Data Analysis &
Machine - Statistical Learning
GRADUATE PROGRAMME

ΠΑΝΕΠΙΣΤΗΜΙΟ ΚΡΗΤΗΣ
UNIVERSITY OF CRETE

HR EXCELLENCE IN RESEARCH

FORTH
INSTITUTE OF APPLIED & COMPUTATIONAL MATHEMATICS

Gender discrimination & Balance in FORTH:

Statistical Analysis of the HRS4R Questionnaire

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HR Excellence in Research logo

- Official quality label awarded by the European Commission to research institutions that implement high standards in how they manage.
- It is part of the **Human Resources Strategy for Researchers** (HRS4R).

Universities or Research Centers that display this logo

- Align with the **European Charter for Researchers**
- Follow the Code of Conduct for the Recruitment of Researchers
- Promote
  - Transparent hiring
  - Fair working conditions
  - Career development support
  - Research integrity and mobility

Why it matters

- Indicates a **trustworthy and well-managed research environment**
- Often **favored in EU funding ecosystems**
- Signals commitment to **open, merit-based recruitment (OTM-R)**
- Enhances institutional reputation and competitiveness

How institutions get it

- Conduct a gap analysis vs. the Charter & Code (40 principles)
- Develop an action plan
- Undergo external evaluation
- Commit to continuous monitoring and renewal

Bottom Line

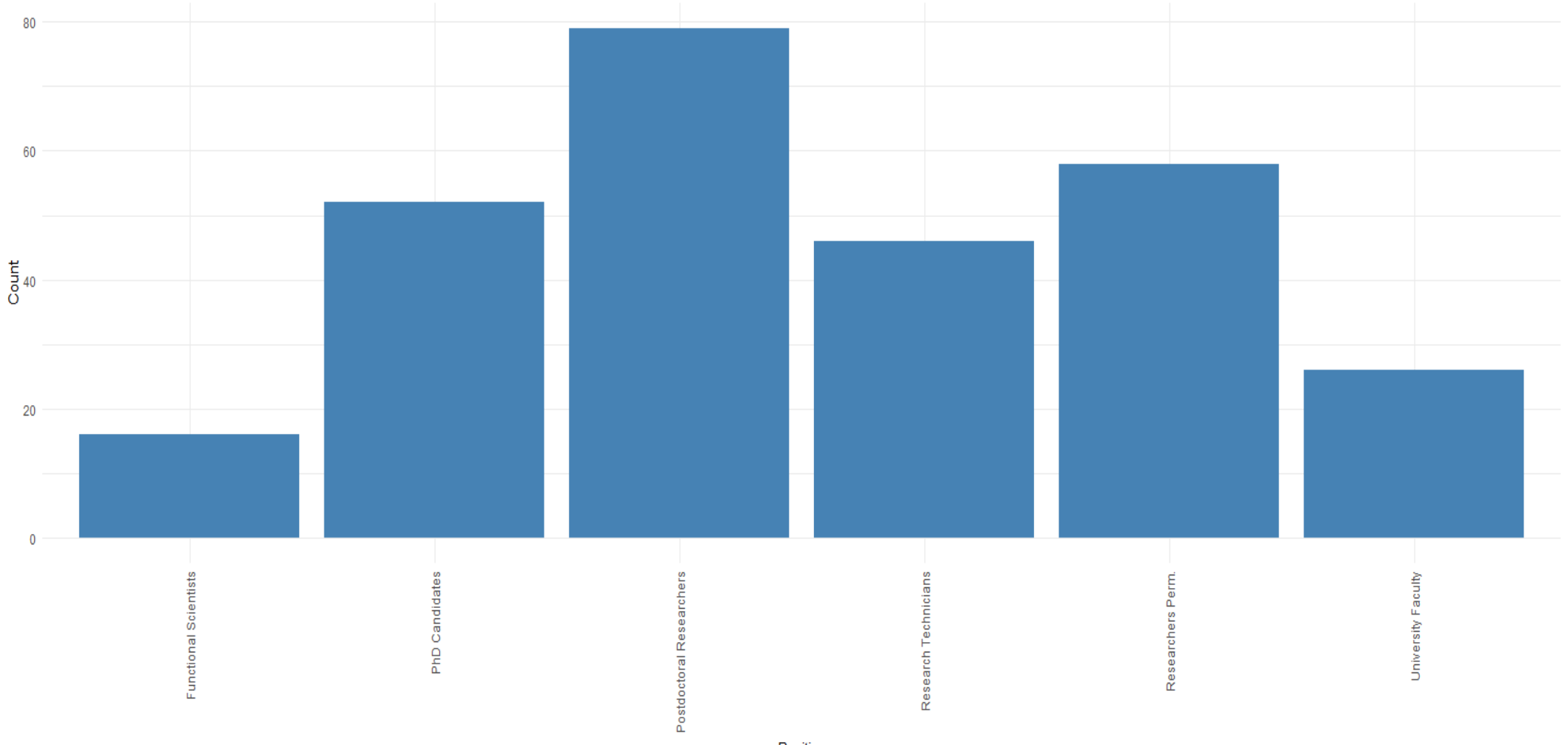
- The HR Excellence in Research logo is essentially a **European quality stamp for good research HR practices**, showing that an institution treats researchers fairly and professionally.
- UoC is among the earliest adopters in Greece (since 2012)
- FORTH: Awarded the HR Excellence logo in 2023

