

A Descriptive Report of First and Second Dose COVID-19 Vaccine Adverse Reactions in a Puerto Rican Cohort



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Introduction

The COVID-19 pandemic urged the scientific community to quickly develop a new vaccine, and this pushed the CDC to authorize the administration of several COVID-19 vaccines for emergency use. Taking this into account, the objective of this research project was to conduct a cross-sectional study to highlight the adverse effects of the COVID-19 vaccine in the Puerto Rican population.

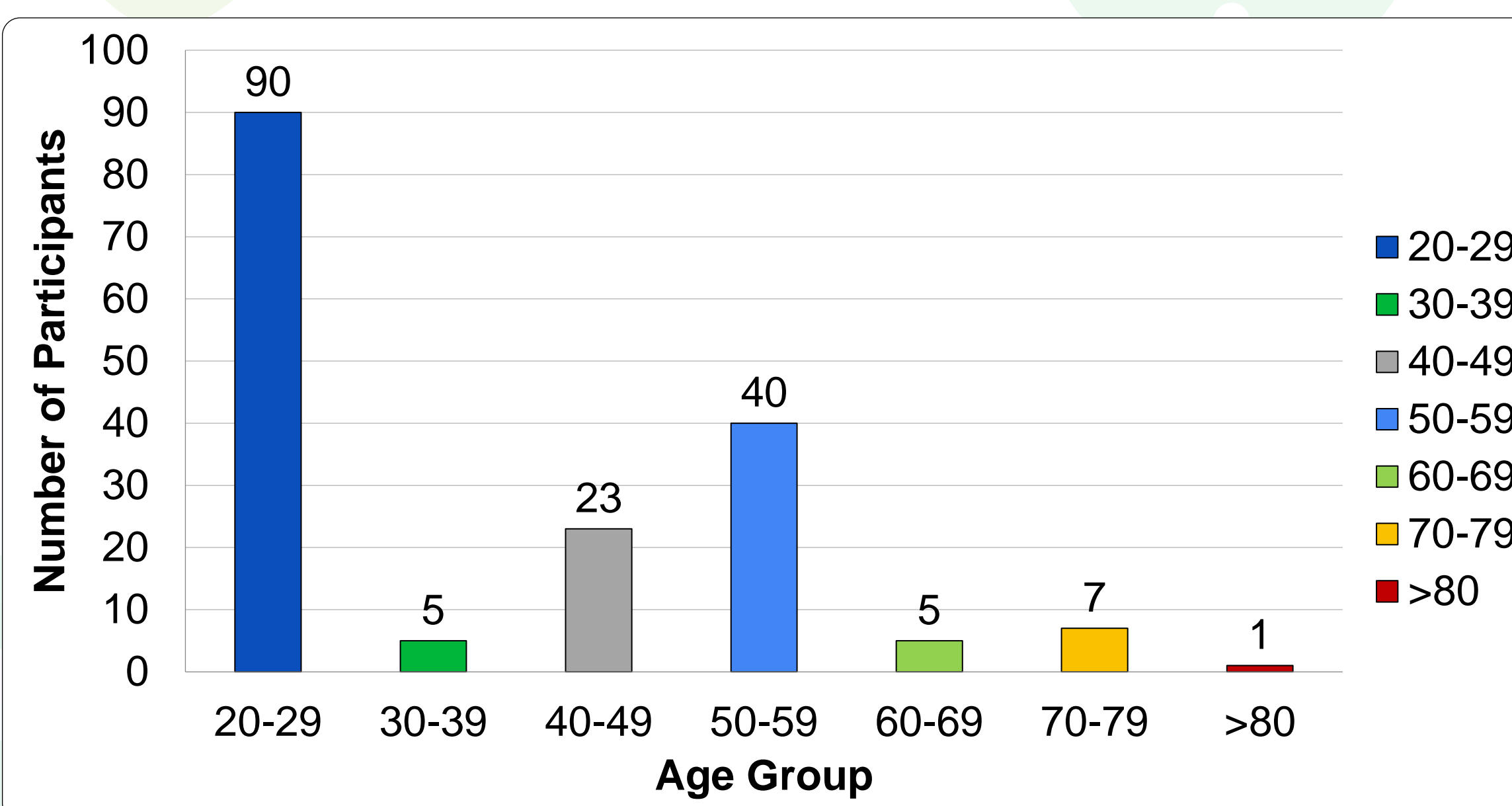
Methodology

A questionnaire with sociodemographic variables and vaccine adverse reactions was distributed to participants from April 2020 to December 2021 at COVID-19 vaccination clinics through social media. Participants who received two doses of the Pfizer-BioNTech or Moderna COVID-19 vaccines were eligible. Descriptive analyses were executed to assess emerging vaccine effects. This study is approved by the UCC IRB (Protocol Number: 2021-09).

