Results from survey on postdoctoral courses

Karolinska Institutet Postdoc Association, 29 May 2020

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CONTENTS

Introduction

Karolinska Institutet (KI) offers a range of doctoral courses to PhD students as part of their training programme. Although these courses are open to postdocs and other researchers as well, in most cases their places are allocated to PhD students when the demand for a course is high. However, training remains an important aspect throughout the career of a researcher and therefore also for postdocs. This has been recognized by the Program and Course Committee of KI. Different possibilities have been discussed to improve the access of postdocs to courses offered or to create a specific training programme for postdocs. To provide the necessary insight and information to develop these options, the Karolinska Institutet Postdoc Association (KIPA) has run a survey to explore the preferences and needs of postdocs regarding training and skills development. This report shows the results of this survey.

Results survey

General

The survey was run from the 16th of March until the 16th of April. In total 110 people responded to the survey. One respondent could not be verified as a researcher at KI and consequently this person was excluded from the analysis. The following results are therefore based on 109 respondents.

Demographics

In the figures 1a to 1e, the demographics of the respondents to the survey are shown. The majority of the respondents are women (fig. 1a), between 30 and 39 years of age (fig. 1b) and have obtained their PhD degree at Karolinksa Institutet or in an EU member state (fig. 1c). The vast majority of the respondents consisted of the target population, i.e. postdocs, with a small number of researchers in other career stages (e.g. assistant professors) responding to the survey (fig. 1d). The respondents were affiliated with 19 different departments, with the majority coming from the departments of Clinical Neuroscience, Cell and Molecular Biology, and Women's and Children's Health (fig. 1e).
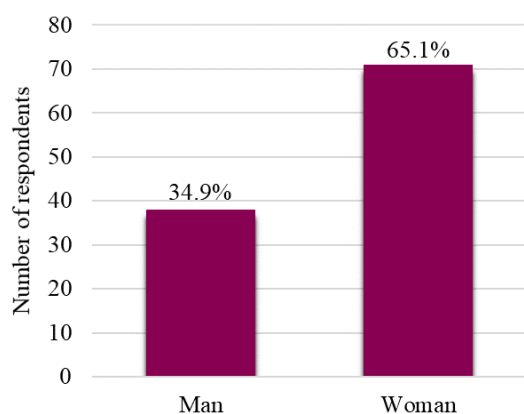
Figure 1a. Gender of respondents (n=109)
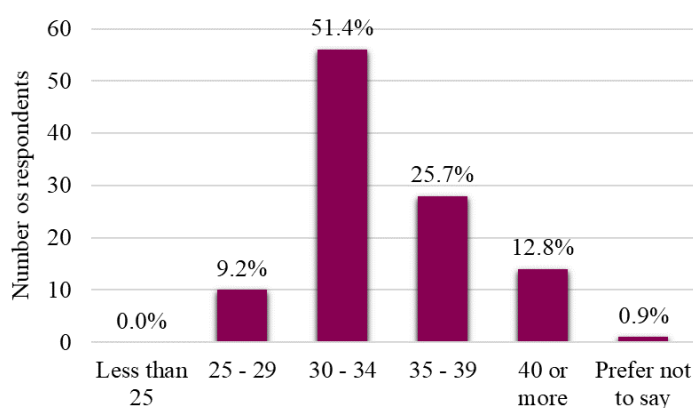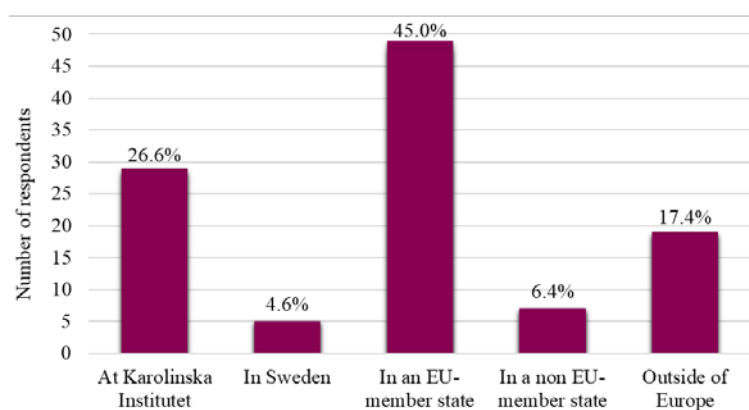