Human Resources Strategy for Researchers at FORTH

- The HRS4R Governance Structure is responsible for the development, implementation and monitoring of FORTH's HRS4R Action Plan.
- The Governance Structure includes members from across the institution, such as: Researchers at all career stages, Admin & Technical Stuff, Delegates from the Union of Researchers and the Union of Employees.
- Head of the Governance Structure: Dr. George Papamichail, STEP-C Director, FORTH/EURAXESS Contact Point, Science and Technology Park of Crete (STEP-C)

Gap Analysis Questionnaire : 40 principles, 40 Questions

- All questions were answered by 277 employees, 99 Female (36%) and 178 Male (64%).
- 19% of the respondents belong to the “20-30” age group, 34% of the respondents belong to the “31-40” age group, 30% of the respondents belong to the “41-50” age group and 17% of the respondents belong to the “51 >” age group
- 19% of the respondents are PhD Candidates, 29% of the respondents are Postdoctoral Researchers and 29% of the respondents are tenured or tenure-track Researchers and University Faculty

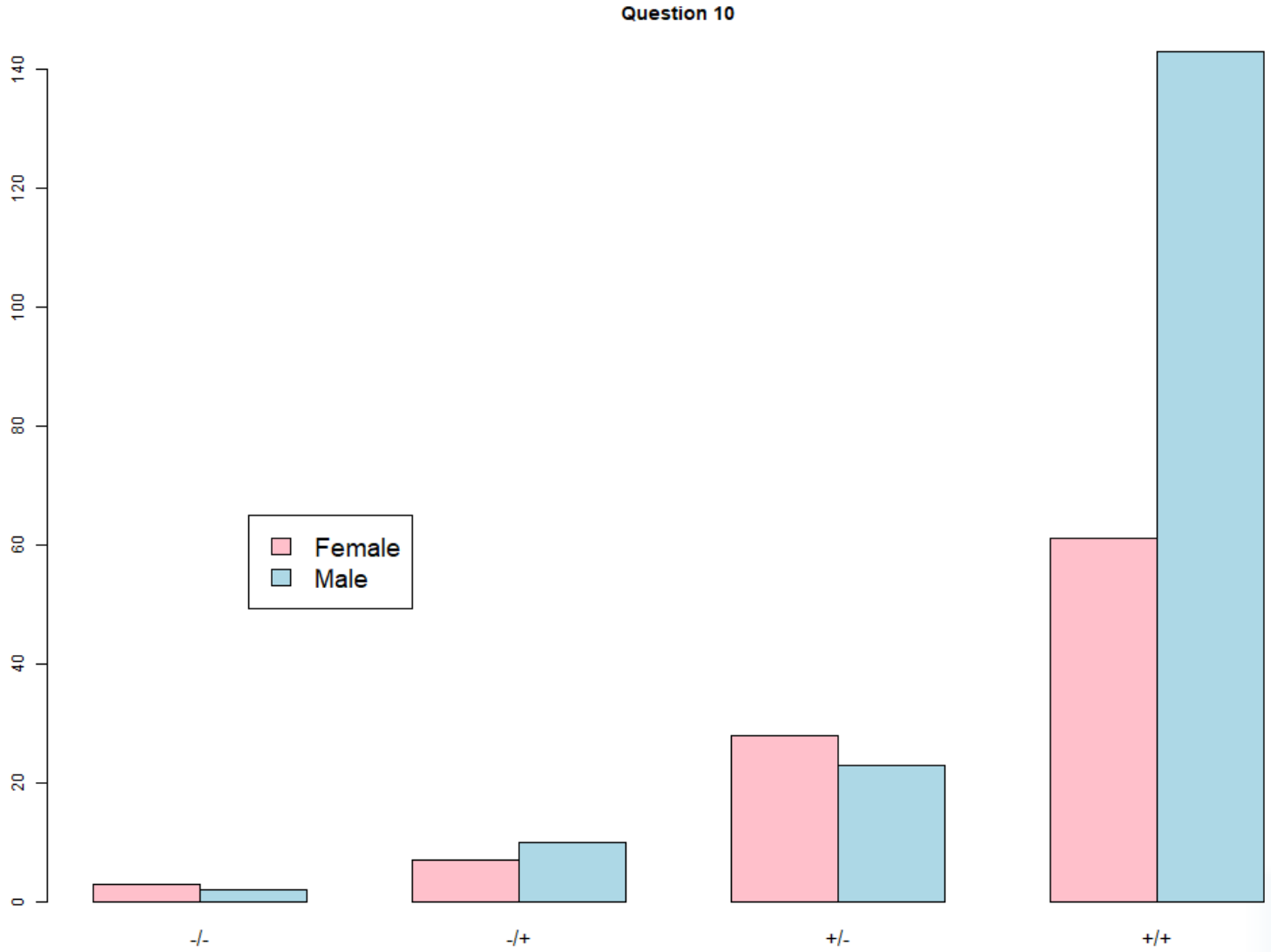

80
60
40
20
0
Count
Functional Scientists
PhD Candidates
Postdoctoral Researchers
Research Technicians
Researchers Perm.
University Faculty

