

Final Report of the Washington University Faculty Senate Council Gender Pay Equity Committee

Introduction

In November 1997, the Faculty Senate Council established the university-wide Faculty Senate Council Gender Pay Equity Committee to review the progress of the University toward pay equity for faculty since the last study in 1990. The committee was chaired by Jean Ensminger. The committee completed the analysis of seven of the schools in the spring of 2000. The committee did not consider non-professorial tracks. The committee did not look at issues external to salary. Jean Ensminger reported the results to the Faculty Senate Council and to the Faculty Senate. The committee concluded that the data from those seven schools provided no evidence of gender bias in the setting of salaries. A summary report was posted on the Washington University website. After Jean Ensminger left the university, Joseph A. O'Sullivan was appointed chair of the Gender Pay Equity Committee.

The analysis at the School of Medicine was delayed for several reasons. First, a pilot study was not completed until December 1999. Second, the School of Medicine decided that a separate gender pay equity committee should be appointed by their Executive Faculty, and that committee should do the analysis, rather than having the Faculty Senate Council Gender Pay Equity Committee perform the analysis as was done in the other seven schools. Linda Pike served on both committees; Joseph A. O'Sullivan attended meetings of the School of Medicine committee. The Washington University School of Medicine Gender Pay Equity Committee submitted a draft report to the larger Gender Pay Equity Committee in August 2001. Their final report was approved by the Executive Faculty of the School of Medicine on April 3, 2002, with minor edits completed April 10, 2002.

The final composition of the Faculty Senate Council Gender Pay Equity Committee was: Joseph A. O'Sullivan, Linda Pike, Nancy Berg, Edward Spitznagel, Martin H. Israel, Susan Appleton, Brian Suarez, and Lee Epstein. The composition of the Washington University School of Medicine Gender Pay Equity Committee was: Philip Stahl, Ph.D., chair; Barbara Cant (Human Resources); Lynn Cornelius, M.D.; Diana Gray, M.D.; Linda Pike, Ph.D.; Michael Province, Ph.D.; D.C. Rao, Ph.D.; Marilyn Siegel, M.D.; and Charles Zorumski, M.D.

The recommendations in this final report were endorsed by the Faculty Senate Council on March 25, 2002. This document was finalized and presented to the Faculty Senate April 15, 2002.

Comments

The Faculty Senate Council Gender Pay Equity Committee requested that pilot studies be run in Arts and Sciences and in the School of Medicine to determine whether measures of productivity or merit added significant predictive power over summary variables such as Department, years at Washington University, years since degree, last degree (M.D. or Ph.D.), rank, track, etc. The School of Medicine selected a "pilot department" in which the pilot study would be run. In addition, they selected a faculty member at the School of Medicine to do the

analysis. The methodology included entering detailed data extracted from the CV's of all faculty in the pilot department. The conclusion of these pilot studies was that the measures of productivity (or merit) considered in the pilot studies failed to improve the predictive power sufficiently to warrant inclusion in the analysis. Based on this result, the Faculty Senate Council Gender Pay Equity Committee requested in December 1999 an analysis of the salary data from all faculty at the School of Medicine, not using measures of productivity (or merit).

The School of Medicine Gender Pay Equity Committee, chaired by Phil Stahl, was appointed at that time. The School of Medicine submitted a draft report in August 2001 using a methodology based on these summary variables. D.C. Rao and Mike Province from the Division of Biostatistics performed the analysis. Compared with models used in other schools of the university and with the models used in the studies approximately ten years ago, the new models had greater predictive value in the sense that the R^2 value was higher ($R^2 = 0.77$ with 22 degrees of freedom (DF)). The draft report found a statistically significant difference in pay between men and women, a large part of which is concentrated at the full professor rank on the investigator track.