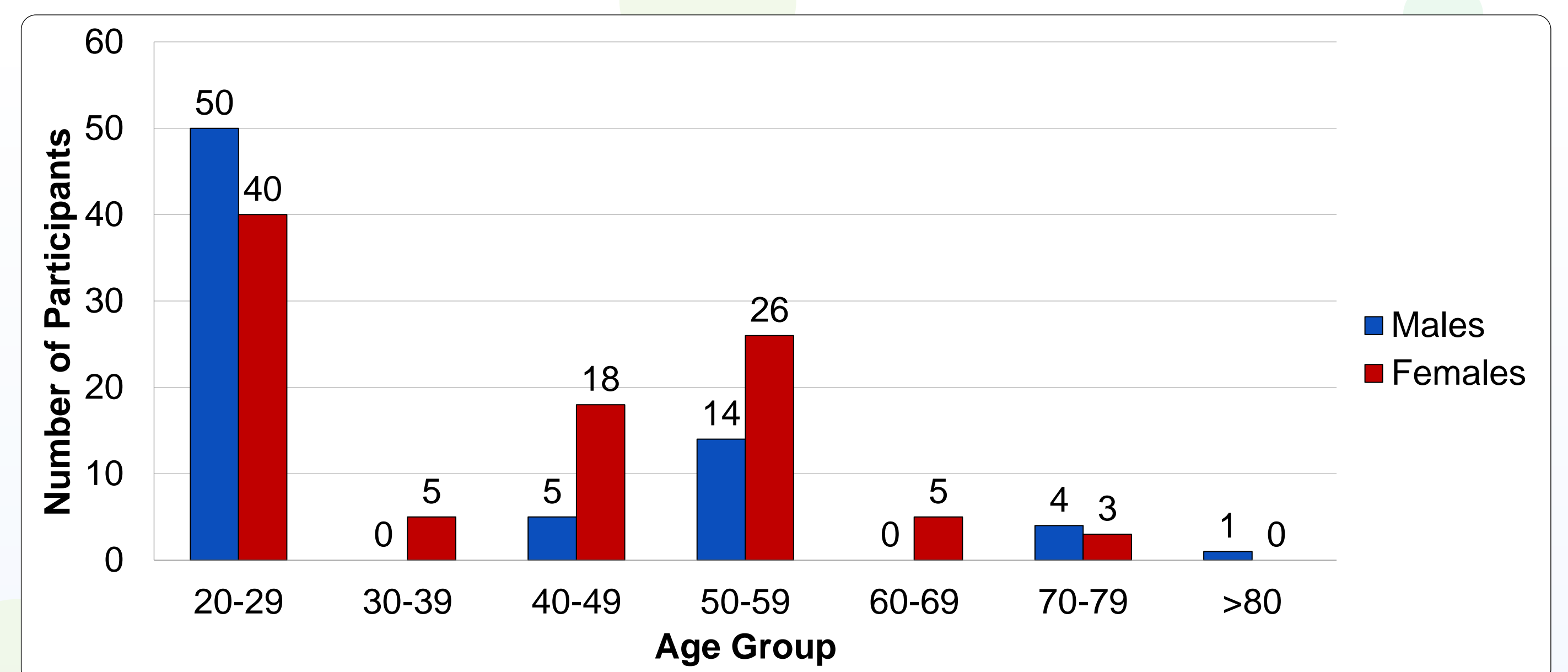
Results

Table 1. Age, Age Range & Sex of Participants