Figure 1b. Age category of respondents (n=109)

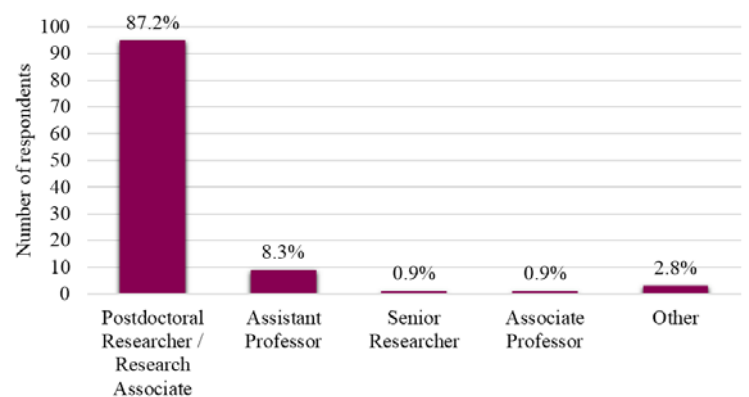**Figure 1c.** *Place PhD obtained of respondents (n=109)*

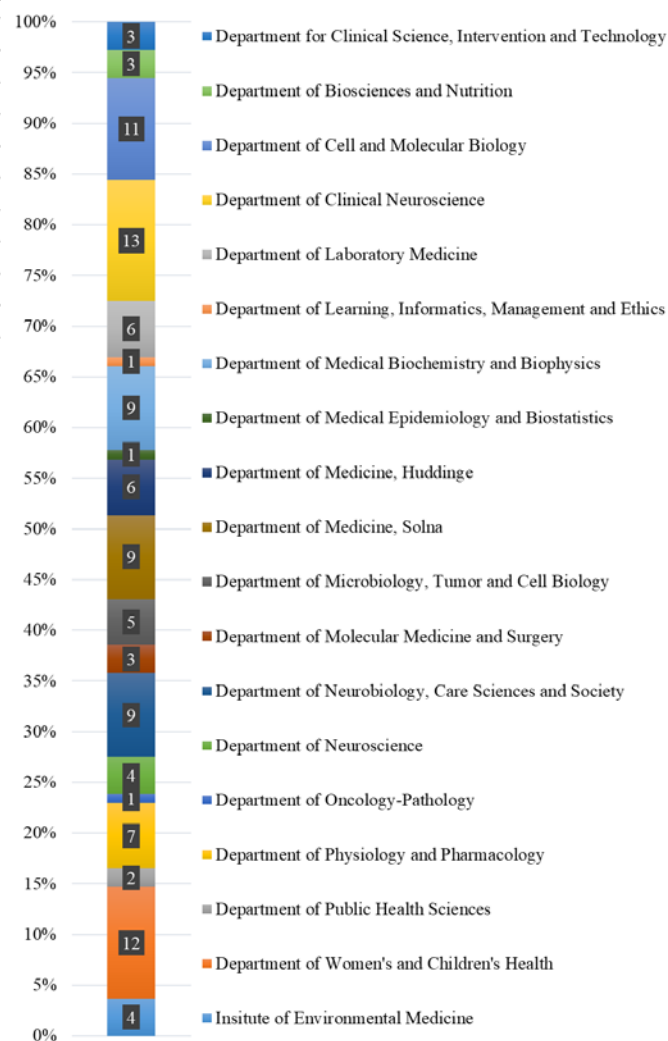**Figure 1d.** *Career stage of respondents (n=109)*