The draft report was presented and discussed at Faculty Senate Council meetings and at a meeting of the Executive Faculty. Motivated by suggestive/borderline evidence indicating a potential gender difference at the Assistant Professor level on the clinician track, Dean Peck asked the School of Medicine GPE Committee to evaluate that group further and identify if additional recommendations were warranted. Further analysis of this group led to some anomalous findings, which in turn uncovered the existence of measures of performance (clinical income, relative value units or RVUs, and grant expenses) available through another administrative unit of the School of Medicine. Using the basic variables and these performance variables, a new analysis was begun in January 2002 and completed in March 2002 (while also using a refined methodology for performing the statistical tests). The new methodology started with smaller subgroups of faculty, recognizing several individual Divisions within two large departments. In the end, the new analysis yielded a model with fewer degrees of freedom (17 as opposed to 22) and a higher predictive value (R^2 value of 0.86 as opposed to 0.77).

The basic finding of this second set of analyses is that the new performance-inclusive model finds borderline significant evidence indicating gender differences and, again, a large part of the potential problem appears confined to the full professors on the investigator track. Although the report finds the evidence not formally statistically significant, it recognizes that the evidence is borderline, thus requiring a careful review of compensation levels with particular attention paid to the full professors on the investigator track. The recommendations from the School of Medicine Gender Pay Equity Committee are as follows:

1. The Dean will provide each Department Head with a listing of all faculty in their departments, along with their predicted compensation levels and the 95% confidence limits. The Department Heads should use this information to determine whether FY2000 compensation is fair and meaningful, paying particular attention to those female full professors on the investigator track who fall below the 95% confidence range.
2. The Department Heads should inform the Dean in writing of their evaluations of the compensation of each female full professor on the investigator track, indicating any adjustments made or explaining why no change is warranted. The Dean, in consultation with the Chair of the GPE Committee, will report the results to the GPE Committee. The

GPE Committee will carefully review the results and actions, and recommend to the Dean whether further action needs to be taken.

3. Beginning with data for FY2003, the Associate Dean for Faculty Affairs/Office of Faculty Affairs should initiate a biennial analysis of pay equity, to determine whether progress has been made in eradicating the suggestion of any gender differences in compensation. These biennial analyses will use the model that included measures of performance (as in the Basic Plus Performance Model) unless additional information on variables relevant to compensation becomes available. These analyses should be carried out by an outside individual or organization (who are sufficiently familiar with the medical school setup and compensation policies). The results of the biennial analyses will be reported to the Dean. The Dean will report the findings to the Academic Affairs Committee of the Executive Faculty as well as the GPE Committee. Review and adjustment of the compensation levels of female faculty members should continue until two sequential studies provide no suggestion of any gender gap in compensation. Subsequently, pay equity studies should be carried out every five years at the School of Medicine to ensure that pay equity is maintained.

At the same time that these studies have been active at Washington University, there were similar efforts and studies at other universities and nationwide. The following comments are extracted verbatim from the final report of the School of Medicine Gender Pay Equity Committee:

Gender differences have been found in national pay equity analyses as well as in studies undertaken by specific institutions. In 1999, the Massachusetts Institute of Technology admitted that their female faculty “suffer from pervasive, if unintentional discrimination” [1]. This discrimination took the form of differences in salaries, resources provided and the treatment of women faculty. The MIT report documented historical bias that is “subtle, but pervasive” [2]; over a career there can be “an accumulation of slight disadvantages.” That report describes “differences in salary, space, awards, resources, and response to outside offers between men and women.”

More recently, Ginther [3] used data from the national Survey of Doctorate Recipients to evaluate employment outcomes for women in science and engineering. Analysis of salary differences indicated that over time the differences in male and female salaries at the assistant and associate professor level can be explained by observable characteristics, including productivity. However, she found that substantial gender salary differences among full professors could not be explained by observable differences. In 1997, this amounted to a 15% salary gap overall for women in science and engineering but a 23% gap for women full professors at medical schools. She concluded that nationwide, “gender discrimination similar to that observed at the Massachusetts Institute of Technology accounts for unexplained gender disparities.”

Conclusions

1. The Faculty Senate Council Gender Pay Equity committee accepts the analysis performed by the School of Medicine Gender Pay Equity committee.