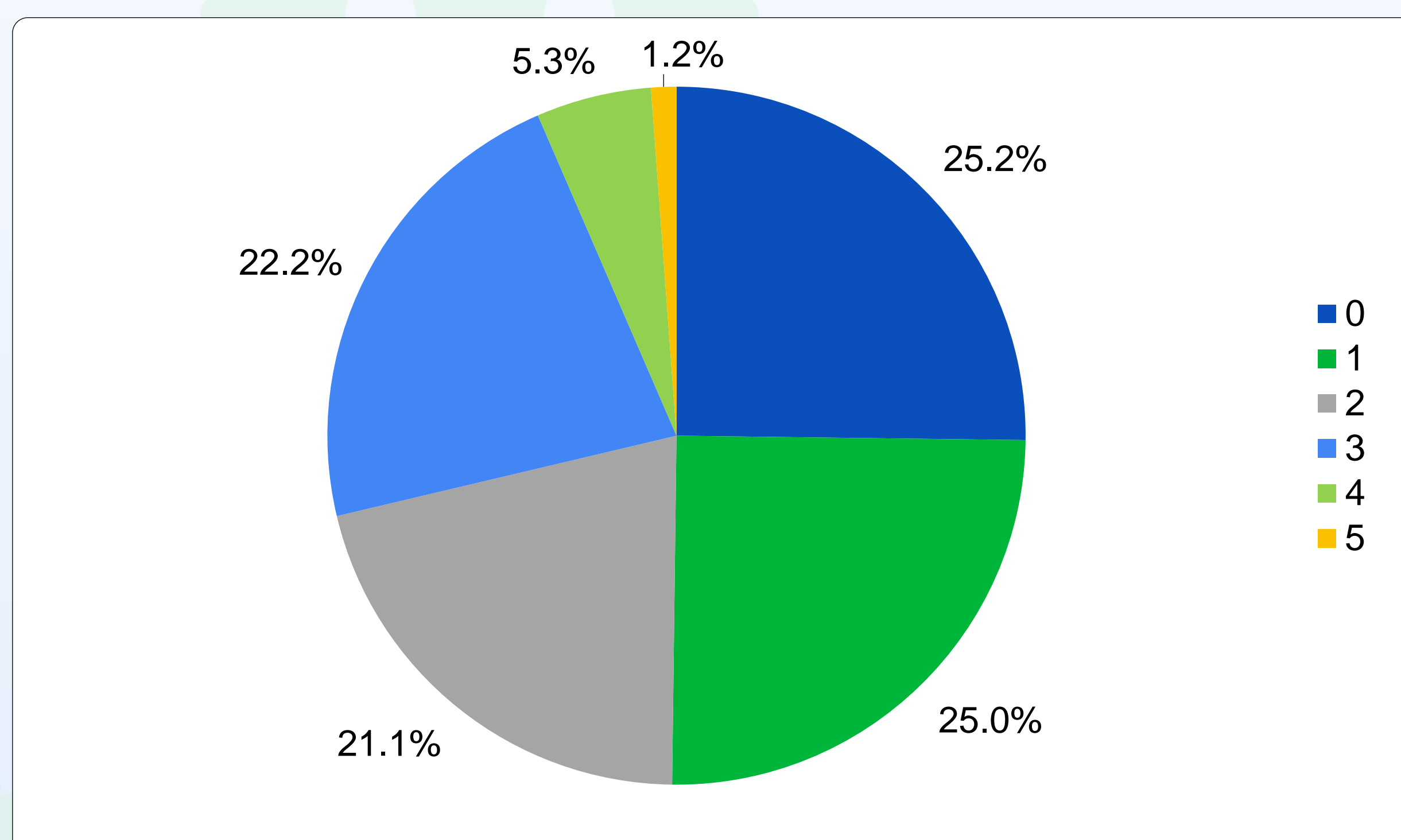
Age	37.4 ± 15.9
Age Range	21-81
Females	97
Males	74