**Figure 1e.** *Department affiliation of respondents (n=109)*

Training importance, content and barriers

When asked how important training is for their professional development, the majority ranked this between 7 and 10 (scale: 0 = not at all important; 10 = very important) with a mean of 8.6 (fig. 2). Most respondents think a "core training" for postdocs is necessary, but that this should be optional (fig. 3). Based on findings from a 2019 survey (presented to the Doctoral Education committee in August 2019, diarienummer: 1-654/2019), the most popular themes were inferred from respondents' preferred doctoral courses. From these, a "core training" programme was suggested to include statistics (basic and advanced), bioinformatics, writing, teaching and career skills/communication focused courses. The respondents were asked to rank these six different types of trainings based on the importance towards their career goals (scale: 1 = most important; 6 = least important) and of them career skills/communication, bioinformatics and writing ranked highest (fig. 4). When asked what are the barriers/obstacles for the respondents not receiving the training they need (multiple options could be selected), nearly all respondents experienced problems (98.2%), with the majority related to time limitations (fig. 5). Additionally, more than 25% of the respondents indicated they could not get in a course due to no vacant spaces for postdocs.
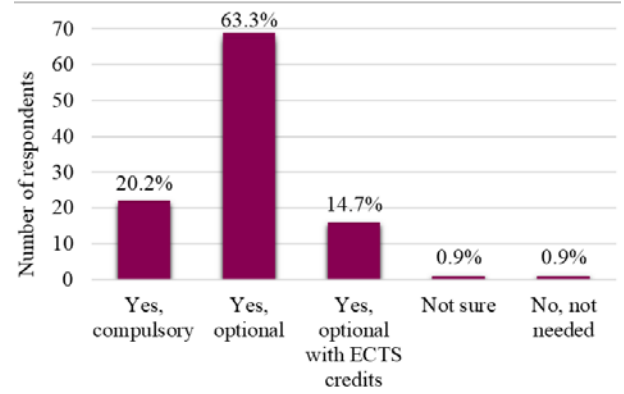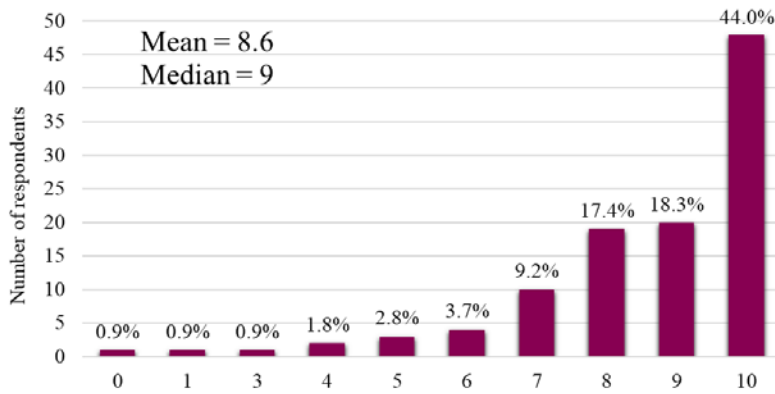
Figure 2. *Importance of training for professional development (n=109) (0 = not at all - 10 = very important)*


**Figure 3.** *Core training needed for postdocs (n=109)*
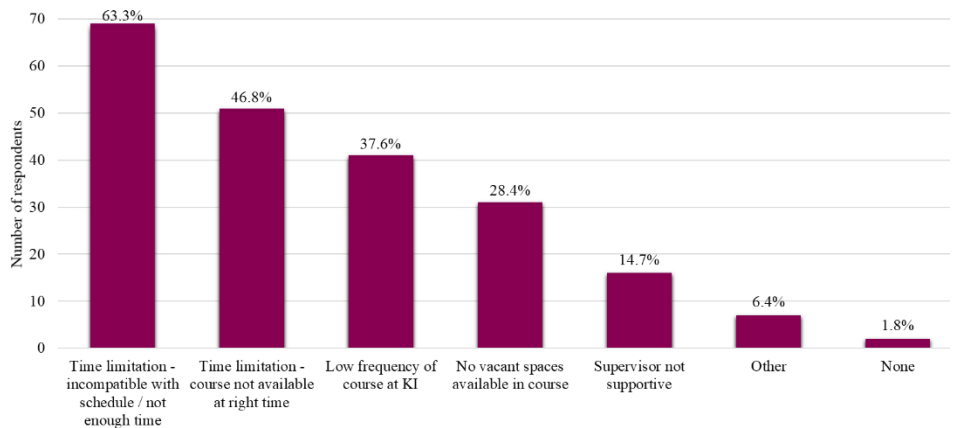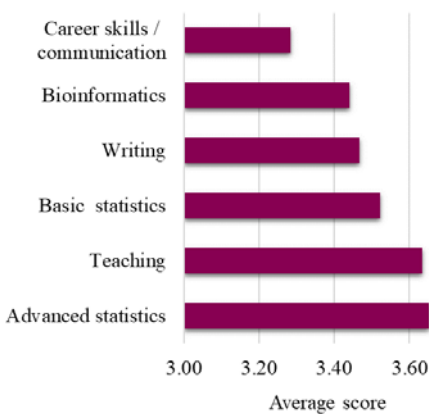
Figure 4. *Ranking types of training for importance towards career goals (n=109) (1 = most important – 6 = least important)*

