# Women in the Professions

# Survey Report 2002

#### VICE-PRESIDENT'S MESSAGE

PESMA

I am delighted to present APESMA's survey of professional women's remuneration and employment conditions, in the *Women in the Professions Survey Report 2002.* 

It is the second extensive national survey undertaken by the Association of women's employment conditions, and builds on the results obtained in the 2000 report. It also investigates the views of women members on various professional issues.

The survey forms part of the on-going efforts of our Association to further explore the needs of our women members.

Whilst primarily it is a tool designed to provide an avenue for female members to let us know of their experience as professional women in the workforce, the information derived provides a valuable insight into a range of aspects of the employment reality. As such, the information should prove to be of value to all those interested in employment relationships including employers, employees, government and unions.

The Women in the Professions Survey 2002 was designed to be statistically significant, and seek additional information about employment conditions which tend to be deemed "women's issues". All women members were invited to participate in the survey, with approximately 800 choosing to do so.

I would like to thank all those who participated. Once again, we intend to put their contributions to good use.

Regards,

JANE WALDOCK Vice-President APESMA

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#### INTRODUCTION

The Association of Professional Engineers, Scientists and Managers, Australia conducts a number of surveys of professional groups each year in order to ascertain information concerning prevailing market rates of pay and elicit the views of members on various issues relating to them as professionals.

The Women in the Professions Survey was conducted by APESMA in March 2002. The intention of the survey was to elicit views from female APESMA members on a range of issues, so that the Association might best reflect their particular needs in the development of policy and the on-going provision of services to them.

The survey report is available free of charge as a membership service to all members of APESMA. Further information regarding this survey, the use of extracts, or the APESMA's Women's Network will be available at http://www.apesma.asn.au/women or by contacting us directly (details on page 12).

# **1 - EMPLOYMENT STATUS**

Table 1.1 shows 19.3% of professional women are engaged in part-time or casual work, a large number of these being professional Pharmacists (the Pharmacy industry being one where part-time and casual work are a significant feature of employment patterns).

The proportion of women working in part-time or hourly contract positions within other professionals groups was considerably lower.

By comparison, the Australian Bureau of Statistics reports just over two-thirds (68%) of all Australian wage and salary earners are employed on a full-time basis <sup>1</sup>.

	Sample	%
Full-time	560	70.0%
Part-time	128	16.0%
Self-employed prop/director	14	1.8%
Hourly contract employee	26	3.3%
Not working - on extended leave	12	1.5%
Not working - seeking work	40	5.0%
Not working - not seeking work	6	.8%
Retired	4	.5%
Other	10	1.3%
Total	800	100.0%

Comparison with male professionals by professional discipline reveals that where part-time and hourly contract work exists, it is much more likely the incumbent will be a female professional (See Table 1.2).

	Engin	eering	Scie	ence	Comp	uting	Phar	macy	Architecture		
	М	F	M F		М	F	М	F	М	F	
	%	%	%	%	%	%	%	%	%	%	
Full-time	85.1	87.6	89.8	78.3	79.2	75.4	40	37	49.1	54.9	
Part-time	1.2	4.6	0.7	7	0.8	6.3	15	32	0.7	3.1	
Hourly Contract	3.6	2.9	1.6	3.5	9.3	9.5	17	17	1.4	4.7	
Other	10.1	4.9	7.9	11.7	10.8	8.8	28	14	48.8	37.3	

Table 1.2 - Employment Status by Professional Discipline by Gender

#### 2 - HOURS OF WORK

In recent years, the problem of excessive working hours has become more serious for professionals, particularly when it is considered that around two-thirds of all professionals receive no additional compensation for the average 5-6 additional hours worked each week.

It is of concern that whilst many women continue to assert their need to be compensated for additional hours worked, (many in order to cope with the demands of balancing work and family life), the trend is toward even less recognition.

According to the latest Professional Engineer Remuneration Survey Report <sup>2</sup>, 63% of full-time male engineers receive no compensation for additional hours worked (the same proportion as two years ago), while the corresponding figure for full-time female engineers was reported as 55%, up from 49% reported two years earlier.

#### Table 1.1 - Employment Status of Women Professionals

When asked directly as part of the Women in Professions Survey to compare their working hours this year compared to last year, over one-quarter of full-time respondents indicated they were working more hours.

Across all professional disciplines, the average number of hours worked per week by full-time employees was reported as 44.3, well in excess of the general standard of 38 hours.