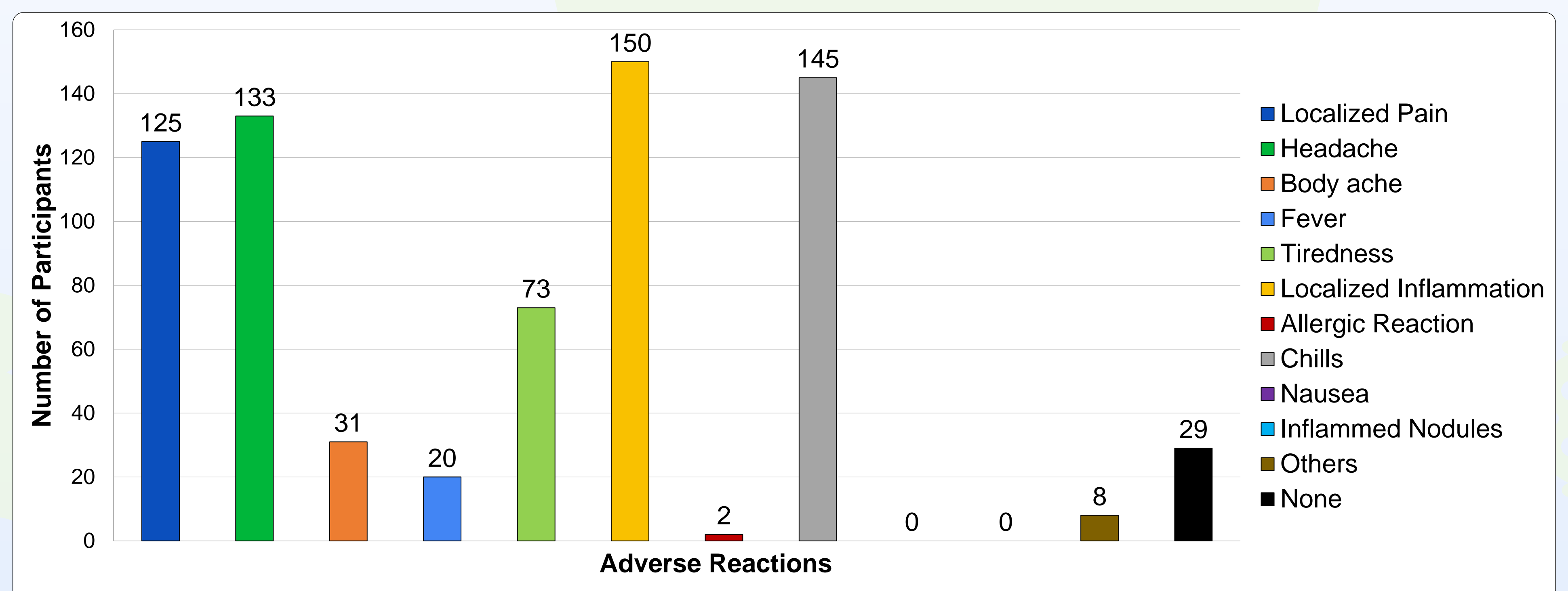
Graph 1. Number of Participants per Age Group



