

Survey Results Overview:

The initial survey of BSD Postdoctoral Association (BSD-PDA) asked questions about the following major categories of information

- I. Demographic/biographic information/salary
- II. Role of postdoctoral scholars association at U. of Chicago
- III. Postdoctoral training
- IV. Job market for scientists/career issues
- V. Benefits

Results were analyzed from 66 unique responses between September 8th, 2000 and February 14th, 2001. This group represents approximately 20% of BSD postdoctoral fellows or equivalent. These results were sufficient for an informative preliminary analysis of the postdoctoral community in the Biological Sciences Division.

I. Demographic/biographic information/salary Postdocs averaged 33 years of age and the community is equally split by gender. The majority of respondents are doing basic research. More than half are permanent residents or citizens and most of the rest hold H1B or J1 visas. The majority also report salaries below the National Institutes of Health's National Research Service Award stipend level effective 7/2000 (per years of experience).

II. Role of postdoctoral scholars association at U. of Chicago A majority of postdocs responded that the PDA should concentrate its functions on representing postdocs to administration and in helping with career training. However, considerable interest remained for a broad PDA role in other areas supporting postdoc development.

III. Postdoctoral training Most respondents believe that their training at the U of C is useful for their future career goals. Postdocs reported learning from a combination of lab personnel and their PI, with a large measure of self-direction. Most postdocs meet with their advisors weekly with a substantial portion meeting daily. However, the majority of postdocs receive no written or oral performance evaluation even though most postdocs would like to be evaluated 1 or 2 times per year. When asked about the aspects of a successful postdoc-PI interaction, postdocs most frequently ranked first 'listening to and respecting one another' and 'freedom to become an independent investigator.' Many postdocs had little or no opportunity to present their work or to teach. Very few have teaching experience as a postdoc although a majority want more teaching experience and believe that more teaching opportunities are needed.

IV. Job market for scientists/career issues Most postdocs went directly from obtaining a Ph.D./M.D. to a postdoc, suggesting a job market favorable for getting a postdoctoral position. Most respondents said they took their postdocs to obtain research experience in a different field of research. The majority of postdocs wish to pursue an academic research/teaching career, with careers in government, biotech, or the pharmaceutical industry as strong second/third choices.

V. Benefits Benefits received by postdocs vary: 98% have health insurance but as few as 5% and maximally 76% have other benefits with many of these coming from spousal coverage or are paid by the postdoc themselves. Most Postdocs were primarily concerned with health insurance, dental insurance, and retirement benefits, and it is clear from the survey that there is no standard benefit coverage for the sampled postdocs.

BSD-PDA Survey 2000-2001 Methods:

The Biological Sciences Division Postdoctoral Association (BSD-PDA) in conjunction with the Office of Graduate Affairs, conducted an online survey of BSD Postdocs. We will use the term "postdoc" as encompassing those individuals engaged in research positions with an advanced degree whose residency is considered temporary. These persons are collectively referred to as "postdocs" for the remainder of this document. The titles associated with these positions are Research Associate, Postdoctoral Fellow, some Research Associate (Instructor) and Medical Fellows primarily engaged in research.

This survey was modeled after surveys at other academic institutions also concerned with their postdoctoral populations. These other institutions include Baylor College of Medicine (<http://www.bcm.tmc.edu/pda/>), Johns Hopkins (<http://www.med.jhu.edu/jhpda/index.html>), University of California-Davis (<http://postdocs.ucdavis.edu/>), and others.

Advertising of the survey was accomplished by the following:

- 1) Email to postdocs that had signed up to be on the BSD-PDA mailing list
- 2) Email to BSD faculty-wide email list encouraging them to pass on the information to their postdocs
- 3) Flyers placed in all buildings with BSD research labs
- 4) Word of mouth

The survey was placed online (http://gradprogram.bsd.uchicago.edu/index3.html?content=pda/pda_home.html) and could be taken using any Javascript-enabled web browser. There was no tracking of IP address, browser settings, or other information that could uniquely track respondents. In addition, there was also no verification of who was taking the survey. These measures were taken to protect the identity of the survey takers and hopefully increase the number of respondents.

The survey was conducted from Sept 8th 2000 through February 14th, 2001. Sixty-eight responses were received, although two were found to closely match other responses and were probably due to the same persons taking the survey twice. The second responses were eliminated. Thus, sixty-six unique responses were further analyzed. Responses were emailed to one committee member who manually placed the responses in an Excel spreadsheet. This spreadsheet was labeled with the questions and the unique response ID and distributed to committee members for analysis.

While 66 postdocs represent approximately 20% of the BSD postdoc population, this number is too small for most statistical analyses to provide valid correlation. We hope that this information will provide the impetus for further examination of the postdoctoral population needs and perhaps further, more comprehensive information gathering. The survey results are available at the following website

(http://gradprogram.bsd.uchicago.edu/pda/pda_survey_toc.html). You may also email Stephen Gasior (sgasior@midway.uchicago.edu) or Orfeu Buxton (orfeu@uchicago.edu) for further information or for additional copies of the survey.

BSD-PDA Survey Committee

BSD-PDA Survey 2000-2001 Results:

I. DEMOGRAPHIC/BIOGRAPHIC INFORMATION

Q2: SEX

female	28
male	37
unspecified	1

Q3: AGE

av \pm stdev	34 \pm 4 years
range	27 - 50 years

Q4: RESIDENCE STATUS

Permanent Resident / Citizen	36
Application Pending	2
J1 VISA	15
H1B VISA	11
F1 VISA	1
Other	1

Q5: ETHNIC IDENTITY

Black	1
Amer Indian/Alaskan	0
Asian/Pacific islander	20
White	38
Latino	3
Filipino	0
Puerto Rican	1
East Indian	1
Middle Eastern	0
Other	2
Unknown	0
No wish to respond	2

