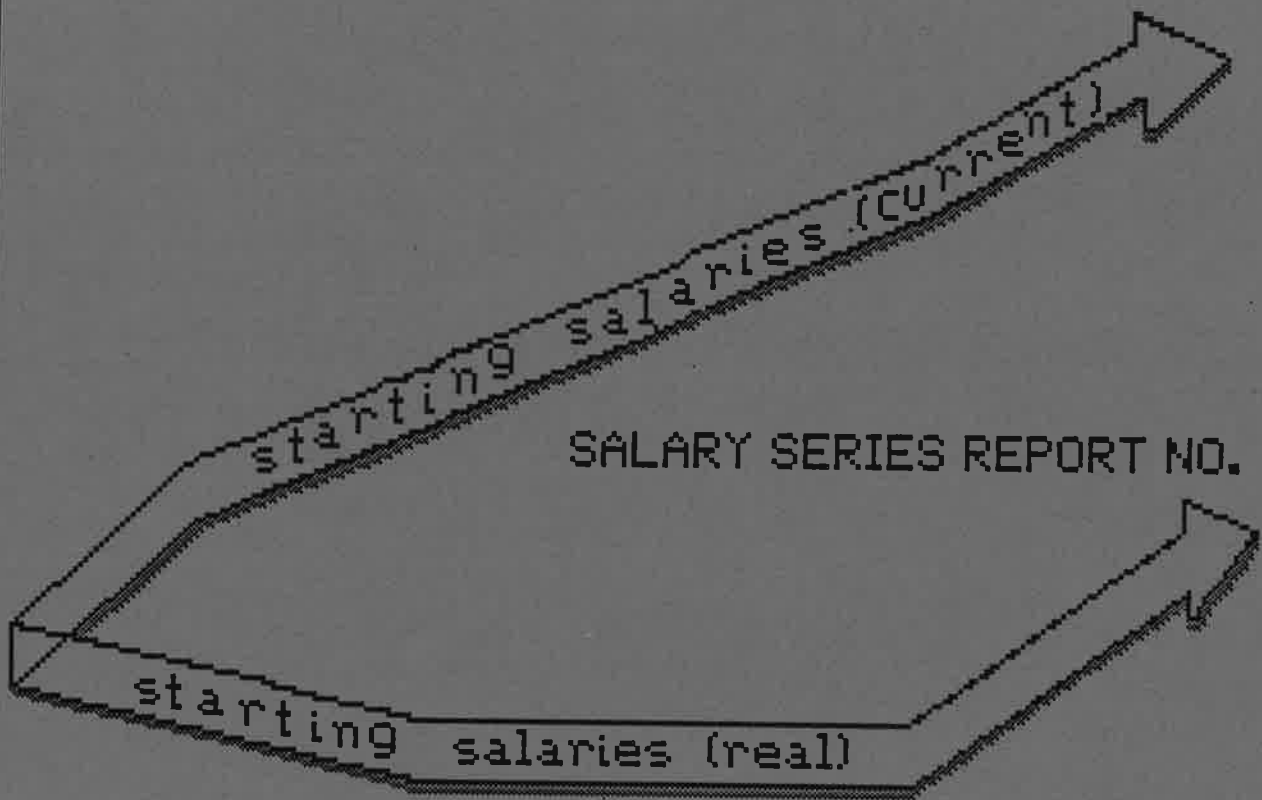


STARTING SALARY TRENDS:
NURSING GRADUATES, 1978-1986

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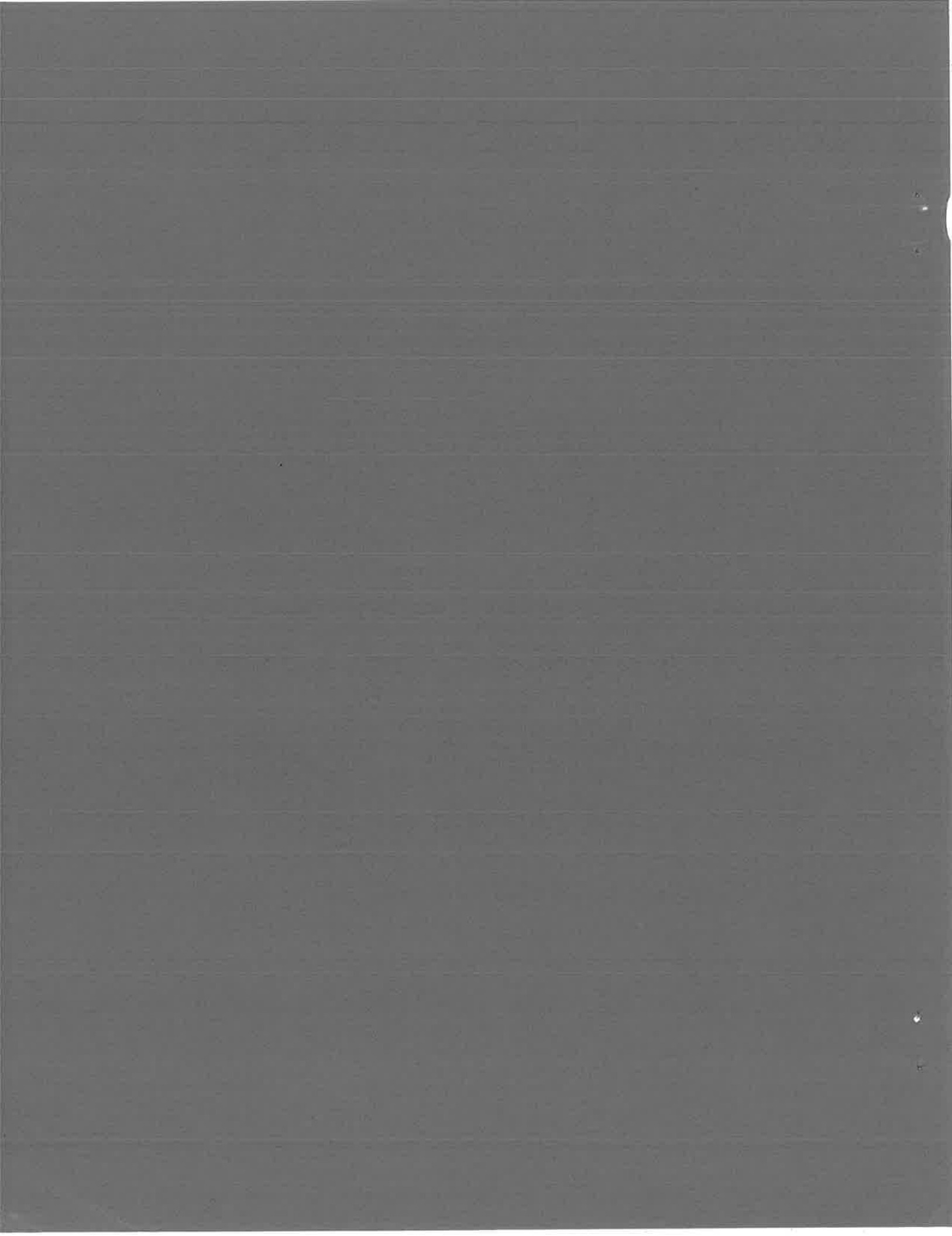
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graduation. These figures reflect 51%, 20%, 1%, and 3% of the total graduate population, respectively.

The response rate varied from a low of 61% in 1979-80 to a high of 91% in 1983-84 (Table 1). The response rate did not appear to be associated with the unemployment rate. Actually, the years of highest non-response paralleled years of reported low unemployment.

Women comprised 96% of the total graduating population. Very few men have graduated in nursing though their numbers have been increasing over the last few years. The response pattern closely approximates the gender distribution in nursing.

Over the eight year period, 81% of the respondents were living in Michigan after graduation. The number living outside the state and reporting salary was slightly higher than the overall distribution, while proportionally more of those working and not reporting salary lived in Michigan. The unemployment rate for graduates who left Michigan was twice as high, 8% as compared to 3%, than the in-state rate.

The majority of nursing graduates (94%) work for medical service employees. A few nurses do work for the government and in the K-12 education system.

Nursing graduates tend to have high grade point averages. Nearly 25% earned GPA's above 3.5. Only 3% had grades below 2.5. The highest non-response rates were for those graduates with grades below 3.0. However, the distribution of respondents reporting salary across GPA groups corresponded closely to the overall distribution.