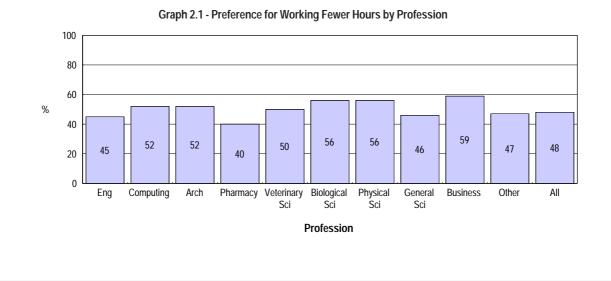
All disciplines worked long hours. A large number in many disciplines were seen to be working very long hours.

	N	Mean	Percentile 25	Median	Percentile 75
Engineering	241	44.3	40.0	43.0	48.0
Computing	21	44.0	40.0	42.0	50.0
Architecture	29	45.6	41.0	45.0	50.0
Pharmacy	58	41.3	38.0	41.0	45.0
Veterinary Science	18	43.6	39.0	40.0	48.0
Biological Science	39	46.8	40.0	45.0	55.0
Physical Science	32	43.8	40.0	44.5	47.5
General Science	26	45.0	40.0	40.0	47.5
Business	29	45.1	40.0	45.0	50.0
Other	59	45.2	40.0	43.0	50.0
Total	552	44.3	40.0	44.0	50.0

#### Table 2.1 - Hours of Work by Professional Discipline

Table 2.1 shows one-quarter of all full-time respondent biological scientists working 55 hours per week or more. One-quarter of full-time female computing, architect and business professionals were working 50 hours per week or more.

In an environment of long hours with little additional compensation, it is not surprising that respondents expressed a preference to be working fewer hours, as shown in Graph 2.1 below.



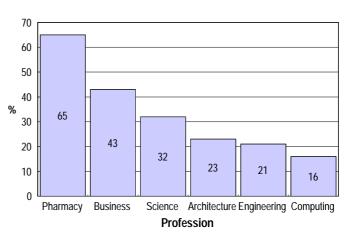
#### **3 - FAMILY AND WORKING LIFE**

The trend toward women having children later in life continues to be a feature of survey outcomes.

66% of respondents to the Women in Professions Survey did not have children, compared to 68% recorded two years earlier.

It was interesting to note that those professions where greater numbers of women were found saw the greatest prevalence of children.





It would not be unreasonable to see this as a result of women feeling the need to compete with males in male-dominated industries by delaying having children until such time as significant career progression has been achieved. In an profession such as Pharmacy, where women are in the majority, these pressures are not as significant.

In terms of employer-provided benefits, employer-provided assistance with child care is rare although access to flexible working hours was not uncommon.

The survey results were somewhat changed from those of the 2000 Report in that a significant reduction was seen in access to training and development (down 17.5%), and flexible hours (down 10%). These may well be seen as reflecting a hardening of employer attitudes in the face of what was thought to be a contracting economic environment in the last quarter of 2001.

Most other employer-provided benefits were seen at a rate similar to that reported two years earlier.

Graph 3.2 illustrates a perceived lack of access to parental leave. The reported rate of access of 51% was identical to that reported two years earlier. Reasons for this continuing problem include confusion between paid and unpaid parental leave, confusion over the terms parental and maternity leave, and a lack of interest in the entitlement given the large numbers of respondents to the Women in Professions Survey without children.

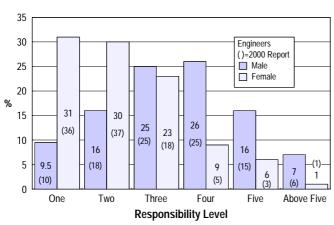




# **4 - CAREER DEVELOPMENT**

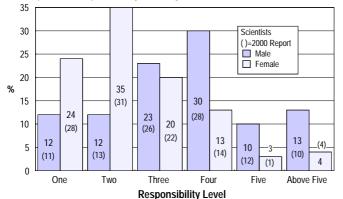
The evidence on gender-based career pathing differences continues to be varied and dependent on professional discipline.

Amongst those professional disciplines which are not entirely dominated by one gender, little evidence emerged to suggest there was any disparity in the representation of women in more senior positions.





Graph 4.2 - Responsibility Level by Gender - Professional Scientists



Graph 4.1 shows an approximately normal distribution of positions for male engineers based on the responsibility level of positions <sup>2</sup>.