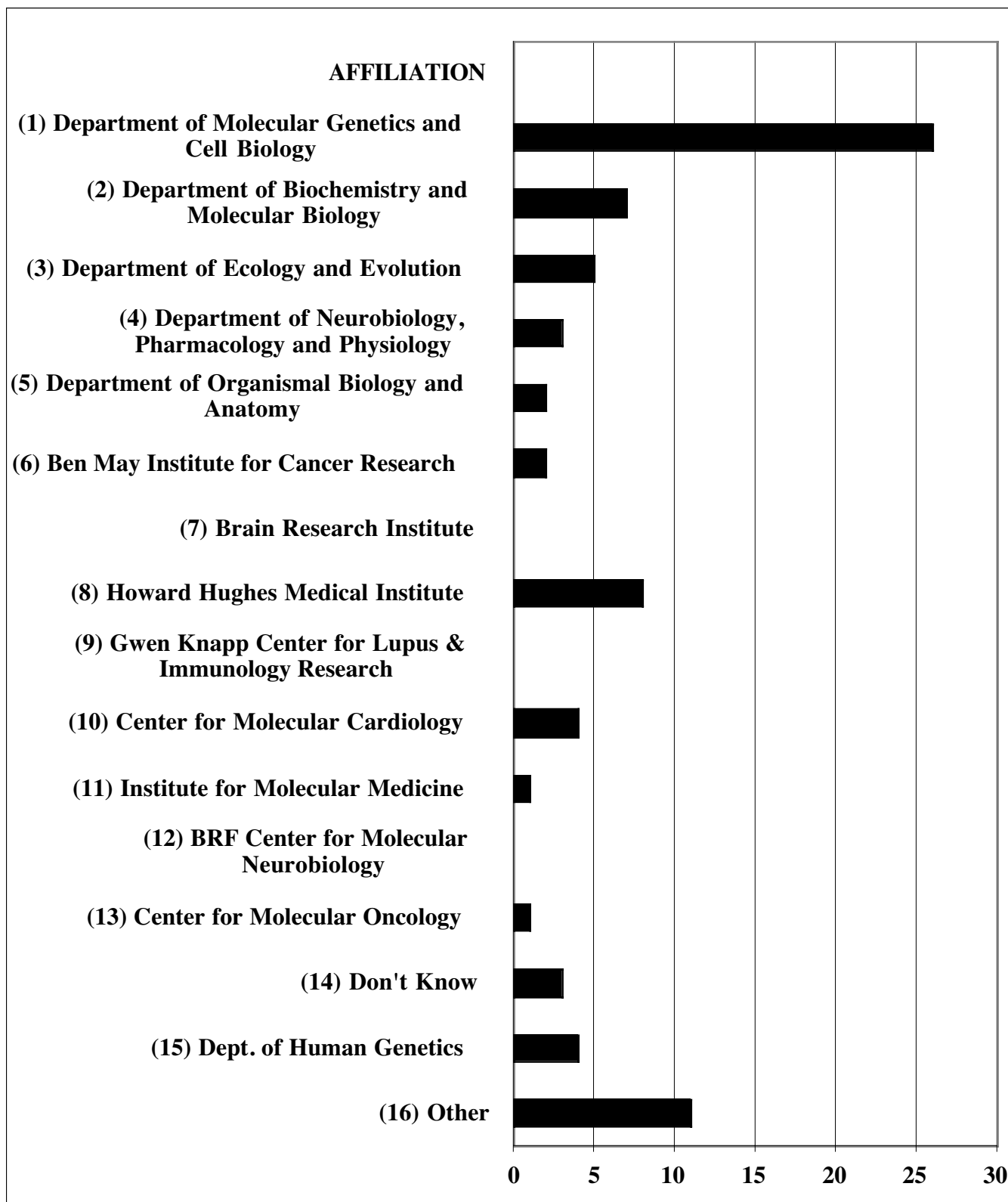
Q6: POSITION

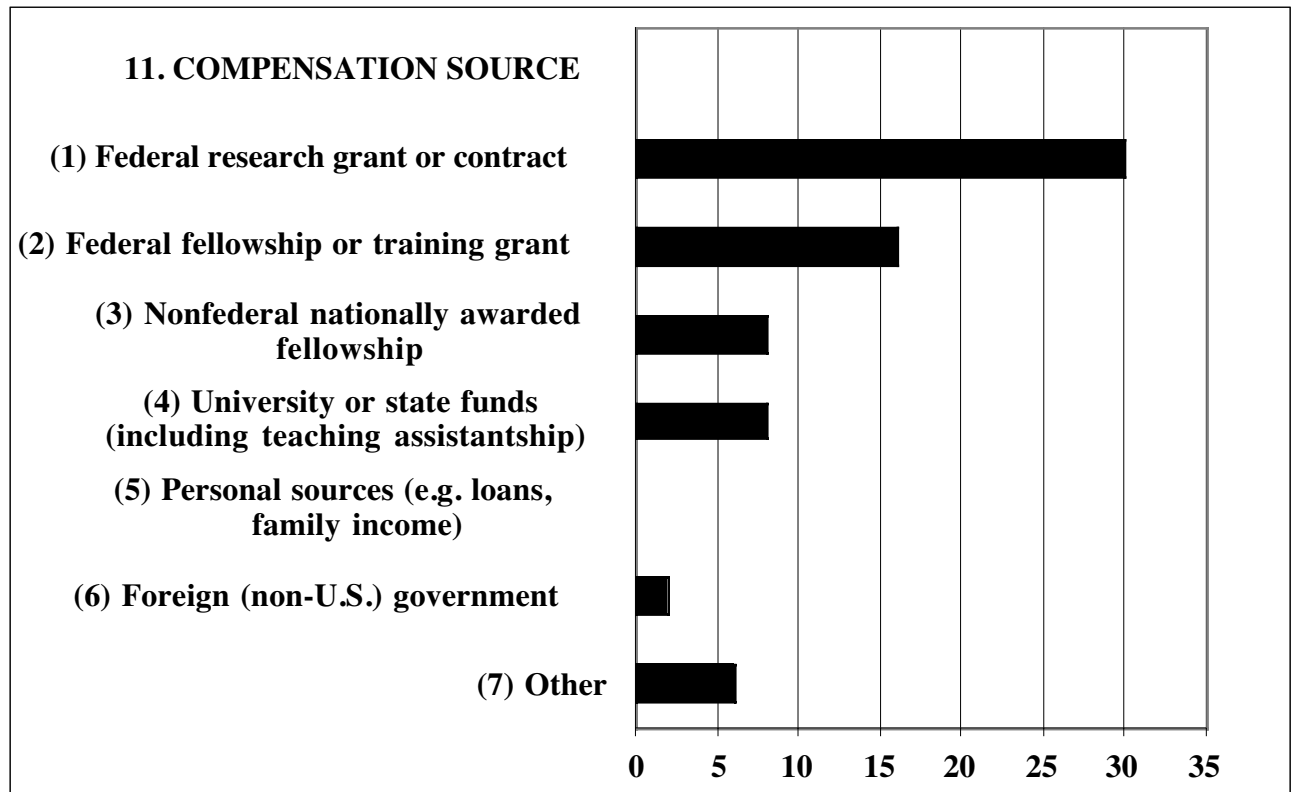
Postdoctoral fellow	26
Research associate	34
Instructor	2
Clinical/medical fellow	1
Don't know	0
Other	2