The racial composition of the nursing graduate population was 90% White, 8% Black, and 2% Hispanic, Asian-American, and Native American. The response rate for Blacks was lower than all other at 52%. Asian-Americans had a 57% response rate. Blacks and Asian-Americans were also not likely to report their salaries. If there is a potential source of bias, it stems from the underrepresentation of minorities in the salary analysis.

SALARY TRENDS AND COMPARISONS

In 1978-79, the average starting salary for nursing graduates was \$13,673 (Table 2). Starting salaries (current dollars that are not adjusted for inflation) have increased at approximately 9% per year. Strong gains were made in salary in 1979-80, 1981-82, and 1984-85: each year above 7%. Salary performance in the remaining years was also good, averaging around 5%. By 1985-86, the average starting salary had reached \$22,278.

When salary figures were adjusted for inflation (1978-79=100), the impact of inflation on current salary trends could be measured. Between 1978-79 and 1980-81, current salary increases failed to keep pace with inflation as indicated by the negative percentage change figures in the real (dollars adjusted for inflation) column of Table 2. Over this two year period, the salary position of new nurses eroded by 9%.

Salaries began to improve in 1981-82 with a robust 5% gain, after inflation, over the previous year. By 1983-84, nearly all of the salary lost previously to inflation had been regained. The 1985-86 real salary level of \$14,190 was 4% above the 1978-79 level. Only graduates from the period 1979-80 to 1982-83 have seen the purchasing power of their starting salaries eroded by inflation, as compared to earlier and later graduates.

The "year of graduation" variable was found to be an important explanatory factor of starting salary ($F=3.85$, $P \leq .001$). Means test of the yearly averages (real) identified several significant differences that are listed at the bottom of Table 2. The year 1980-81 (lowest salaries) differed from 1984-85 and 1985-86 (highest salaries).

Gender

Only 14 male graduates reported their salary, making comparisons tenuous. The average real salaries of men and women nurses were very similar, \$13,165 and \$13,447, respectively. If current salaries were examined, men held a decided advantage, \$19,648 to \$17,785, primarily because no male reported his salary until 1981-82, after the period most affected by inflation.

Location

The decision to accept a position within or outside of Michigan can have an impact on starting salaries. The average starting salary outside of Michigan was \$13,506 (real), while positions within Michigan were \$13,420, a difference of \$86. This difference was not statistically different. Location did not apparently play an important role in establishing salary levels.

Upon examination of yearly averages, a reversal in salary position between in- and out-of-state respondents was observed. Between 1978-79 and 1981-82, out-of-state positions had the salary advantage, though it has declined from a high of \$1,741 in 1978-79 (Table 3). Inflation affected graduates in all locations, but out-of-state salaries declined by 17% as compared to 8% in Michigan. Steady improvement in nurses' salaries in Michigan, combined with some bad years, in terms of salary adjustment, outside the state, have propelled Michigan salaries to a large advantage over out-of-state positions. Caution should be taken in interpreting out-of-state salaries because of the small sample sizes in each year. Out-of-state salaries may not be representative of the nursing labor market outside Michigan.

Employer

The majority of the nurses reporting salary (95%) work for medical service organizations within the service sector of the economy. The average salary was \$13,411 (real). For completeness, the salaries for nurses working in other sectors of the economy are listed in Table 4. Those working for government agencies and in educational institutions were remunerated \$13,188 and \$14,289, respectively.

Grade Point Average

It is often assumed that students with higher grades generally receive higher starting salaries. As the salaries for various grade point averages in Table 5 suggest, this assumption does not hold for nursing graduates. In fact, a reverse relationship with lower grades receiving higher salaries seems to be evident. The average salary for graduates with grades below 3.0 was \$13,822 as compared to \$13,434 and \$13,264 for the 3.0-3.5 and >3.5 groups, respectively. Upon closer examination of the means, the difference between groups proved to be statistically insignificant.

Race

With only 21 minority nursing graduates reporting their salaries, comparisons across racial groups may not reflect accurately the prevailing labor markets encountered by nurses from different racial backgrounds. The salary of Black and White graduates were very similar at \$13,568 and \$13,382, respectively (Table 6).

CONCLUSIONS

In the examination of nursing salaries from 1978 to 1986, only the year of graduation seemed to influence starting salary levels. Except for two years, 1979-80 and 1980-81, when inflation and state economic conditions caused salary levels of nurses to decline, the starting salaries for nurses have shown steady increases above the rate of inflation. Today, nurses are better off, in terms of salary, than nurses who graduated eight years earlier.