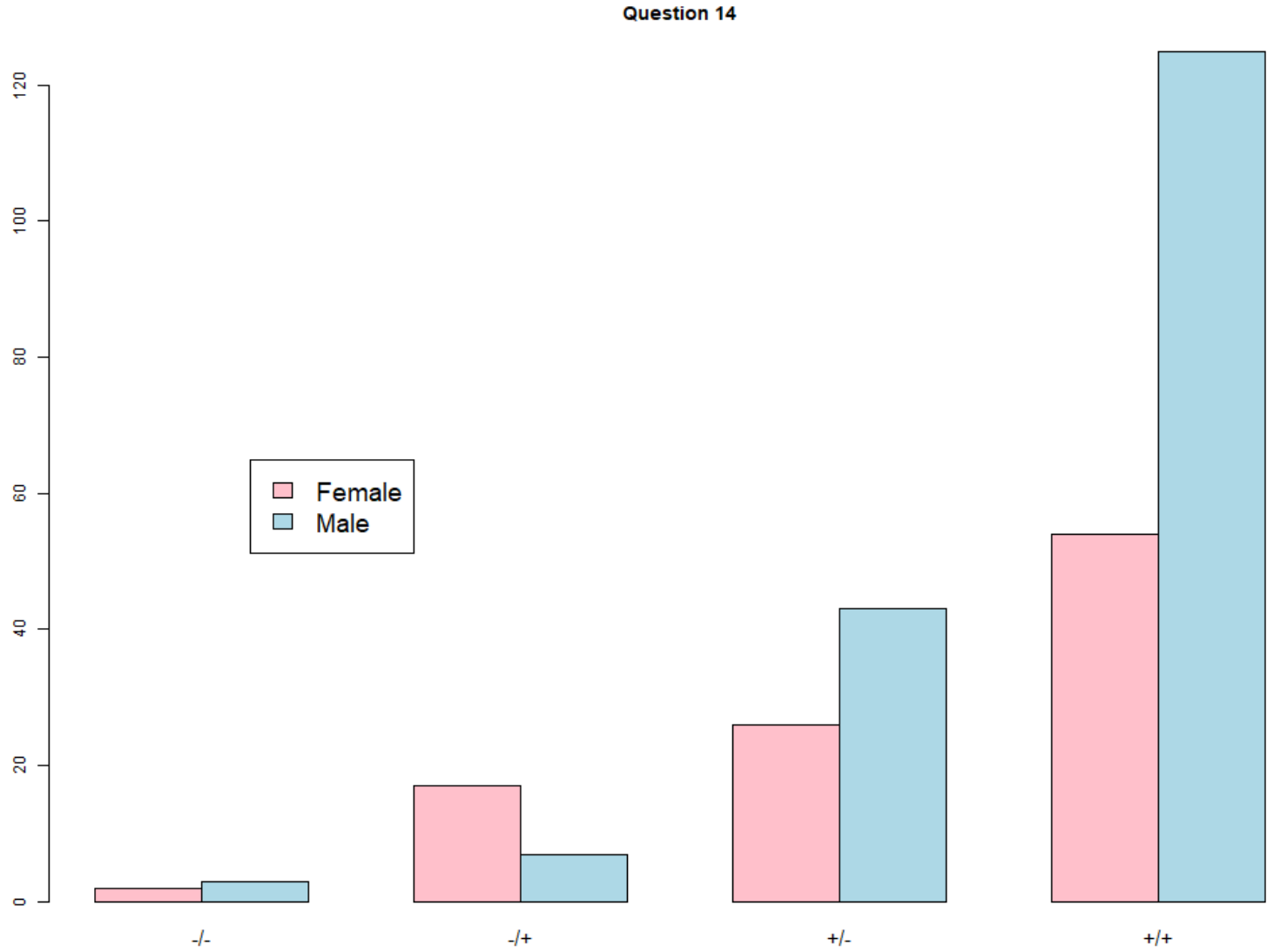
Gap Analysis Questionnaire : 40 principles, 40 Questions