Q9: RESEARCH TYPE

Basic science	54
Applied science	6
Clinical research	6
Other(specify)	1

Q7: Dept Affiliation



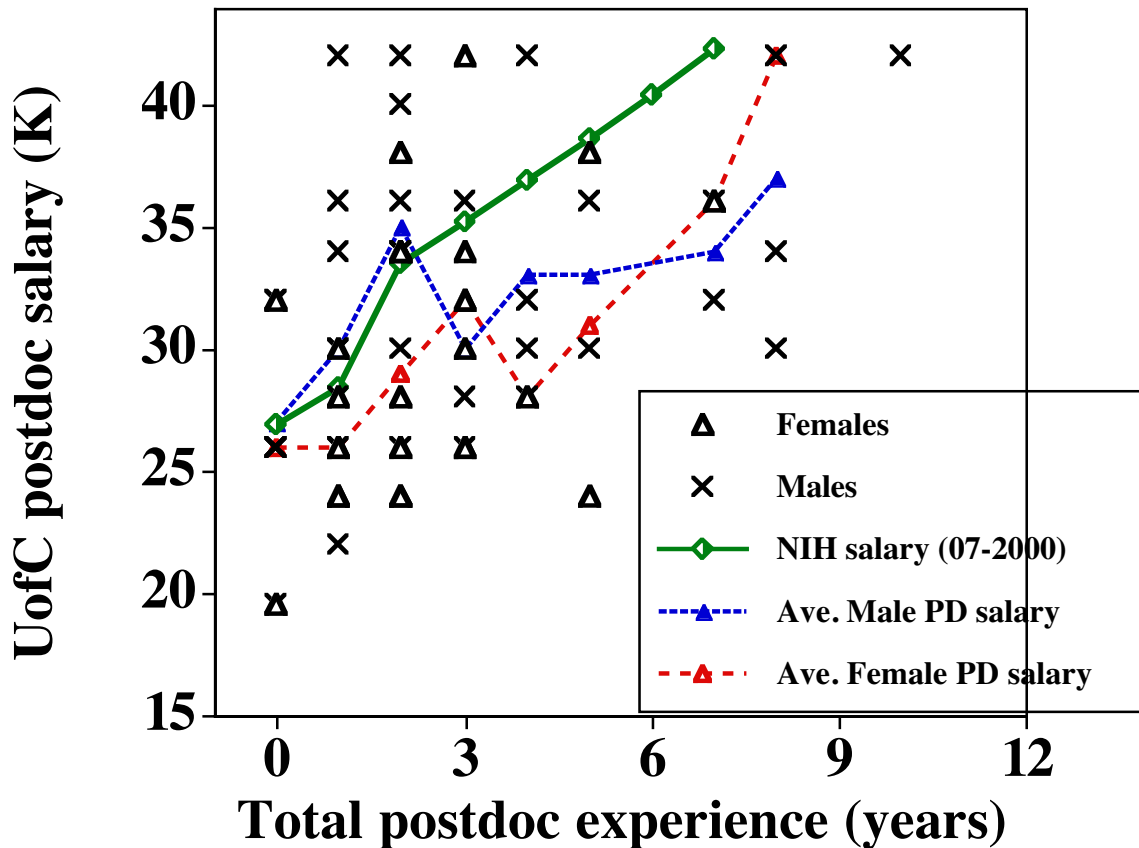


Results: The postdoc population is diverse in ethnic identity, age, and citizenship status, with somewhat more men than women. A majority of respondents are white and/or have permanent resident status or US citizenship. Nearly half have a primary affiliation to the Department of Molecular Genetics and Cell Biology, but since "other" is the second largest and 10 other affiliations were reported, a wide variety of programs are represented.

Interpretation: Initial survey response rates were very good, but further surveys should be collected to allow the BSD-PDA to more effectively advocate for postdocs with the U of C administration and others.

Q10: Years postdoc experience?

Q16: What is your current annual postdoc compensation (i.e. your gross salary or stipend before taxes; do not include the value of additional benefits provided to you by the University in the form of retirement investment or healthcare coverage, as these are normally not considered part of your salary)?



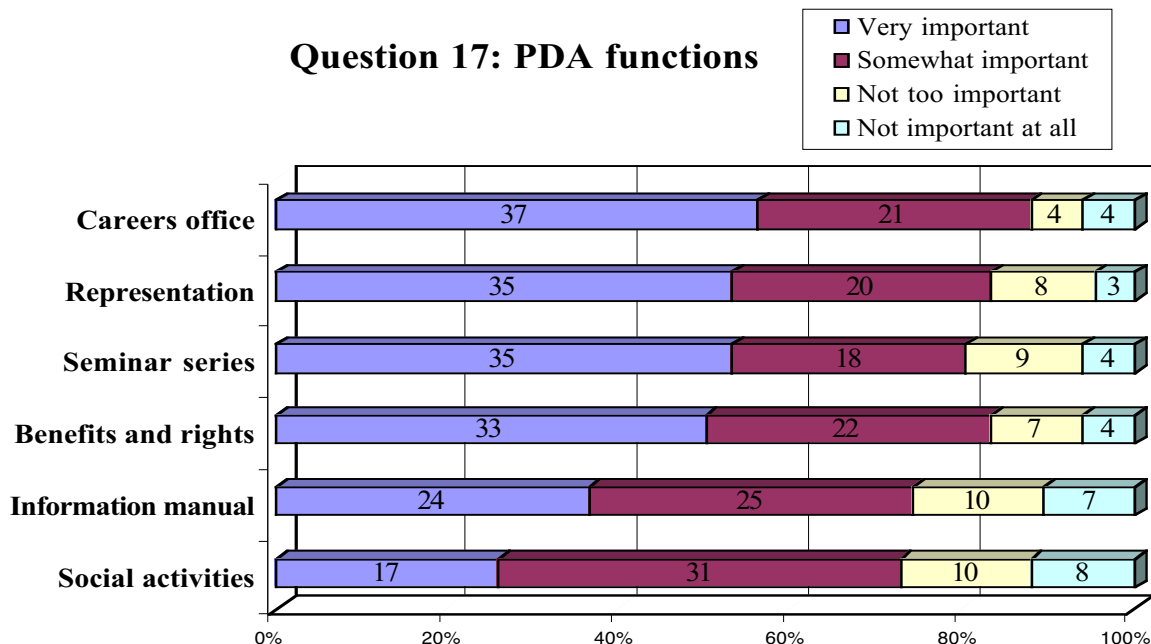
Results: The majority of BSD postdoc respondents reported salaries below the NIH minimum salary levels based on years of cumulative postdoctoral experience (effective 07/01/2000). Since the maximum reportable salary was ">42,000", the extent of the disparities may have been underestimated. A difference in salaries based on sex was also apparent. With 0-2 years of experience, men on average had higher salaries than women. This difference was no longer apparent after 3 years of experience or greater.

Analysis: Overall, the differences based on sex were not statistically significant. However, it seems clear that many postdocs lag well behind federally-recommended salary levels.

Interpretation: With greater numbers of respondents, it will be possible to determine whether sex, departmental affiliation, field, or other factors most account for the differences in salary. Nonetheless, "raising all boats", or improving postdoc salaries to the NIH minimum standards appears to be a promising avenue by which the PDA can have a serious impact on BSD postdocs. Salary is obviously an inflammatory topic for many, and a cautious approach would be advisable.

II. Role of postdoctoral scholars association at U. of Chicago

Question 17: Rate the functions you think the PostDoctoral Association should perform using a scale of very important, somewhat important, not too important, not important at all.



Numbers inside the bars correspond to the number of responses

Comments Representation, the development of a careers office and seminar series, as well as providing information regarding benefits and rights seem to be the priority functions that the PDA should have. Interestingly, 26 persons rated the organization of social activities as the most "somewhat important priority".

Question 18: The Postdoctoral Association is compiling an orientation / information manual for postdocs, what information would you like this manual to provide (check all appropriate)

Orientation manual content	# times checked		
Benefits and rights	55	Campus organizations	41
Scientific resources and facilities	53	Financial aid and funding	39
Visa issues	51	Campus organizations	36
Tax issues	48	Child care	35
Transportation	46	Arts and leisure activities	32
Career and employment referrals	45	U of C administration structure	31

III. Postdoctoral training

Question 19: How many people does your PI supervise?

Results:

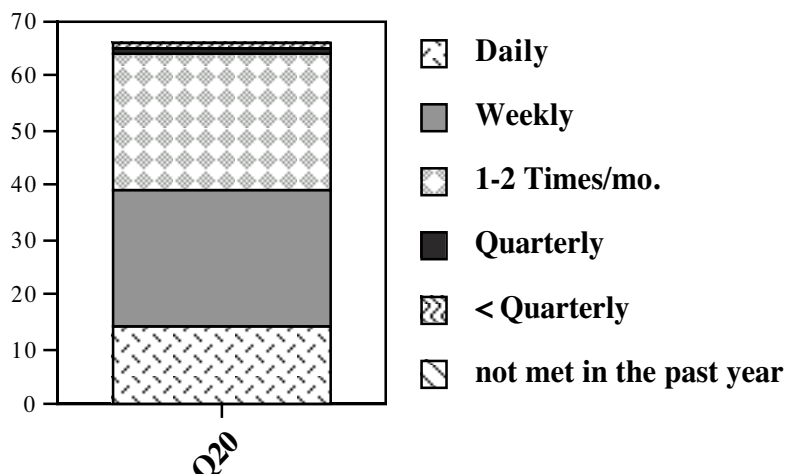
Ph.D. / M.D.	3.6 ± 2.4 S.D.
Grad students	2.3 ± 2.1 S.D.
Technicians	2.2 ± 2.0 S.D.
Undergrads	2.2 ± 2.4 S.D.