Because the salary information for the majority of nurses in this study was from White women who worked for medical organizations in Michigan, comparisons could not be made by student characteristics nor could the interpretation of the data be extended to the nursing labor market outside of Michigan. Salary comparisons for selected characteristics were presented for completeness.

Table 1. Response Rate of Nursing Graduates by Year.

Year	Total	n	Working Salary		Working No Salary		Graduate School		Unemployed		No Response				
			%	n	%	n	%	n	%	n	%	n			
1978-79	111	14	67	16	60	11	7	10	0	3	12	3	30	15	27
1979-80	119	14	56	13	47	14	9	12	0	3	12	3	46	22	38
1980-81	82	10	43	10	52	16	10	20	5	2	7	2	16	8	20
1981-82	112	14	58	14	52	33	20	30	1	5	19	4	15	7	13
1982-83	114	14	62	15	54	12	7	11	0	2	8	2	38	19	33
1983-84	100	12	45	11	45	37	23	37	2	7	27	7	9	4	9
1984-85	94	11	41	10	44	19	12	20	2	4	15	4	28	14	30
1985-86	91	11	49	11	54	19	12	21	0	0	0	0	23	11	25

Source: Follow-up report data base for 1978-1986, Placement Services, Michigan State University, East Lansing, Michigan 48824.

Table 2. Average Starting Salary, Current and Real, for Nursing Graduates, 1978-1986.

Year	n	Average		Average	
		(Current) (\$)	% Change	(Real) (\$)	% Change
1978-79	67	13,673		13,673	
1979-80	56	14,950	9	13,230	-3
1980-81	43	15,728	5	12,482	-6
1981-82	58	18,034	13	13,163	5
1982-83	62	18,766	4	13,216	.4
1983-84	45	20,045	6	13,544	2
1984-85	41	21,482	7	14,041	4
1985-86	49	22,278	4	14,190	1

Deflated comparisons that were significant at the .05 level.
1980-81, 1984-85; 1980-81, 1985-86.

Source: Follow-up report data base for 1978-1986, Placement Services, Michigan State University, East Lansing, Michigan 48824.

Table 3. Average Starting Salary (Real) for Positions Located in Michigan and Outside the State for Nursing Graduates, 1978-1986.

Year	Michigan			Outside Michigan			\$ Difference (M-O)
	n	Average Starting Salary (\$)	% Change	n	Average Starting Salary (\$)	% Change	
1978-79	57	13,413	-3	10	15,154	-8	-1,741
1979-80	44	13,027	-5	12	13,977	-9	-950
1980-81	37	12,420	6	6	12,866	3	-446
1981-82	47	13,147	2	11	13,233	-5	-86
1982-83	46	13,444	1	16	12,561	6	883
1983-84	33	13,602	4	12	13,383	3	219
1984-85	30	14,141	1	11	13,768	-5	373
1985-86	45	14,285		4	13,121		1,164
Total/Avg	339	13,420		82	13,506		

Source: Follow-up report data base for 1978-1986, Placement Services, Michigan State University, East Lansing, Michigan 48824.

Table 4. Average Starting Salary, Real and Current, for Different Economic Sectors for Nursing Graduates, 1978-1986.

Economic Sector	n	Average (Current) (\$)	Average (Real) (\$)
Service	402	17,891	13,411
Government	5	16,700	13,188
Education	14	16,980	14,289

Source: Follow-up report data base for 1978-1986, Placement Services, Michigan State University, East Lansing, Michigan 48824.

Table 5. Average Starting Salaries (Real) for Grade Point Average Groups, for Nursing Graduates, 1978-1986.

GPA	n	Average Starting Salary (\$)
< 2.5	9	14,620
2.5-3.0	50	13,678
3.0-3.5	238	13,434
> 3.5	124	13,264

Source: Follow-up report data base for 1978-1986, Placement Services, Michigan State University, East Lansing, Michigan 48824.

Table 6. Average Starting Salary (Real) by Race for Nursing Graduates, 1978-1986.

Race	n	Average Starting Salary (\$)
White	396	13,382
Black	17	13,568
Other	4	15,117

Source: Follow-up report data base for 1978-1986, Placement Services, Michigan State University, East Lansing, Michigan 48824.