Figure 5. *Barriers/obstacles for not receiving training (n=109)*

The respondents were also asked to describe what topics or skills should be covered within the six different types of "core training" and the suggested themes, topics and skills were classified into broad, inclusive categories in the figures below (fig. 6-11). This can give guidance for the development of a specific postdoc "core training" programme or for adapting pre-existing courses to match postdoc competencies and requirements.
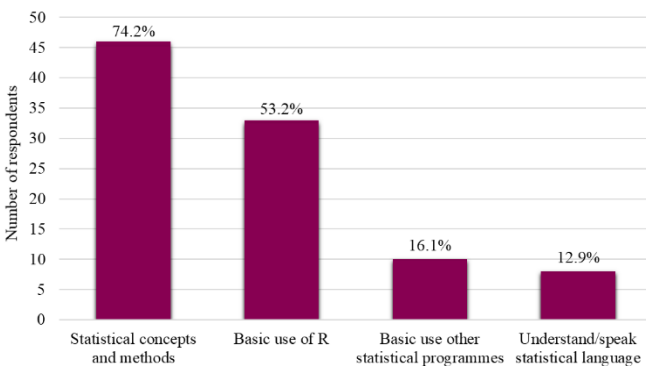
Figure 6. *Themes/topics/skills for basic statistics (n=62)*
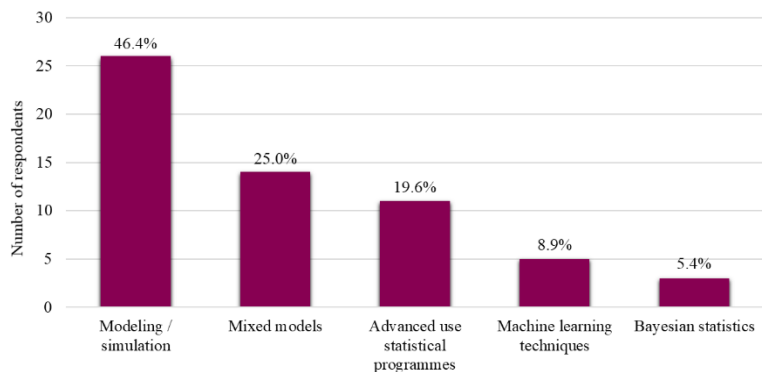
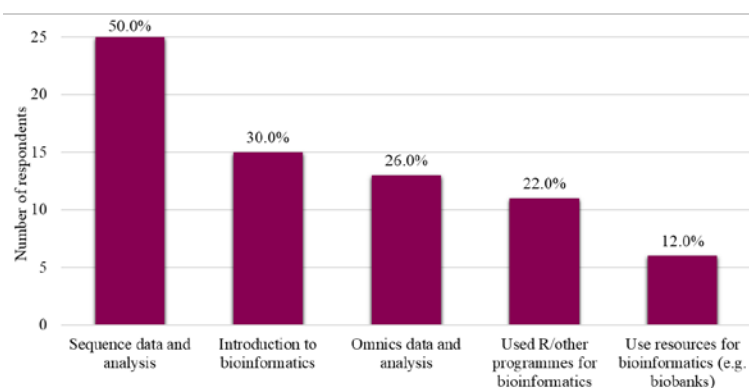**Figure 7.** *Themes/topics/skills for advanced statistics (n=56)*