Comments: There are very few “mega” labs at the U of C such that a PI is supervising more than 7 postdocs at one time. The smaller to moderate size labs here should be favorable to postdocs receiving more personal attention from their PIs.

Question 20: In the most recent year how often did you meet individually with your principal investigator/mentor to discuss your work?

Result: With only 2 exceptions, postdocs meet with their PI at least quarterly and half report meeting frequently or daily.

Analysis: The average number of postdocs advised per PI is 4.5 among those meeting 1-2 times per month. Those postdocs who meet more frequently are in labs whose average postdocs supervised is 3 (eliminating a single >12 response in this latter group lowers the average to 2.8).



Interpretation: Most postdocs meet sufficiently often with their PIs to get feedback and advice. The potential correlation with increasing postdoc numbers in a lab and decreased meeting frequency is consistent with larger labs providing a less personal PI-postdoc interaction.

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Question 21: Have you received any performance evaluation in the most recent year?

Result 21:

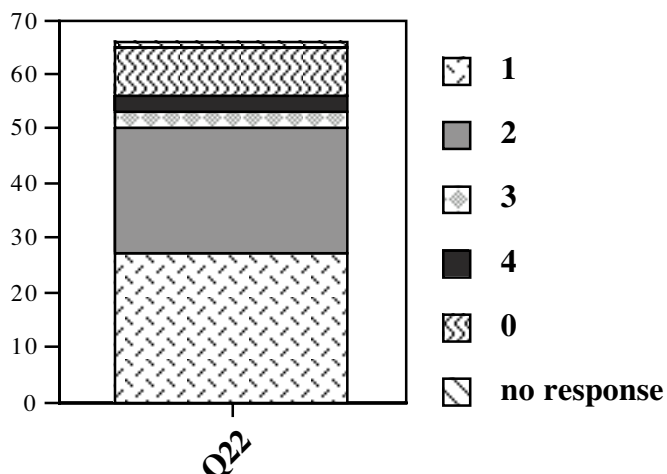
yes, written	7 (10.6%)
yes, oral	17 (25.8%)
none	42 (63.6%)

Question 22: How many times per year would you like your performance to be evaluated?

Result 22:

Comments: Very few postdocs receive written performance evaluations even though many would like evaluations one to two times per year. The lack of performance evaluations in the postdoc setting is a strong departure from both graduate education (which includes multiple faculty meetings) and from the corporate setting. This departure is probably due to a

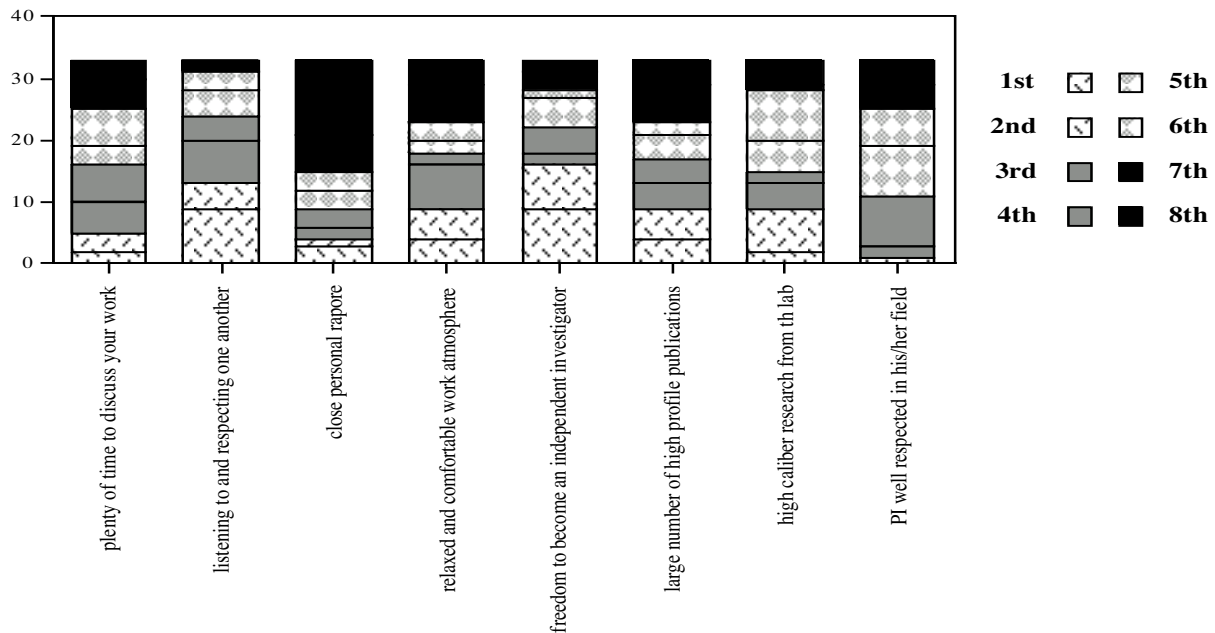
lack of oversight mechanisms of postdoctoral training and to a perceived desire for freedom from oversight among postdocs. Also, the failure to have written documentation of performance also means that grievances between PIs and postdocs have no written record for evaluation by third parties. Finally, the low frequency of any type of evaluation suggests that postdocs may have little sense in their progress towards fulfilling their training goals.



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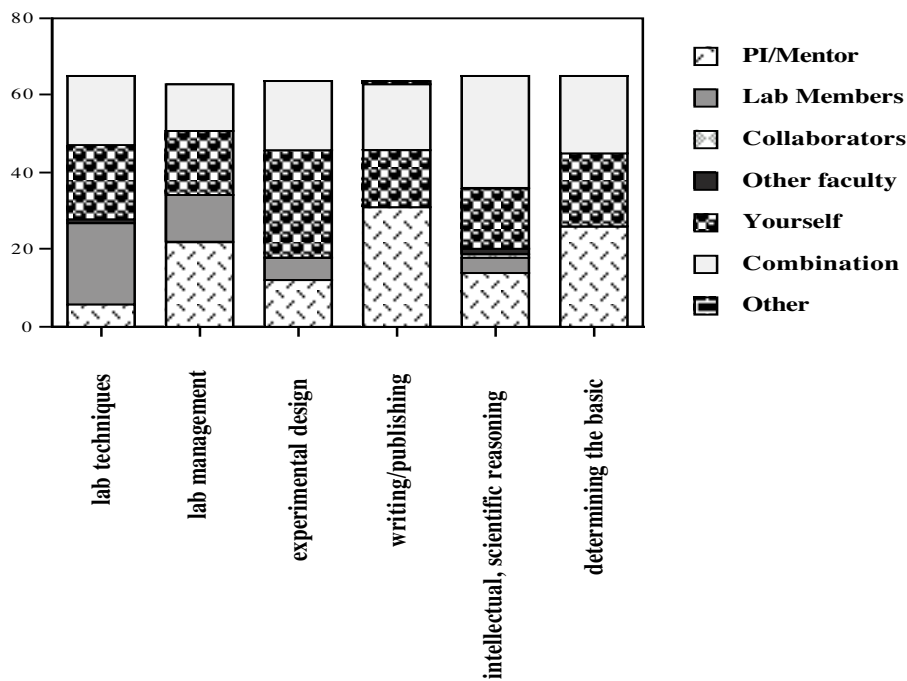
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Question 23. What are the most important aspects of a successful postdoc-PI experience? (rank in order from most important = 1 to least important = 8)



Result: Due to a fault in the wording of the question (“rank” was ambiguous) only 33 responses for this question were valid. Those responses in which rank values were NOT duplicated were analyzed. Most important aspects (most often ranked #1 or 2) are ‘Listening to and respecting one another’ and ‘Freedom to become an independent investigator.’ The least important was ‘close personal rapport’

Question 24. The majority of your training in each of the following areas comes from . . .