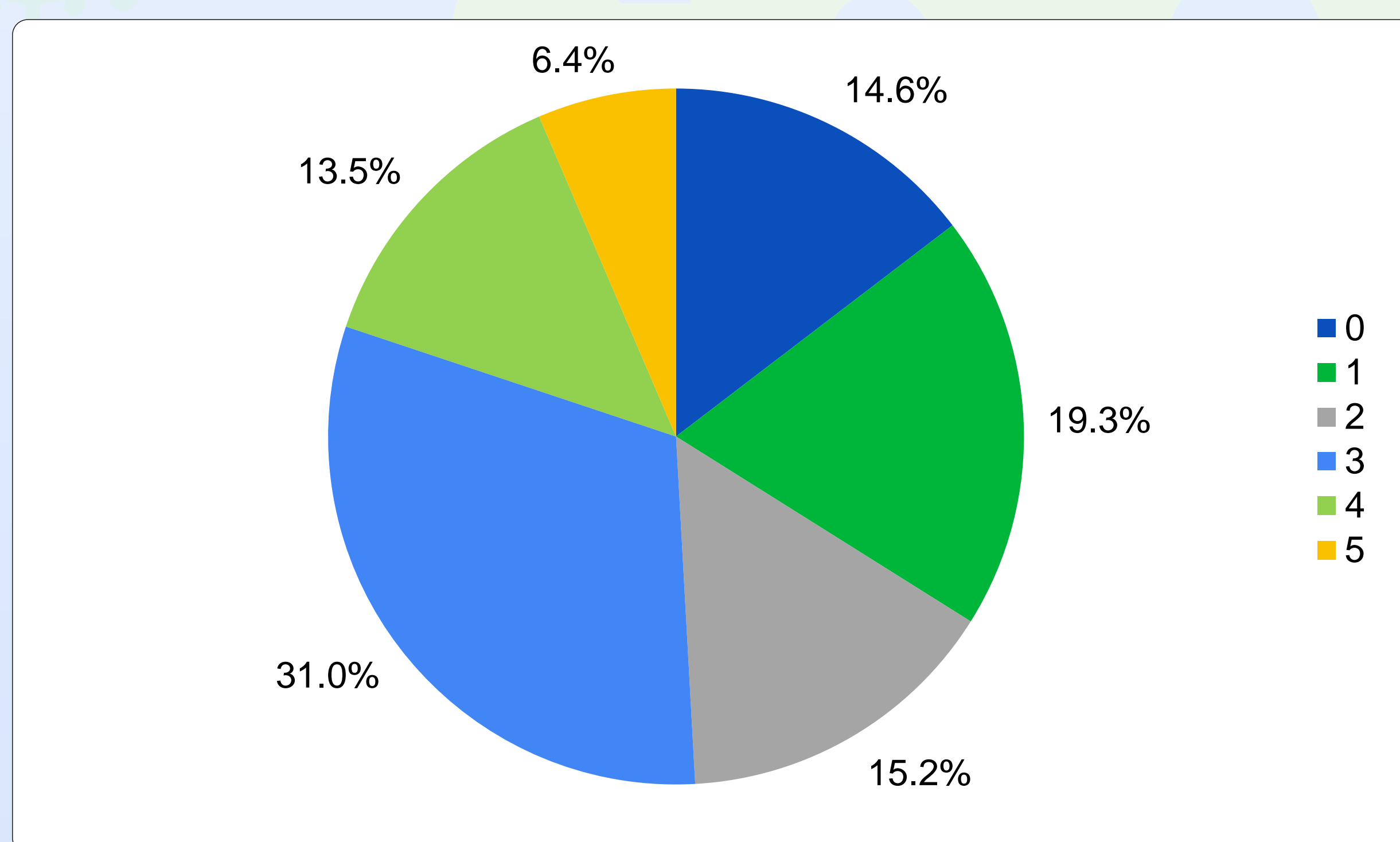
Graph 2. Males and Females per Age Group