The same type of distribution is not found for those engineering positions where the incumbent is female. The distribution is skewed downward toward lower levels for these incumbents. (It should be noted however that there has been some shift in this pattern since 2000. Since that time the proportion of female engineers at responsibility level 1 and 2 has declined whilst the proportion at responsibility levels 3,4 and 5 have increased).

Graph 4.2 illustrates the skew toward lower level positions for female professional scientists, even though a greater proportion of professional scientists are women than professional engineers who are women <sup>3</sup>.

There did not appear to be any significant overall change in the pattern of responsibility levels between male and female professional scientists over the last two years.

Graph 4.3 show that amongst computer professionals, women are still underrepresented at more senior levels in the profession, although the degree of disparity is much less than for professional engineers and scientists 4.

There did not appear to be any significant overall change in the pattern of responsibility levels between male and female computer professionals over the last two years.



30

27 (29) (23)

Three

23 (31)

(23) (17)

Four

**Responsibility Level** 

22

28

16

(15)

Two

6

(8)

One

30

25

20

% 15

10

5

Λ

Above Five

Computer Professionals

Female

14

9 (14)

(12)

() = 2000 Report

Male

13

8 (14)

(10)

Five

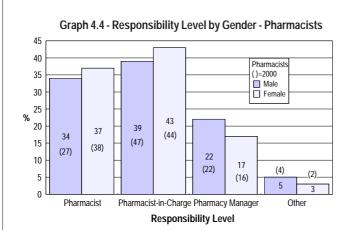


Table 4.1 - Perception of Career Path of Men and Women

	Sa	me	Diffe	rent
	Sample	%	Sample	%
Engineering	128	46.9%	145	53.1%
Computing	11	44.0%	14	56.0%
Architecture	21	58.3%	15	41.7%
Pharmacy	52	35.4%	95	64.6%
Veterinary Science	7	33.3%	14	66.7%
Biological Science	21	44.7%	26	55.3%
Physical Science	13	38.2%	21	61.8%
General Science	23	76.7%	7	23.3%
Business	18	62.1%	11	37.9%
Other	30	44.8%	37	55.2%
Not applicable	6	75.0%	2	25.0%
Total	330	46.0%	387	54.0%

	Average Age							
	Male Female							
Engineer	41	29						
Scientist	41	33						
Pharmacist	48	41						
IT Professional	43	41						
Architect	43.1	33.2						

Graph 4.4 shows that as in the 2000 survey, the pattern of career progression amongst female Pharmacists was not substantially different from that of male Pharmacists<sup>5</sup>.

There again emerged a deal of evidence to suggest that women continue to be underrepresented at higher levels of responsibility in other professions.

As shown in Table 4.1, there is little doubt that women generally perceive a significant difference in the career paths of men and women within their particular profession.

It is somewhat unclear whether this result is founded on a belief that there are distinctly different career patterns for men and women during their working lives, or that men enjoy an advantage over women in the workplace when seeking to further their career objectives.

It is intended to analysis of this issue further in the next Women in Professions Survey.

Table 4.2 describes the average ages of professionals based on gender, and shows the greatest disparity in average ages between men and women professionals to be amongst engineers; computer professionals have the least disparity between average ages based on gender.

The results suggest that where there exists broadly similar levels of experience between male and female professionals, the disparity in the rates of progression to more senior positions is less likely.

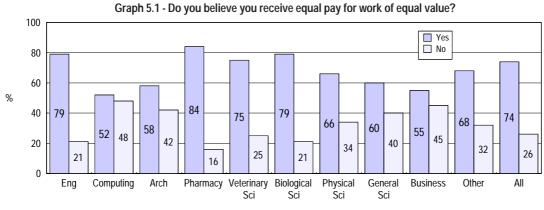
Further analysis of experience levels between male and female professionals confirmed a significant difference in professional experience across professional disciplines, with the exception again of computer professionals.

	Average Experience						
	Male Fema						
Engineer	17	6					
Scientist	15	7.5					
Pharmacist	26	18					
IT Professional	18	15.5					
Architect	19.8	8.7					

Table 4.3 suggests the gap in seniority levels between male and female professionals is also significantly influenced by the relative years of professional experience, although there is naturally a strong correlation between age and experience. It is expected that, as greater numbers of women enter these technical and scientific disciplines, the seniority gap will be narrowed.