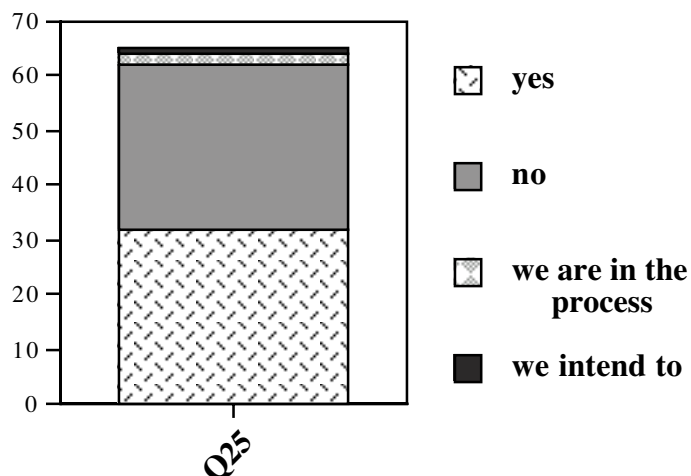


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Result: While most areas surveyed show about one-fourth of postdocs' training comes from a combination of factors, there is also a high degree of self-learning among postdocs in all areas. Notably, lab techniques and experimental design show a low frequency of PI-only direction while writing shows a high frequency of PI-only. This response is consistent with the role of a PI as a facilitator of publishing and grant writing while not providing direct help with the experiments themselves.

Question 25: Did you and your PI write a plan (proposal) detailing the expectations of your project(s)?



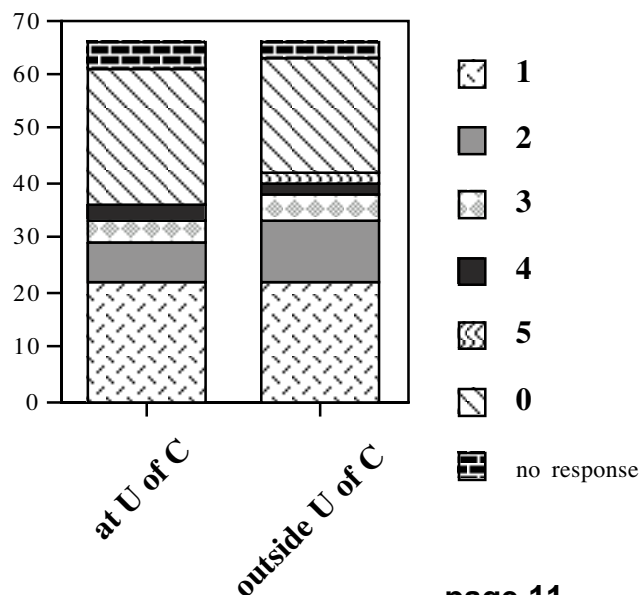
Result: About half of postdocs wrote a plan detailing the expectations of their projects. The question was ambiguous as to whether this was a separate document compared to fellowship applications. However, fully half of postdocs never wrote a research plan.

Comments: The absence of written plan detailing the research expectations could potentially mean many postdocs do not have a clear understanding of the scope of their

research training and when their postdoc training will likely be at an end. In addition, the NAS COSEPUP *Enhancing the Postdoctoral Experience* guide(<http://www4.nationalacademies.org/pd/postdoc.nsf/web/homepage?OpenDocument>) suggests not only should a plan be written detailing the research expectations but also for other aspects of the training period and what the postdoc would ultimately like to accomplish for his or her career.

Question 26. During the past year, how many times have you presented your research outside your lab group?

Result: The majority of respondents present their work once or not at all in these two different settings. There were 15 respondents that have not presented their work in either setting.



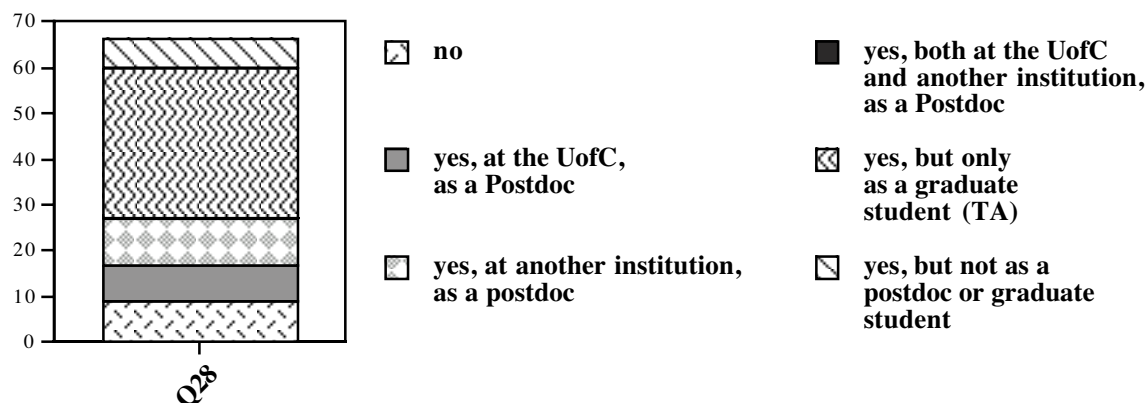
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Question 27: Would you like your postdoctoral training to include teaching experience?

Result: Yes 42 (63.6%)
No 14 (21.2%)
Don't know 10 (15.2%)

Question 28: Have you had any experience teaching?



Question 29. Have you, as a postdoc, mentored (longer than just to explain a technique) others?

Result: no 20 (30.3%)
yes 27 (40.9%)
yes, elsewhere 19 (28.8%)

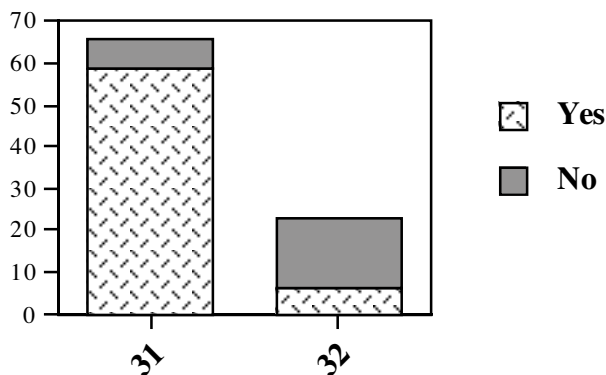
Question 30. Do you think there should be more opportunities to practice talks and to teach available for postdocs?

Result: yes 46 (69.7%)
no 13 (19.7%)
don't know 6 (9.1%)

IV. JOB MARKET FOR SCIENTISTS/CAREER ISSUES

Question 31: Did you take a postdoctoral appointment within a year after receiving your doctoral degree?

Question 32: If you did not take a postdoctoral position within a year of receiving your doctoral degree, did you have difficulty in finding a job or postdoc?



Results: 59 out of 66 respondents replied yes to question 31. The majority of respondents said they had no trouble finding a postdoctoral position; however, most responses came from those who replied yes to question 31.

Interpretation: Most postdocs went directly from obtaining Ph.D./M.D. to postdoc; the job market is favorable although this could merely reflect U of C hiring practices.