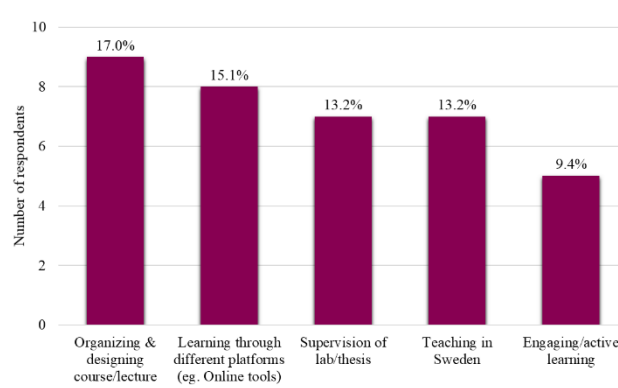**Figure 8.** *Themes/topics/skills for bioinformatics (n=50)*

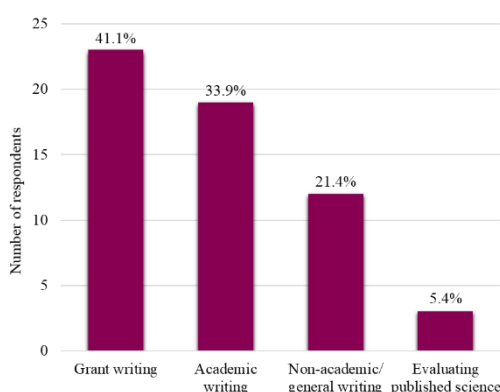**Figure 9.** *Themes/topics/skills for teaching (n=53)*

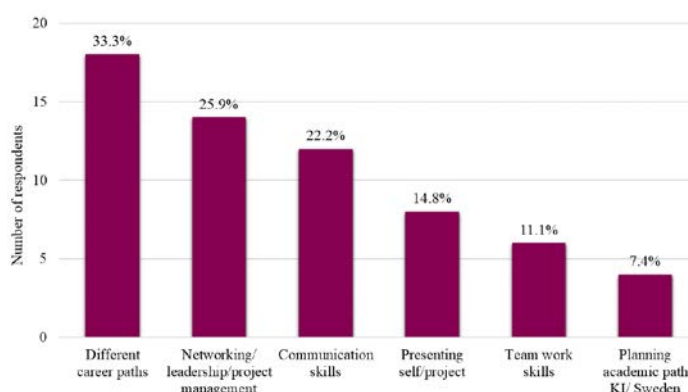**Figure 10.** *Themes/topics/skills for writing (n=56)*

Figure 11. *Themes/topics/skills for career skills/communication (n=54)*

Duration, format and completion of training

If a "core training" programme would be implemented for postdocs, the majority of respondents indicated that it should take somewhere between 2 weeks/10 days and 6 weeks/30 days (fig. 12). The respondents could indicate what kind of format they would prefer for the training (max. two options could be selected), with respondents exhibiting similar preferences towards each option (fig. 13). In general, respondents had a slight preference for physical courses held on half days over multiple weeks, or for structured online courses. This suggests that structuring training in different formats would accommodate all postdocs. Respondents consider an exam after completion of a course to be not necessary (fig. 14) and think a certificate of completion as accreditation is sufficient (fig. 15).
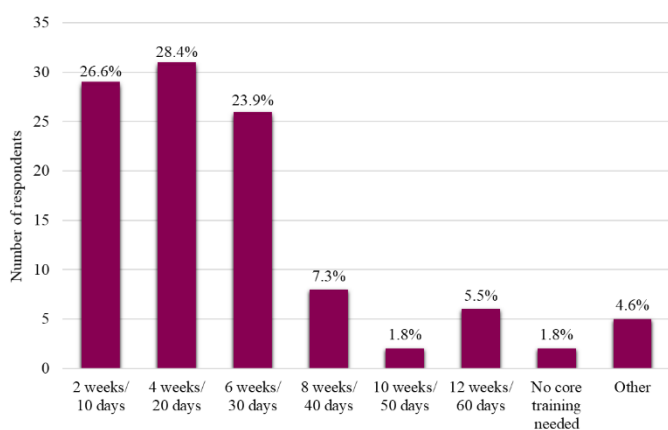