2. When analyzed without including measures of productivity or merit, the data show a statistically significant difference in salaries between men and women. When analyzed including three measures related to productivity and performance, the overall gender differences in salaries decrease, but do not disappear completely (two-sided P value increases from 0.006 to 0.077).). (As noted in the GPE report, the P values used two-sided tests, corresponding to the question “Are women paid differently than men?” One-sided tests, corresponding to the question “Are women paid less than men?” would yield P values half of those reported, increasing their interpreted significance.)
3. The data show that a large part of any real difference is associated with a difference in salaries at the full professor rank on the investigator track. Approximately ninety percent of the full professors (both men and women) are on the investigator track. This difference is statistically significant when clinical revenue, RVUs, and grant income are not included (two-sided P value of 0.012). When including these three measures, the two-sided P value increases to 0.075, which, although not formally statistically significant, indicates borderline evidence. (Again, if a one-sided test had been used, the P values would be half those reported, increasing their interpreted significance.)
4. The 20% difference between female and male median deviations among Associate and Full Professors on the research track in the basic-plus-performance model (Table III in the final report of the School of Medicine Gender Pay Equity Committee), while having slightly less significance (two-sided P value of 0.090) than the difference of full professors on the investigator track, should also be a cause for concern and attention. (Again, if a one-sided test had been used, the P value would be half that reported, increasing its interpreted significance.)
5. These data do not eliminate the possibility of gender bias in the setting of salaries in the Washington University School of Medicine.
6. Without the three measures of performance included, the differences in salaries between men and women are comparable to those that existed in 1990 (at the full professor rank on the investigator track, -10.4% in FY1990 and -10.7% in FY2000).

Recommendations

The Faculty Senate Council Gender Pay Equity Committee endorses the report of the Washington University School of Medicine Gender Pay Equity Committee and makes the following additional findings and recommendations:

1. *Finding:* It is not entirely clear to what degree the recommendations from previous studies and reports regarding the status of women at the School of Medicine have been implemented. Previously recommended pay analyses were not performed accordingly. We note that the analysis of the data in the School of Medicine took a long time to complete.
Recommendation: That the School of Medicine submit a report to the Faculty Senate Council in the Fall of every even-numbered year on the status of gender pay equity in the School of Medicine. Each analysis should be based on the salaries for that fiscal year (salaries beginning July 1 of those even-numbered years). We recommend that the analysis and interpretation be performed by an outside individual or organization.

2. *Finding:* The MIT and the Donna Ginther studies suggest that the issues may be broader than salary. The lack of women in leadership positions in the School of Medicine is a cause of concern; all department chairs and most division heads are men. The absence of women from leadership positions may create a perception of bias. At the very least, it affects the professional work environment at the School of Medicine. Other reports such as from the Task Force on the Status of Women [4] show a perceived difference in mentoring of men and women faculty.

Recommendation: That the Dean of the School of Medicine report to the Faculty Senate Council on the status of women at the School of Medicine at the first fall meeting in 2002. This report should address issues broader than salary including mentoring, allocation of resources, promotion of women to leadership positions, recruiting efforts, and the response to the recommendations in the report of the 1997 Task Force on the Status of Women.

3. *Finding:* Issues in gender equity have received national attention in part due to the MIT study. Groups of universities have agreed to work together to address these issues.

Recommendation: That Washington University under the leadership of the Chancellor become engaged in the national dialogue on the status of women in science and medicine to improve attitudes toward women and the environment in which they work. As part of this effort, that the Chancellor identify individuals and resources at Washington University that would serve as a catalyst for improving the environment for women at this institution as a whole.

Final Comment

We emphasize that the analysis of all schools focused on gender pay equity, and as mentioned above, excluded faculty at other than professorial ranks. The Faculty Senate Council should consider that this analysis had a limited scope, and that there are issues related to workplace environment university wide not necessarily revealed by a study of pay equity.

References

1. Goldberg, Carey. (1999) "MIT Acknowledges Bias Against Female Professors." *The New York Times*. (March 23, 1999): p.1.
2. "A Study on the Status of Women Faculty in Science at MIT," Massachusetts Institute of Technology, 1999.
3. Ginther, D.K. (2001) "Does Science Discriminate Against Women? Evidence from Academia, 1973-1997." Federal Reserve Bank of Atlanta. Working Paper Series. Working Paper 2001-02. February 2001.
4. R. Evens, et al., "Report of the Task Force on the Status of Women at Washington University School of Medicine," 1997.