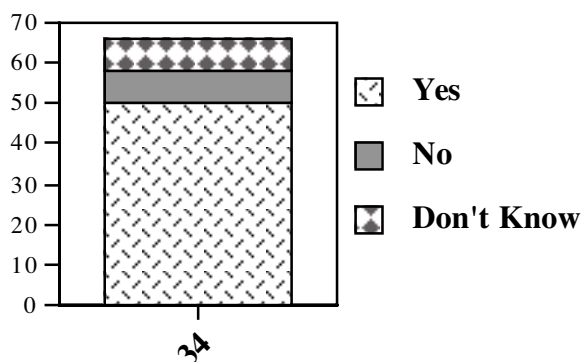
Question 33. What were the reasons for taking your FIRST postdoctoral appointment? (Multiple responses allowed)

Result: Of 66 respondents, 43 said they took their postdoc to obtain research experience in a different field of research. This was the most common answer although of these 43, 9 also wished to obtain experience in their graduate field, 17 wished to work with a particular scientist or group, and 1 couldn't get employment in desired position (Multiple responses were available). Couldn't get employment in desired position was only observed 4 times.

Question 34: Do you wish to pursue a career in the U.S. if possible?

Result: 50 of 66 respondents wish to pursue a career in the U.S.

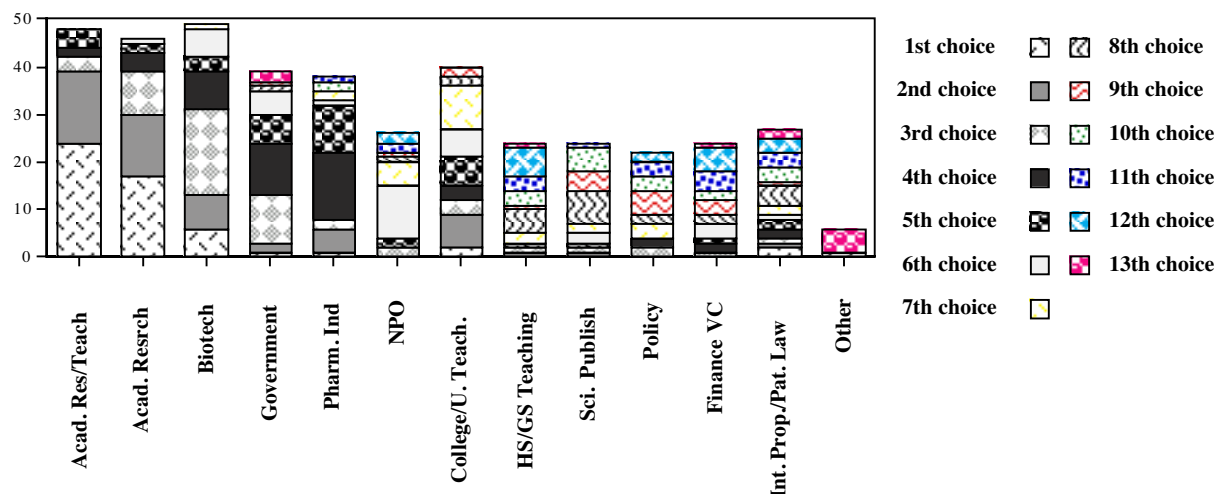
Analysis: 7 of the 8 respondents who replied "No" received their Ph.D. or M.D. from another country (the 8th did not provide this information). 6 of the 8 respondents who replied "Don't Know" received their Ph.D. from another country (the other two received Ph.D.'s in the U.S.A.) The majority of people who received their Ph.D. from non North American countries desire to stay in the U.S. (15 out of 28)



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Question 35: In what field do you plan to pursue a career?



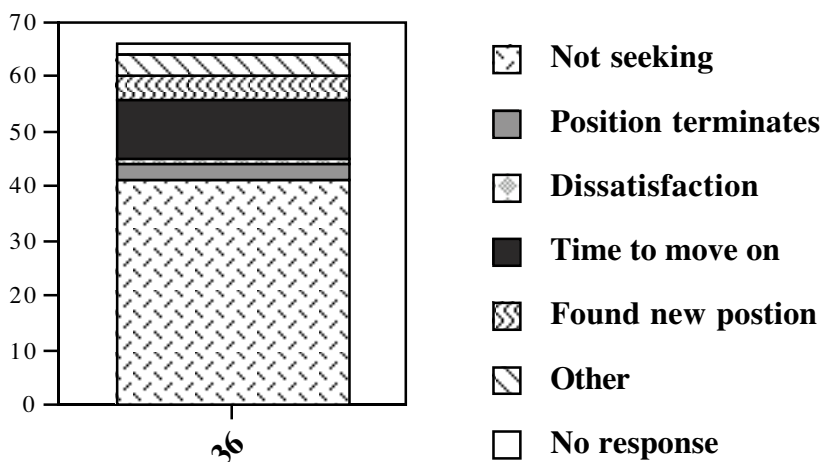
Result: Due to ambiguity in the question, only 54 valid responses are used in this analysis. Only those responses that gave each category a unique rank were analyzed. The majority of respondents wish to pursue a career in “Academic research/teaching, Academic research, or Biotech.” These career paths were ranked 1st/2nd in 47/35 of the 54 responses. “Biotech” and “Government” were ranked 3rd in 28 responses. “Pharm. Industry” was ranked 4th in 14 responses (the largest 4th ranking). Another noteworthy item is that 9 people put College Teaching as their 1 or 2 choice.

Interpretation: The majority of postdocs wish to pursue a career path that is of an academic nature. Government, biotech or the pharmaceutical industry are strong third/fourth choices.

Question 36: Which of the following best describes your immediate career plans?

Result: 41 of 66 respondents are not currently pursuing a new position. Only 1 postdoc is pursuing a new position due to dissatisfaction with current position.

Analysis: 33/41 postdocs who are not currently pursuing a new position said they are in their 0-2nd year of the postdoc at the U of C.



Interpretation: Given that a majority of survey takers are in only the second or third year of their postdoc, this response is typical of the fact that postdoctoral training usually takes greater than 3 years and early postdocs have not started the job search for the next phase.

Biological Sciences Division Postdoctoral Association Survey 2000-2001

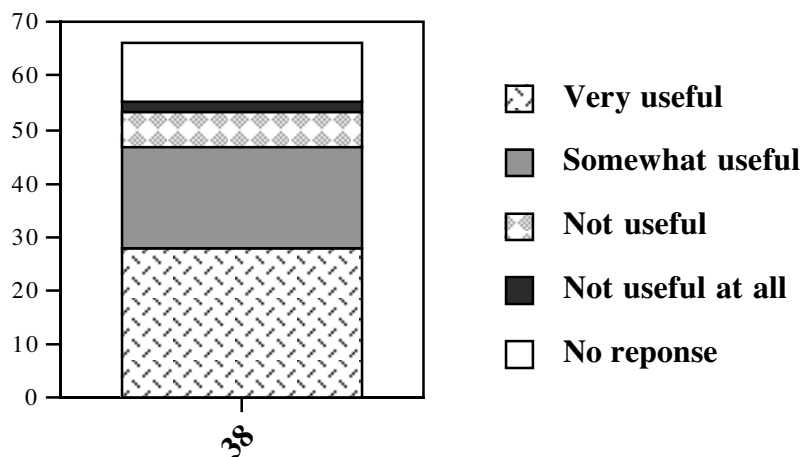
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Question 38. How useful has your postdoctoral experience at U of C been in preparing you for your intended career?

Result: 47 of 55 respondents answered "very" or "somewhat useful." Only 8 respondents chose "not useful" or "not useful at all."