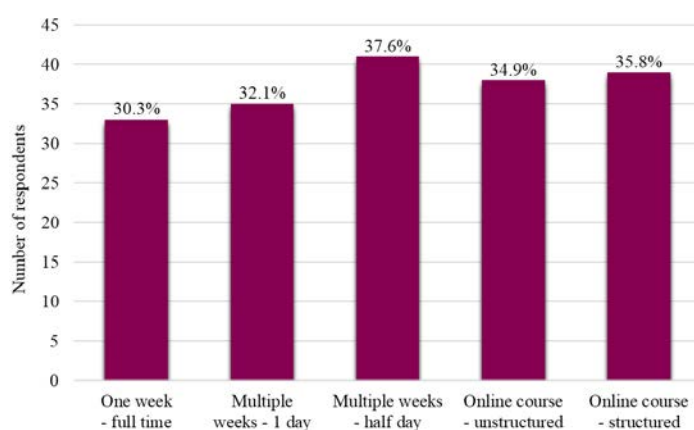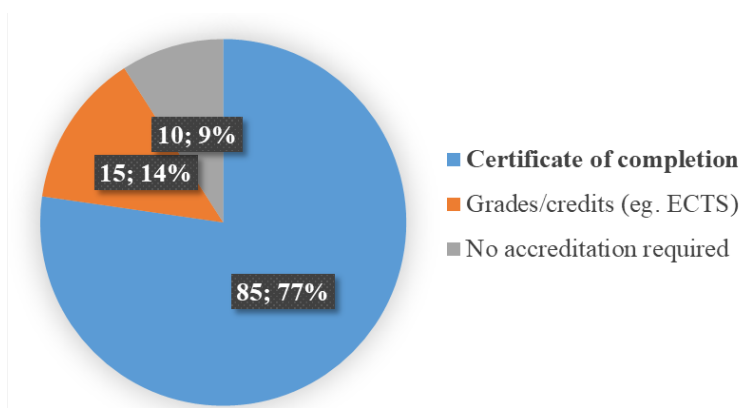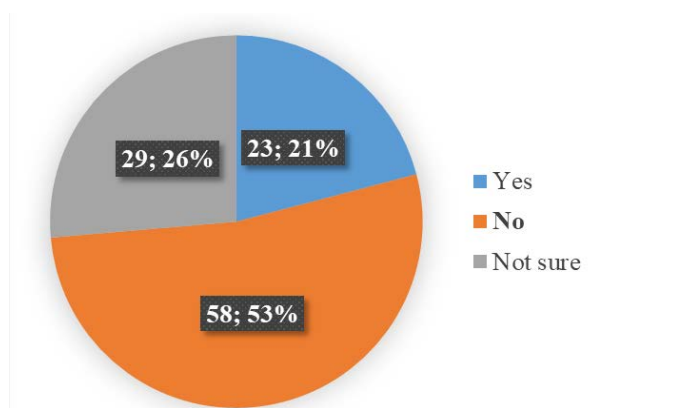**Figure 12.** *Duration of "core training" (n=109)*

Figure 13. *Format/schedule of training (n=109)*

Figure 14. Exam requirement after course completion (n=109)

Figure 15. Accreditation of course (n=109)

Summary

The results of this survey highlight the importance to training for postdocs at KI, the potential difficulties in accessing it and the skills that postdocs are most keen to develop. Meeting these demands could be achieved by increasing spaces in existing PhD courses to accommodate postdocs, many of which already offer relevant curricula. Developing specific courses for postdocs may also be beneficial given that the survey encompasses a large number of respondents who express the need for advanced training. Finally, developing a specific "core training" programme for postdocs would help ensure excellence amongst researchers at KI and this survey provides input for the content and format of courses in such a programme.