# **5 - REMUNERATION**

Graph 5.1 illustrates prevailing perceptions of the fairness of salary outcomes between male and female professionals as reported by survey respondents. Overall, 26% of respondents to the Women in Professions Survey believed they did not receive equal compensation in the workplace compared to males. The perception of disparity was particularly evident amongst certain professions, particularly Computing, Architecture and the category of Other. Those professions where underpinning industrial awards or enterprise agreements play a significant role in salary determinations such as Engineering, Pharmacy and Veterinary Science, generally saw a perception of greater equity in wage and salary outcomes.





Where salaries are above rates prescribed by industrial awards or agreements, many factors combine to produce the salary outcome. Such factors include experience, qualification, industry settings, negotiation skills, corporate policies and prevailing market and economic conditions.

As a result of the interplay of some or all of these factors, female professionals on average receive lower salaries than men. The explanation for this is generally held to be the result of women being less experienced than their male counterparts on average.

A better way of assessing the extent to which any gender-based salary differential exists requires an analysis of job responsibility, given that, ultimately, it is this parameter which should principally determine salary level. Below is an analysis of remuneration for the largest respondent professional disciplines.

#### ENGINEERS

Analysis of the results for full-time professional engineers is inconclusive across all levels because of the lack of sufficient numbers of women in senior positions in the profession.

The resulting analysis revealed a mixed picture, although at most levels, male engineers earned more than their female counterparts. Part of this may be attributable to the higher concentration of women in the fields of civil engineering and chemical engineering, fields which are not as highly paid as other disciplines such as electrical engineering<sup>2</sup>.

	Level 1 Level 2					Level 3 Le				Level 4			Level	5	Above Level 5			
	Total Package		Years Total Exp Package					Years Exp			Years Total Exp Package				Total Package		Years Exp	
	Ν	Median	Median	Ν	Median	Median	Ν	Median	Median	Ν	Median	Median	Ν	Median	Median	Ν	Median	Median
Male	223	49,206	2.0	405	60,900	5.0	607	74,150	12.0	604	90,980	21.0	383	109,013	23.0	167	151,482	26.0
Female	63	47,747	1.5	64	59,501	4.0	41	71,040	7.0	18	95,943	10.0	13	102,085	11.5	1	171,200	17.0
Total	286	48,742	1.7	469	60,300	5.0	648	73,796	12.0	622	91,065	20.5	396	108,531	22.0	168	151,503	26.0

Table 5.1 - Median Total Package & Years of Professional Experience by Gender - Full-time Engineers

#### **PROFESSIONAL SCIENTISTS**

As was the case two years earlier, at nearly all levels of responsibility, female professional scientists appear to earn less than their male counterparts. Whether or not the degree of difference in salaries is sufficient to discount statistical error is problematical, particularly with the much smaller number of female respondents. Yet, even if statistical error were to explain some difference, it does not explain why the pattern has been so consistent, i.e. that female scientists earn less than male scientists at nearly all levels of responsibility<sup>3</sup>.

	Level 1 Level 1					2	2 Level 3				Level	4	Level 5				Beyond Leve					
	Total Package				Years Exp	5 Total Package				Years Exp		Total ackage	Years Exp		Total ickage	Years Exp	Р	Total ackage	Years Exp	Р	Total ackage	Years Exp
	Ν	Median	Median	Ν	Median	Median	Ν	Median	Median	Ν	Median	Median	Ν	Median	Median	Ν	Median	Median				
Male	42	50,966	4.00	42	57,786	5.50	82	68,191	15.00	102	83,510	20.00	37	94,216	19.00	48	127,536	18.00				
Female	22	47,652	1.25	36	50,247	4.00	18	66,858	8.00	13	91,320	11.00	4	81,398	15.00	3	127,240	18.50				
Total	64	50,035	2.00	78	55,887	5.00	100	68,191	13.00	115	83,510	20.00	41	94,153	18.00	51	127,422	18.00				

#### **COMPUTER PROFESSIONALS**

Apart from the entry level, female computer professionals were, on average, reported to be earning less than male computer professionals at each level of responsibility<sup>4</sup>.

The result differs to some degree to that reported two years ago when a much smaller gender-based gap in salaries appeared evident.

The computing sector has seen significant reduction in job opportunities over the last two years and one theory to explain the apparent emergence of a significant salary gap is that women have borne the brunt of the financial constraints brought on by a decline in the sector.