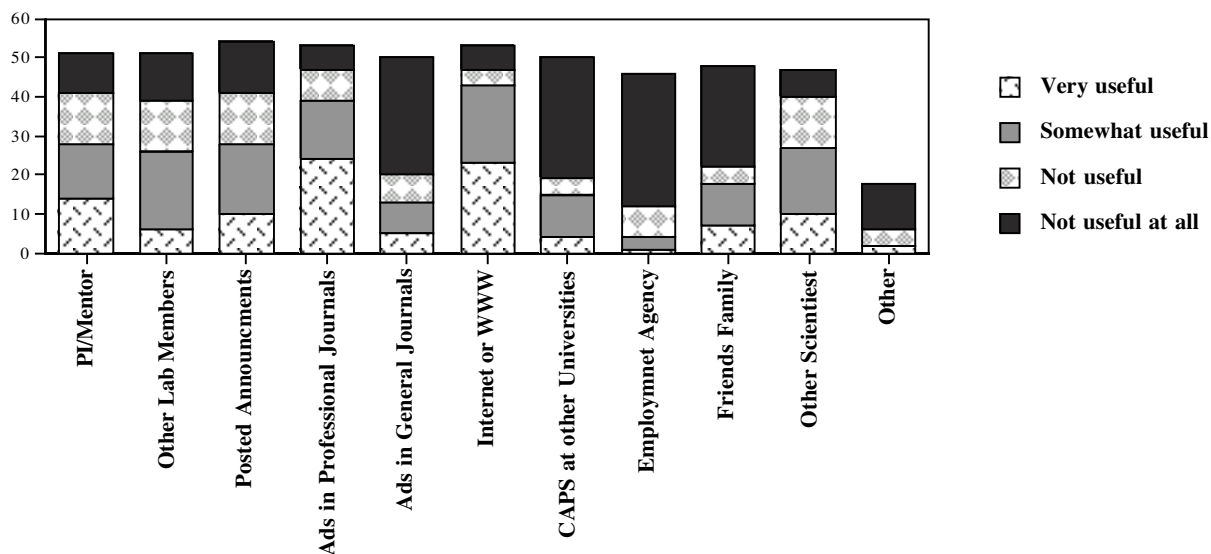
Interpretation: Most postdocs consider their experience here as providing preparatory training for their intended career. No noticeable correlation to finding it 'not useful' was observed to other survey responses. In hindsight, an

additional question to ask was whether postdocs felt their experience here was "sufficient" for their intended career. This question does not address this issue. Considering that a majority of respondents wish to go into academic career paths, this is not surprising that U of C's traditional training appears to provide at least some useful training.



Question 39. How useful have the following resources been to you in providing information about jobs/careers?

Results:



Analysis: Traditional networking and professional contacts as well as ads in professional journals seem to be the most useful.

Biological Sciences Division Postdoctoral Association Survey 2000-2001

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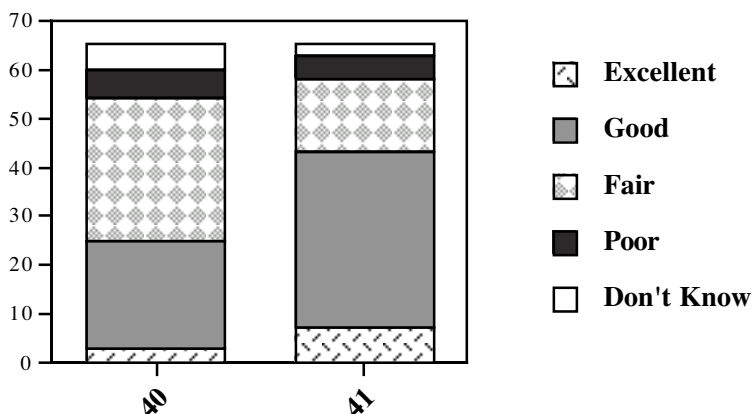
Question 40: What is your perception of the job market for scientists now?

Question 41: How would you rate your chances of finding a satisfying career?

Result 40, 41:

Analysis: These results are pretty similar when the good and fair responses are grouped. These similar distributions suggest that the extreme feelings are pretty similar for the overall question and the personal question.

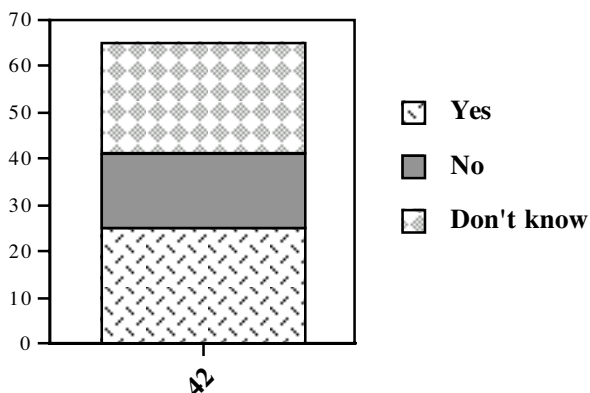
Note, 36 felt his or her personal chances at finding a satisfactory career are good versus 22 for the overall job market. Additional comparisons to gender showed that both males and females showed similar distributions for their responses to these questions.



Interpretation: The fact that more people responded good for their personal chances suggests that postdocs perceive the U of C as an above average training opportunity for career advancement.

Question 42: Do you think your postdoctoral PI/mentor has a realistic view of the job market for scientists today?

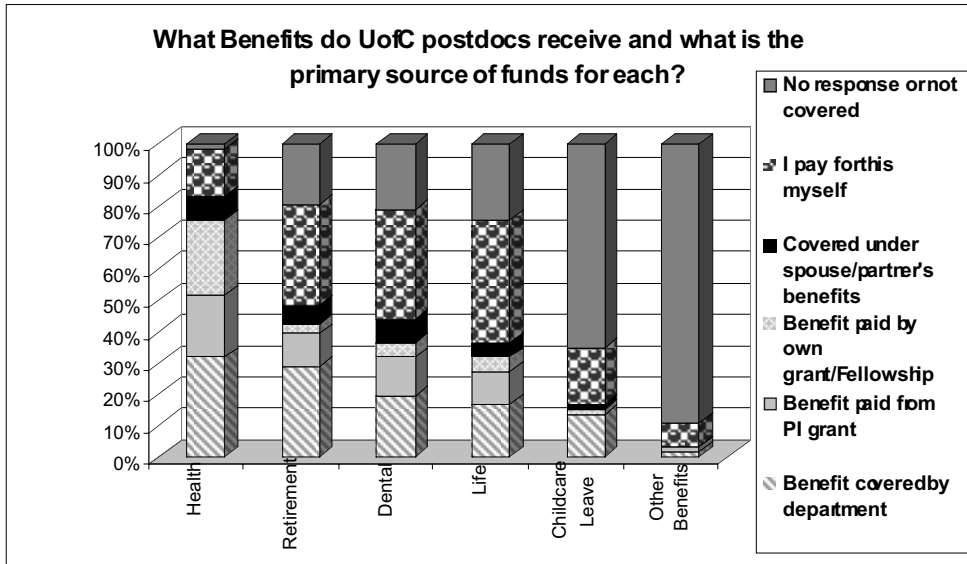
Result:



Analysis: The responses are pretty well split. Within the "don't know" group only 3 said their PI was very or somewhat useful in providing information for career advancement (Q 39-1).