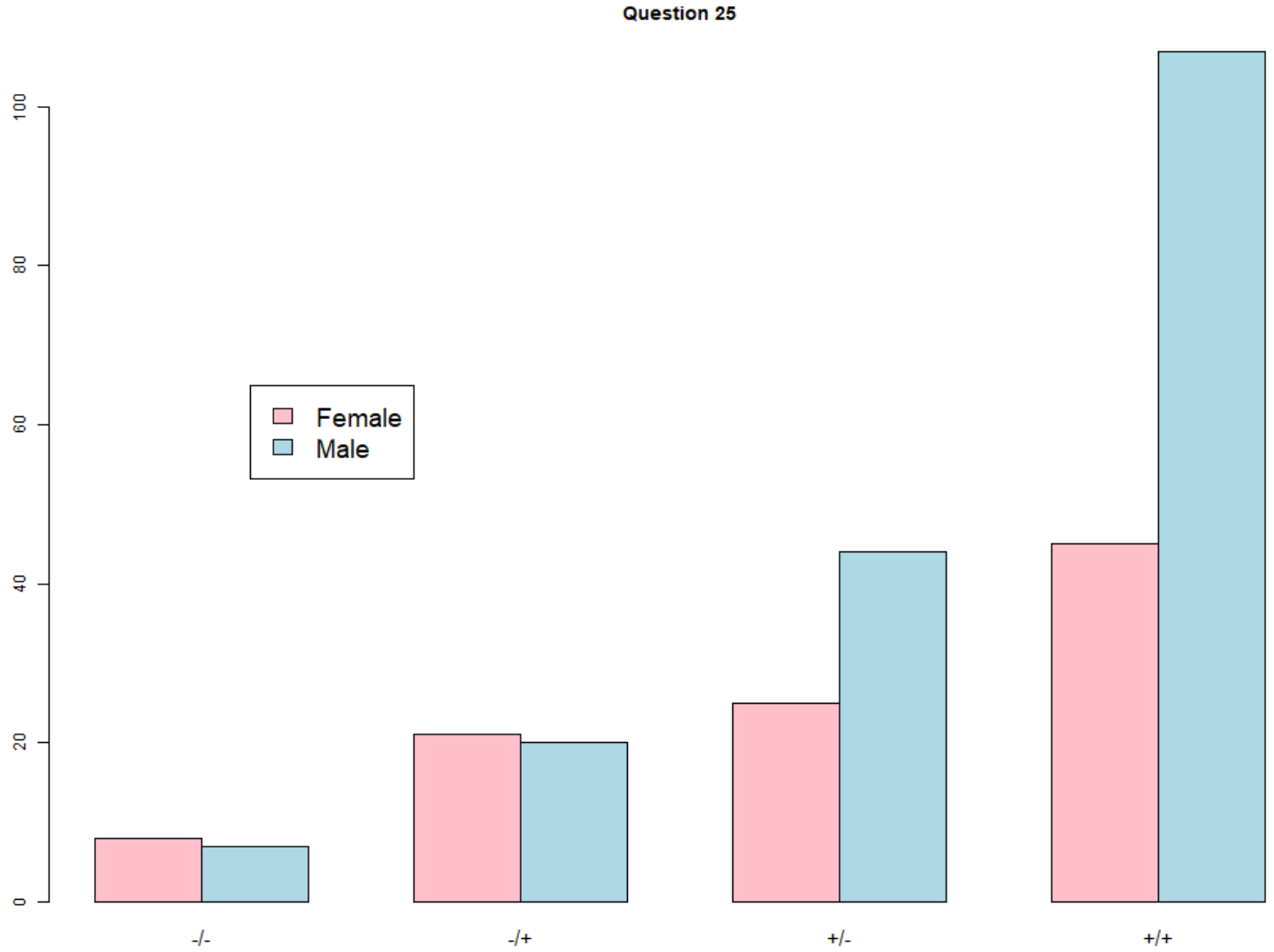
- For each question one obtains a percentage of answers per category (Likert scale with 4 classes): -/- "Insufficiently implemented", -/+ "Partially implemented ", +/- "Almost implemented", +/+ "Fully implemented“
- Principles of particular interest are the ones that attain the highest percentages in -/-. The ones in the top 25% are related to career advice, funding and salaries, stability of employment, handling of appeals.
- Question 27 (4.3%) Gender balance: There are efforts to ensure gender balance at all levels of the organization in recruitment and promotion levels.

Gender Inhomogeneity

- Do different genders tend to respond differently? The Mann-Whitney statistical test was applied in all 40 questions; we have strong evidence in favor of significant differences per gender for…
- Question 10 Non-discrimination: The non-discrimination practices of FORTH are sufficient.
- Question 14 Selection: Staff selection committees are composed of members with different professional qualifications and expertise to ensure gender balance.
- Question 25 Stability and permanence of employment: Employment stability for researchers and especially for fixed-term contractual researchers is ensured


Question 10
140
120
100
80
60
40
20
0
Female
Male
-/-
-/+
+/-
+/+
Wilcoxon rank sum test p-value: 0.0011


Question 14
120
100
80
60
40
20
0
Female
Male
-/-
-/+
+/-
+/+
Wilcoxon rank sum test p-value: 0.0024


Question 25
100
80
60
40
20
0
Female
Male
-/-
-/+
+/-
+/+
Wilcoxon rank sum test p-value: 0.0056