	Level 1			Level 2			Level 3			Level 4			Level 5			Above Level 5		
	Total Package		Years Exp		Total ackage	Years Exp	Total Package		Years Exp	Total Package		Years Exp		Total ackage	Years Exp	Total Package		Years Exp
	Ν	Median	Median	N	Median	Median	N	Median	Median	N	Median	Median	N	Median	Median	N	Median	Median
Male	37	50,106	8.00	161	64,424	10.00	303	81,956	15.00	248	97,878	20.00	146	117,866	21.00	172	165,100	20.50
Female	11	52.333	5.00	46	61.212	10.00	52	77.785	14.00	45	93,990	20.00	20	111.760	16.00	20	156.600	20.00

15.00

97,200

293

20.00

166 116,850

21.00

192 163,010

20.00

Table 5.3 - Median Total Package & Years of Professional Experience by Gender - Full-time Computer Professionals

#### PHARMACISTS

48 50,428

7.00

207 64,248

10.00

355 80,850

Total

The Association has conducted annual remuneration surveys of Pharmacists over many years. In this time, little overall difference in rates paid to male and females has been evident.

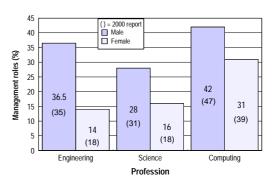
There is little doubt this is the result of pay rates in the industry being largely determined by prevailing industrial awards and agreements which cover both Community and Hospital Pharmacists. Significant over-award payments are relatively uncommon here.

# 6 - JOB FUNCTION

Once again the survey showed women professionals to be generally under-represented in positions of management. This gap was evident across the major comparative groups of engineering, science and computing. (See Graph 6.1).

The contention for some time has been that a lack of experience has contributed to the imbalance and that as greater numbers of young women enter the various professions, more and more women will assume more senior positions, particularly those in management.





On the basis of the comparison between the current survey and that conducted in 2000, it appears very little headway has been made. There are very many more management functions performed by men than women.

What this result may also serve to highlight is that experience is not the only factor influencing career progression and women may not be able to compete equally for higher level positions even when similar levels of experience are taken held.

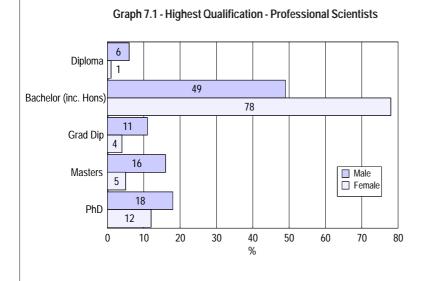
The reasons for this may well lie in the fact that women continue to shoulder the bulk of parenting and domestic responsibilities, so that relevant experience may take longer to achieve and/or the types of positions sought by women are those which are more likely to allow greater flexibility in working arrangements.

# 7 - EDUCATION

Overall, 71% of respondents to the Women in Professions Survey held a Bachelor degree with Pass or Honours.

As with male professionals, the extent to which higher qualifications are held will be influenced by professional discipline. Very few Pharmacists, for example, have their highest formal qualifications beyond the degree level (10% Graduate Diploma, a further 3% Masters or PhD)<sup>5</sup>.

Professional scientists on the other hand, are much more likely to pursue higher qualifications. Overall, only 56% of professional scientists hold a Bachelor degree (Pass or Honours) as their highest qualification <sup>3</sup>.



Amongst professional scientists however, there continues to be a significant gender gap in the rates at which higher qualifications are held.

As illustrated in Graph 7.1, 22% of female professional scientists hold qualifications other than a Bachelor degree (inc. Hons), compared to 51% of male professional scientists.

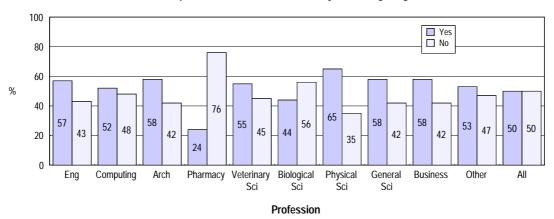
Such a disparity in qualifications may manifest as career disadvantage<sup>3</sup>.

# 8 - MENTORING

A good deal of interest was shown by respondents when asked to consider participation in a women's mentoring program designed to broaden the skill set of women by placing them in contact with more senior women in their chosen field for advice and guidance.

50% of all respondents indicated a willingness to participate in such a program. As shown in Graph 8.1 below, all professional disciplines showed significant interest with the exception of pharmacists.