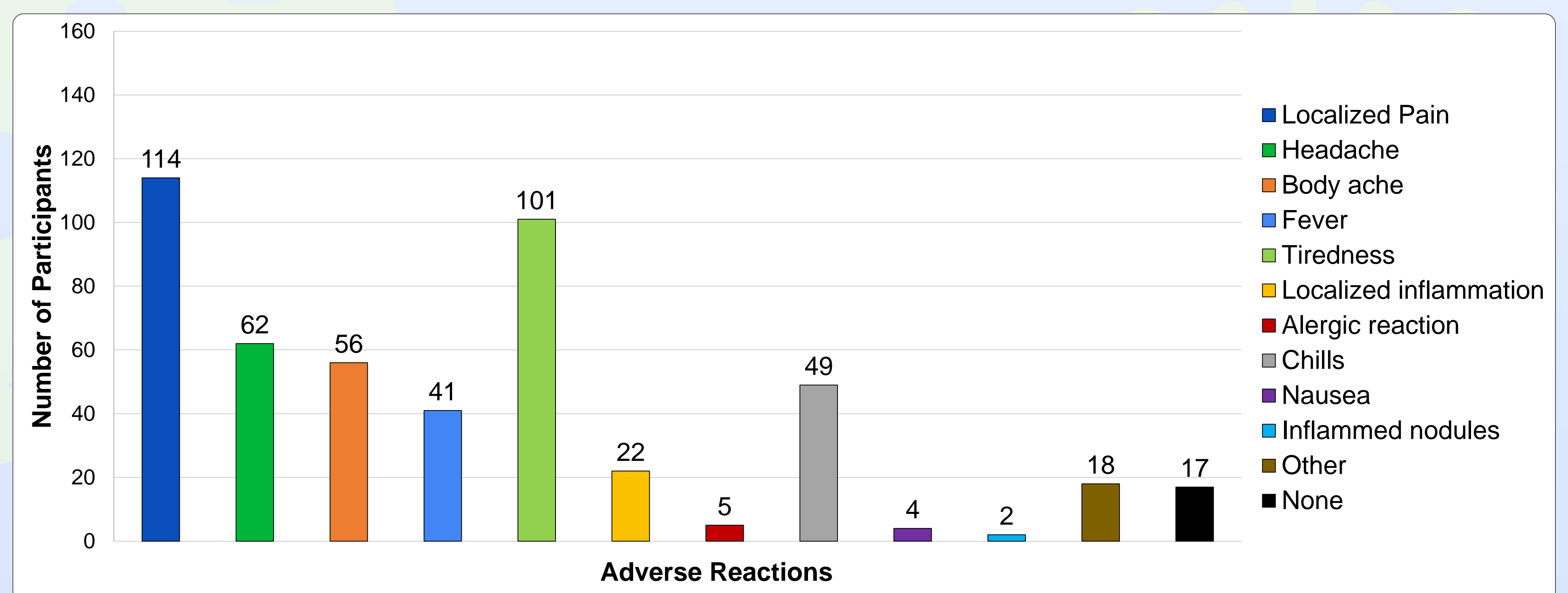
Graph 3. Severity of Adverse Reactions Reported by Participants After Receiving the First Dose of the COVID-19 Vaccine



Graph 4. Number of Participants and Adverse Reactions Experienced After Receiving the First Dose of the COVID-19 Vaccine



Graph 5. Severity of Adverse Reactions Reported by Participants After Receiving the Second Dose of the COVID-19 Vaccine



Graph 6. Number of Participants and Adverse Reactions Experienced After Receiving the Second Dose of the COVID-19 Vaccine

Discussion

The data gathered shows a younger participant distribution, where most of them were between the ages of 20 to 29, with an overall higher percentage of females. Participants who received the first dose experienced to a greater degree localized pain, headaches, localized inflammation, and chills compared to the second dose, in which localized pain and tiredness were the most common symptoms experienced. When comparing the severity of the symptoms between the first and second dose, the adverse effects after receiving the first dose were distributed between grades 0 through 3, compared with the second dose that had a higher percentage of severity greater than grade 3.

Conclusions

Based on the preliminary data, the first dose presented with localized symptoms like pain at the injection site and inflammation of the arm, plus headaches; the second dose shifted to more generalized symptoms like body aches, tiredness, and chills. Also, the severity of said symptoms showed an increase in the second dose, compared to the first one.

Acknowledgements

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