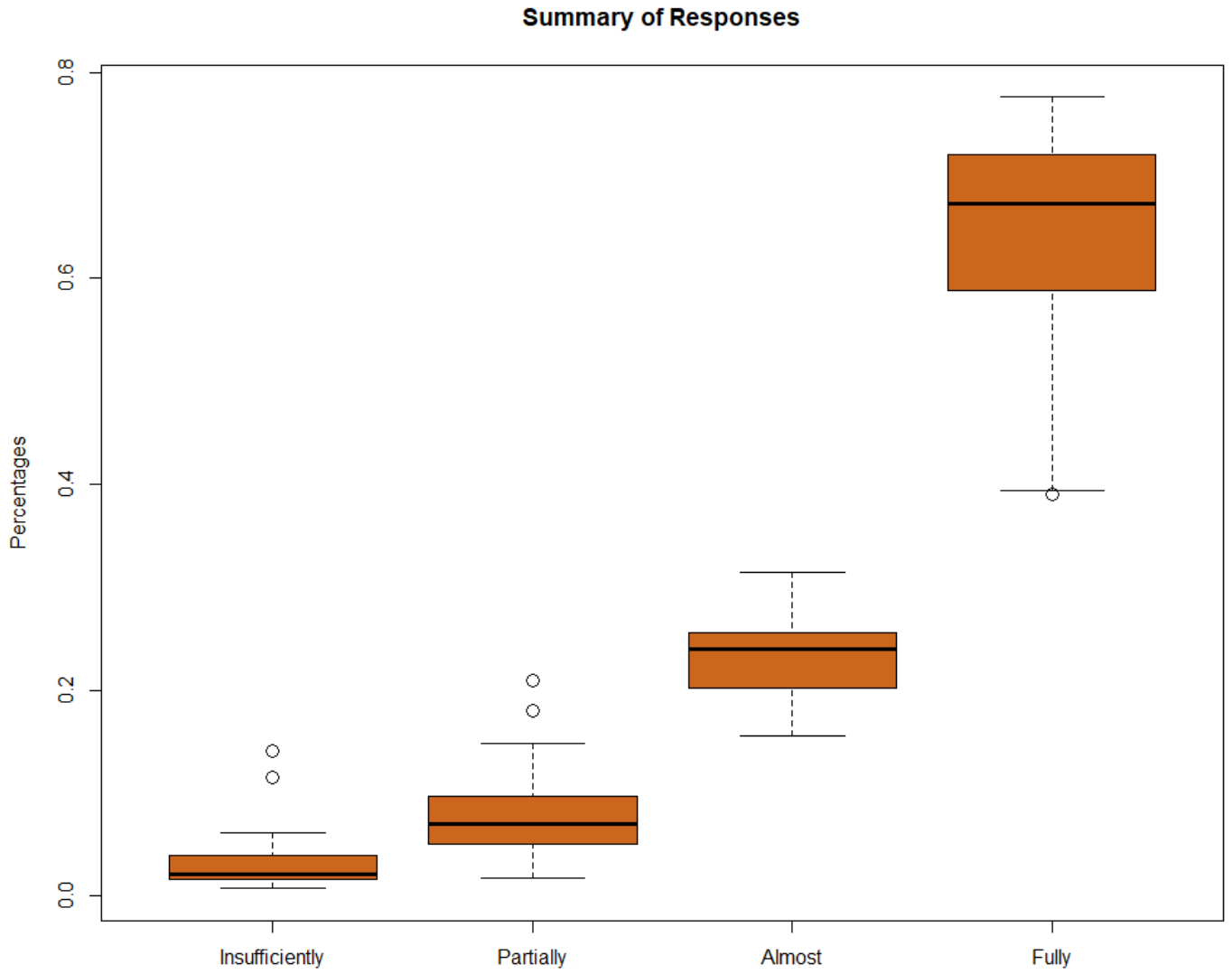
Gender Inhomogeneity

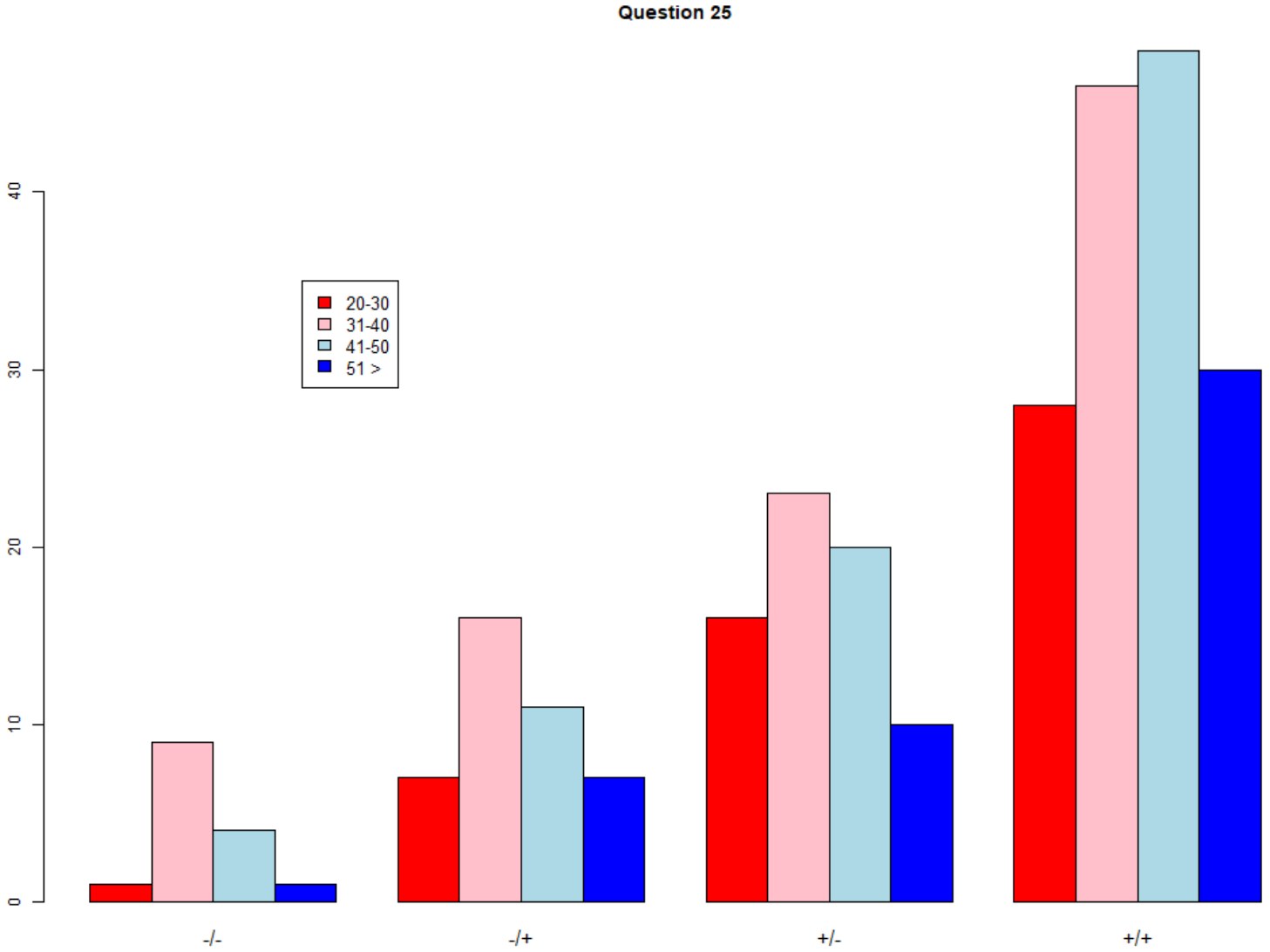
- Males tend to believe that the 3 abovementioned principles are fully implemented, whereas a significant fraction of the female employees do not agree; hence one observes higher percentages in of -/- +/- and -/+ in females for these questions.