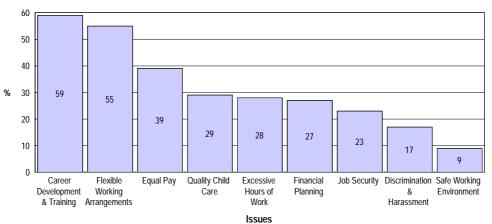
Of those willing to participate, 66% were willing to take part in an email-based mentoring program for women.



Graph 8.1 - Interest in Women's Only Mentoring Program

# 9 - IMPORTANT ISSUES FOR PROFESSIONAL WOMEN

As part of the APESMA Women in Professions Survey, participants were asked to identify the three issues of greatest importance to them as professionals and so should be given the highest priority by the APESMA Women's Network. The results were as follows:



Graph 9.1 - Most Important Issues Facing Professional Women

The three issues identified as being of greatest importance were career development and training (59%), flexible working arrangements (55%) and equal pay (39%). These three issues were also identified as the most important issues facing professional women in the 2000 survey.

The need to maintain skills in order to work to a high standard and promote career opportunities is constantly cited by both male and female professionals and their employers as the key to career advancement, and explains the ongoing importance placed on career development and training by survey respondents. This is of particular relevance to those working in technical disciplines such as computing, engineering and science.

Issues surrounding the quantity of hours worked and the flexibility in working them continue to be at the forefront for professional women.

The result serves to highlight the effect of competing demands on many women in performing multiple roles as a professional and as a parent or carer. The fact that so many respondents identified these issues would suggest that existing arrangements are proving inadequate and that problems continue to be experienced by large numbers of female professionals in trying to balance work and family life.

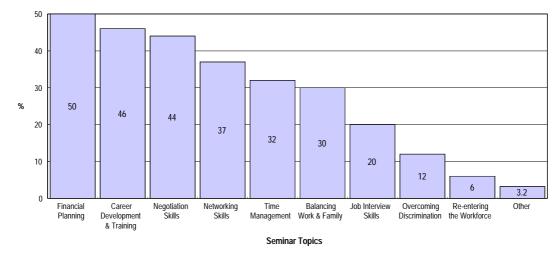
The third most significant issue raised was that of equal pay. Large numbers of women continue to perceive inequities in the levels of compensation offered to male and female professionals, especially in certain professions.

The varying degrees of importance given to the remaining issues indicated some level of interest in them, although they were not deemed to be a priority by most respondents. Some variation did occur within the survey group on these issues, the variation often corresponding to individual circumstance, e.g. those with young children were more interested in quality child care than older respondents who felt financial planning was of greater importance.

### **10 - SEMINAR TOPICS**

As shown in Graph 10.1, when given an opportunity to nominate topics suitable for seminars, respondents to the APESMA Women in Professions Survey indicated their strongest preference for seminars dealing with topics concerning financial matters. This result is consistent with broader surveys of the APESMA membership that have previously indicated financial topics as being of greatest interest.

Seminars on topics related to career development again scored highly, as did the related seminar topic of negotiation skills.





# CONCLUSION

The survey highlighted a number of issues surrounding hours of work, family and careers. Women want to work fewer hours and are more likely to work part-time where such work is available. A high percentage (66%) of respondents did not have children and the proportion of women who did was influenced by the professions in which they worked.

Women are still establishing their careers in a number of the professions surveyed. In all of these professions there are fewer women at the highest responsibility levels. On the basis of the comparison between this and the 2000 survey, it appears that women are making little headway into assuming managerial roles. We also again observed that in some professions, such as science, fewer women are completing higher qualifications than men.

Due to the continuing prevalence of women undertaking the bulk of family responsibilities, their careers may be suffering due to longer time periods required in the workforce to gain the same level of experience and reduced capacity to undertake additional career related activities such as further study.

As a result of these and other factors, professional women continue to earn less than professional men.

# BIBLIOGRAPHY

The analysis contained herein draws on all of these sources and is an amalgam of information, arising from responses to previous APESMA surveys, as well as the Women in Professions Survey, and indeed other sources and statistics. Where comparisons are made between male and female professionals, the information is drawn from within the latest source where a direct comparison is possible, normally the most recent remuneration survey conducted by APESMA for that professional discipline.

Where reporting is done relevant to female professionals only, the Women in Professions Survey was the primary source used.

- 1. Australian Bureau of Statistics, (1999), *Employee Earnings and Hours, Australia*, 6306.0
- 2. APESMA, (December 2001), *The Professional Engineer Remuneration Survey Report*
- 3. APESMA, (2000/2001), *The Professional Scientist Remuneration Survey Report*
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