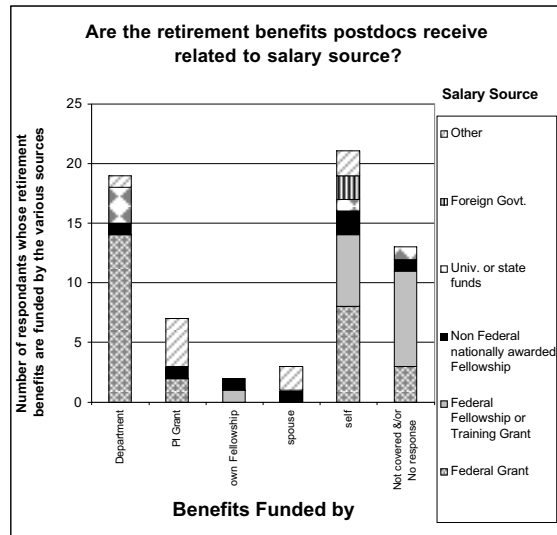
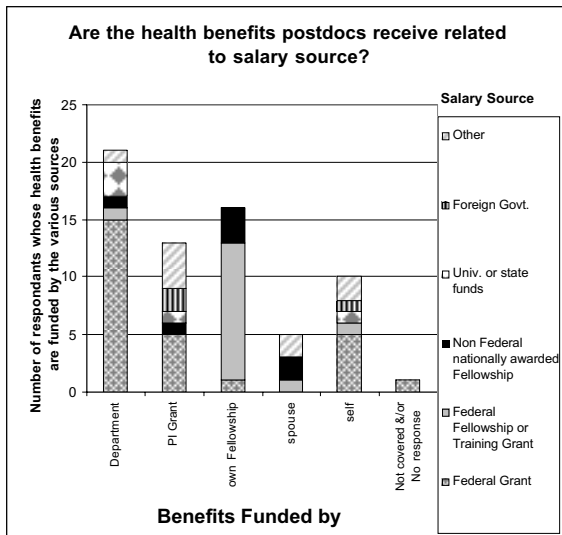
V. BENEFITS

Question 43: What benefits do U of C postdocs receive and what is the primary source of funds for each?



Of the 66 postdocs responding to the survey, 98% have health insurance with 76% of them covered by the department, a PI's grant or the postdoc's own fellowship; an additional 22% pay for the insurance themselves or are covered under a partner's plan. Decreasing percentages of postdocs receive retirement, dental, and life insurance coverage with an increasing percentage of people paying for these benefits themselves. Very few postdocs receive childcare leave or other benefits.

Analysis: Are the benefits that postdocs at U of C receive related to salary source?



Biological Sciences Division Postdoctoral Association Survey 2000-2001

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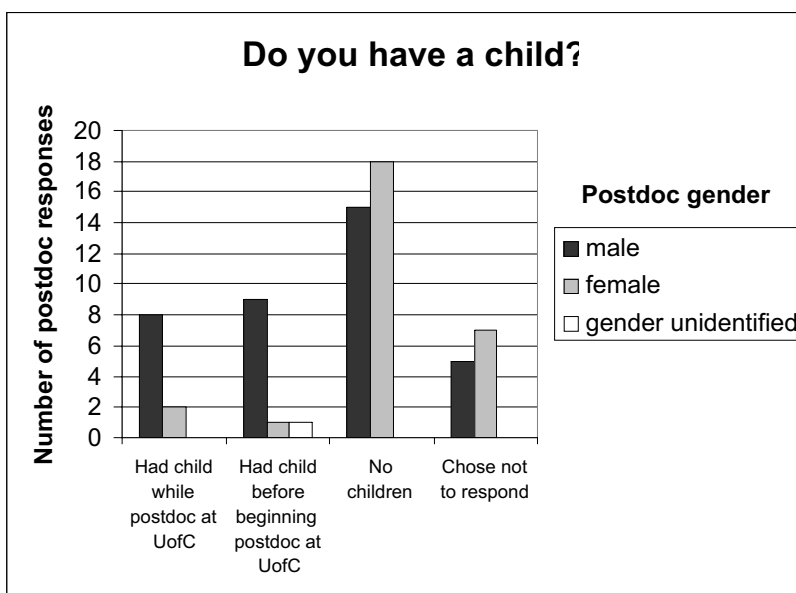
Of 27 postdocs whose salaries are paid by federal grants, 78% have health insurance and 59% have retirement paid by either the department, the PI's grant or their own fellowship. Of the 15 postdocs on federal fellowships or training grants, 87% have health insurance paid by the department, the PI's grant or their own fellowship; but only one person has retirement paid by same. Of 7 postdocs with their own fellowships, 5 have health coverage and 3 have retirement benefits paid by the department, the PI's grant or their own fellowship. Of the 17 postdocs who have salaries paid by other sources, health insurance is covered for 65% and retirement is covered for 47% of them.

Interpretation: there is no standard benefit coverage for postdocs at The U of Chicago.

Question 46: If you have a child, was that child born while you were a postdoc at U of C?

Thirty-three of 66 postdocs indicated that they have no children and twelve chose not to respond to the question. Eleven postdocs had children before they began their positions here and 10 had children while they were postdocs here. Of the 21 postdoc parents, only three are women, (one postdoc chose not to identify their own gender).

Issue: why do fewer female postdocs at U of C have children than their male counterparts? And, is this a national trend?



Question 47: If you had a child while a postdoc at U of C, did you receive childcare leave and was it paid?

Childcare leave was provided to 8 of 10 people who had children while they were postdocs at U of C; number of months leave ranged from 1-8 months for males – all paid; and was 6 months for each of two females – one paid and one unpaid.

The survey did not ask if leave was requested and fulfilled as desired or denied. The survey also did not ask if those who received leave continued to work in the lab but perhaps with reduced responsibilities – this could explain why most leave was paid while in one case it was not.

Biological Sciences Division Postdoctoral Association Survey 2000-2001

<http://pda.bsd.uchicago.edu/>

Question 48: If you have children, what is your perception of childcare availability?

Eighty percent of respondents with children born while they were postdocs at U of C indicate that childcare availability is poor while 67% of respondents with children born before beginning their postdocs at U of C indicate that childcare availability is good to excellent.

Issue to address: Perhaps the difference in responses reflects a difference in the age of children; if so, there may be a lack of high-quality infant childcare in the area. Alternatively, perhaps new parents are not as aware of the childcare that may be available; it is also possible that infant childcare in the area is too expensive – these issues could be addressed by the PDA.

Status was the main additional issue raised by postdocs in the open comments field. This is a summary (paraphrased) of some of the comments made:

- Are postdocs students, staff, self-employed, or what...?
- Why are postdocs' salaries so low? Perhaps the student classification is justification for keeping salaries low; but then if postdocs are students, shouldn't we receive tuition wavers, serious career training, and free bus service?
- There is no standard categorization of postdocs nor is there a standard of treatment. For example: postdocs who receive outside fellowships or training grant fellowships are not considered employees and do not receive the same benefits that "employees of the U of C" receive; however, some do receive benefits but the level of coverage appears to be dependent upon the PI. These postdocs face the additional burden of paying estimated taxes just as people who are self-employed must do, but they do not garner the benefits of being considered self-employed by the IRS for tax purposes.
- Does the U of C cover worker's compensation insurance for these non-employees?
- Does the U of C even know who its postdocs are, or which labs they are in? Where do postdocs stand???

When asked what additional benefits U of C should offer its postdocs, these were the responses (the most requested benefit is listed first):

Health insurance
Dental insurance
Retirement plan
Daycare, especially for infants
Additional training, especially in bioinformatics
Tuition wavers
Life insurance
Job search assistance for spouses
Security is an issue because postdocs work odd hours; escort service?
Parking passes
Gym passes