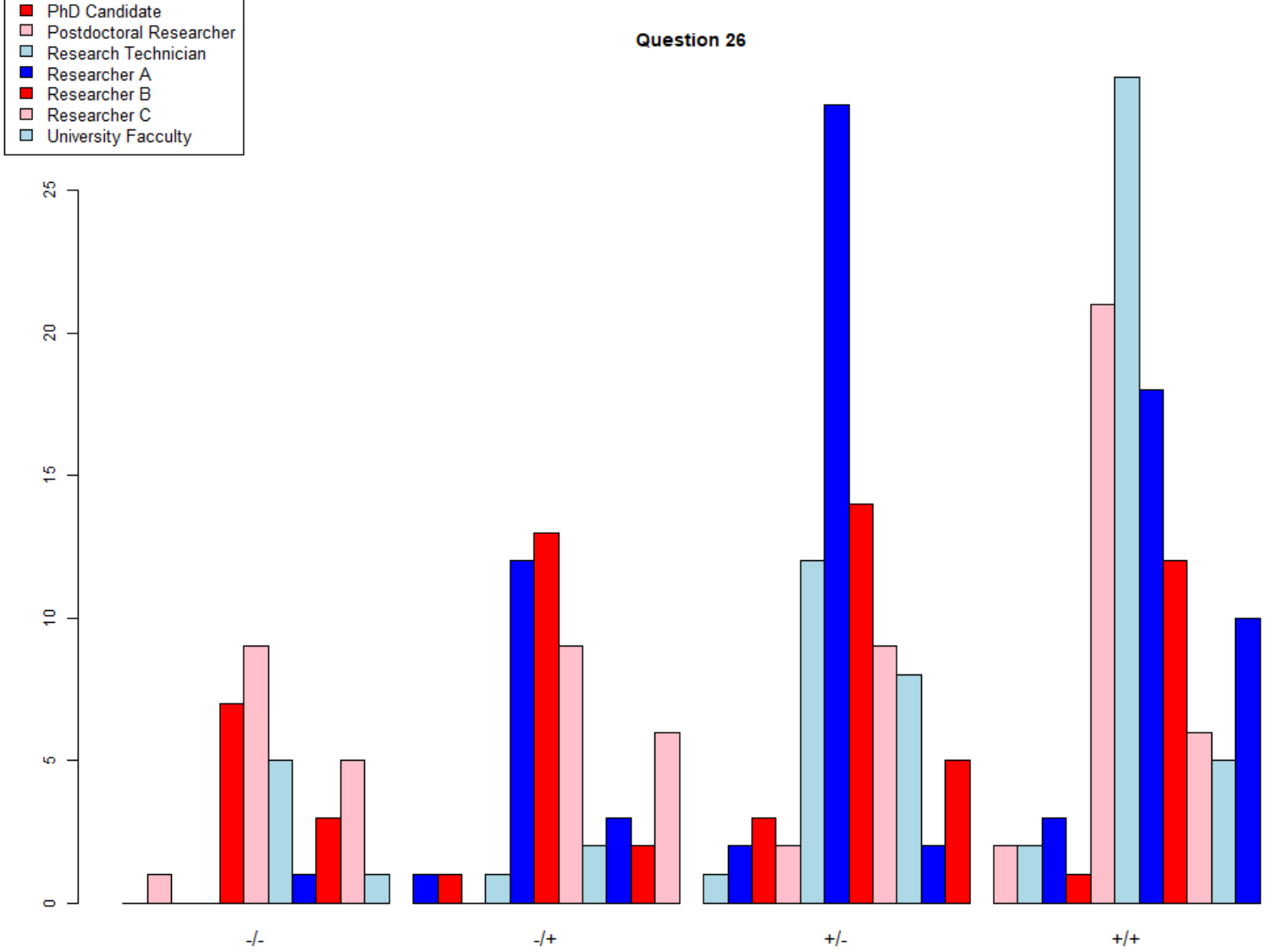
Gap Analysis Questionnaire : 40 principles, 40 Questions

- Do we observe significant differences in the responses per age group? The Kruskal-Wallis test was applied in all 40 questions; in this case we do not observe p-values extreme enough to suggest strong evidence in favor of age-dependent responses.

- Do we observe significant differences in the responses per professional position? The Kruskal-Wallis test was applied again in all 40 questions; again, in this case we did not observe p-values extreme enough to suggest strong evidence in favor of position-dependent responses.


Summary of Responses
Percentages
0.0
0.2
0.4
0.6
0.8
Insufficiently
Partially
Almost
Fully


Question 25
20-30
31-40
41-50
51 >
0
10
20
30
40
-/-
-/+
+/-
+/+
Kruskal Wallis test p-value: 0.2794


PhD Candidate
Postdoctoral Researcher
Research Technician
Researcher A
Researcher B
Researcher C
University Faculty
Question 26
0
5
10
15
20
25
-/-
-/+
+/-
+/+
Kruskal Wallis test p-value: 0.7368



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