RESEARCH ACTIVITIES IN CANADIAN UNIVERSITY SCHOOLS AND FACULTIES OF NURSING FOR 1988-1989

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In November 1987, the Canadian Association of University Schools of Nursing (CAUSN) passed a motion that CAUSN council take responsibility for preparing an annual report of research activities in schools and faculties of nursing. The motion stemmed from the need for a better national data base to assess the current status, to plan strategies for developing research and to track future progress. The purpose of this paper is to describe the research activities for 1988-89, as reported during the first annual survey.

Methods

The methods of data collection and compilation used by Ontario Region of the Canadian Association of University Schools of Nursing (ORCAUSN) over the past five years were adopted for the first annual CAUSN survey (Mohide & O'Connor, 1986; Mohide, O'Connor, & Cameron, 1987, 1989; O'Connor, Cameron & Mohide, 1988, 1989). An explanatory letter and structured response forms were mailed to the directors and deans of the 27 CAUSN member schools or faculties; two non-CAUSN members in Quebec were also surveyed. Data regarding faculty personnel resources and personnel awards were elicited using summary report forms. A structured response sheet was also completed for each research project. As survey results were obtained, questionable responses were verified by personal communication. The research categories were developed using key terms and project titles. The data were reduced and analyzed using the SPSSX statistical package.

Results

All schools and faculties responded to the survey. The deans made suggestions for improving the next annual survey, including more specific definitions of faculty employment status and research personnel awards, and the addition of a question on programmatic research.

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Table 1

Faculty Personnel Data for Canandian University Schools of Nursing, 1988-89

University/School		Facul	tv	Educat	ion(FT I	PT)					(%time)	# Funded
OHIT VET BITCY/ SCHOOL	FT	PT	Tot	Ph.D.	Masters	Bacc.	>50	26-50	11-25	1-10	0%	P.1.
Hemorial	25	1	26	3	22	1			25		•	4
Dalhousie	34	10	44	7	26	11		27		3	4	3
St. Francis X	10	1	11	-	10	1			10			2
Moncton	14	18	32	-	32	-			14			1
Moncton Hew Brunswick	27	17	44	1	25	18	-		-	17	10	3
Atlantic total:	110	47	157	11	115	31	0	27	49	20	14	13
									6			
Hull-Quebec	6	8	14		14		2	5		5	3	6
Laval	15	3	18	6	12			1	4	8	3	9
McGill	16	5	21	9	12		7	6	1	3	20	6
Montreal	37	60	97	15	50	26			3	3	1	1
Sherbrooke	7	15	22	1	15	4		(50)	-	-	MR	ò
Trois-Riv Quebec	5	0	5	1	MR		WR	MR	MR	MR	ax.	٠
Quebec total:	86	91	177	32	107	30	9	12	14	19	27	55
	14	17	31	1	11	19	-	3	2	8	1	5
Lakehead	20	13	33	i	14	18			-	15	5	4
Laurentian	38	13	39	10	29		5	4	11	14	4	15
McMaster		48	80	7	44	29	4		7	12	9	17
6wa110	32		26	6	19	1	2		6	5	2	6
Queens	15	11		1	33	8		1	2	7	25	4
Ryerson	35	7	42		35	7	3	6	5	4	15	15
Toronte	33	20	53	11	13	17			5	12		9
Vindsor	17	21	38	8					11	8	2	9
Western Ontario	21	15	36	7	25	4	-	-				
Ontario total:	225	153	378	52	223	103	14	14	49	85	63	84
Brandon	4	0	4		3	1	-	1	2		1	1
Hanitobs	24	44	68	6	31	27			24	-		7
Saskatchewan	24	12	36	2	20	13	-			24		. 7
Alberta	45	33	78	28	33	17			-	45	-	11
	1		1	1	-					1		
Athabaska	34	26	60	16	20	23		4	7	8	15	10
Calgary	5	1	6	2	3	1	-	5			-	
Lethbridge	38	2	40	7	33	-		2	8	16	12	11
British Columbia Victoria	38	5	14	5	9		-	-			-	- 7
Western total;	184	123	307	67	152	82	0	12	41	94	28	50
BCD141H 141411	191											
TOTAL	605	414	1,019	162	597	246	23	65	153			169
x	59	41		16	59	25	4	11	26	37	22	3

Faculty resources

Information about research manpower in each school or faculty is presented in Table 1. Of the 1,019 full-time and part-time faculty employed in 29 schools on October 31, 1989, 59% held full-time positions. Graduate degrees were held by seventy-five percent of full-time and part-time faculty. There were 162 faculty with earned doctorates. Seventy-eight percent (n=459) of full-time faculty and 8% (n=34) of part-time faculty were engaged in research. The majority of full-time faculty had minimal time allocated to research (1-10%). Only 5 faculty had 75% time protection. The number of faculty involved in research varied widely across the schools and faculties (minimum 1; maximum 45). Of those involved in research, only 169 (37%) held grants as principal investigators.

Research projects

The funding status of all research projects conducted in Canadian university schools and faculties of nursing is provided in Table 2. Of the 390 projects reported, 62% were funded. Ninety-three percent of the funded projects had nurse principal investigators. Similarly, 93% of unfunded projects were led by faculty nurses.

Table 2

Funding Status for all Research Projects 1988-89

	Role of Faculty Nurse							
Funding Status	Principal investigator*	Co-investigator	Total	%				
Funded	225	16	241					
Not funded	138	11	149					
Total	363	27	390	100				

^{* 170} nurses held grants as principal investigators; mean number of grants per faculty nurse as principal investigator = 1.7 (range 1-6).

Total operating grants. The total funding for all operating grants where faculty nurses served as principal or co-investigators is shown in Table 3. This table includes only those projects that received funding in 1988-89. For projects funded over more than the 1988-89 fiscal year, the portion reported was estimated by dividing the total amount of the award by the number of years of funding. Funding for the 242 projects totalled \$4,490,761. The largest contributors were the Provincial Ministries of Health, MRC, American sources, Health and Welfare, and other provincial ministries. Several agencies contributed funds around the \$150-300,000 level, including local agencies, SSHRC, internal university sources, and provincial and national foundations.

Total operating grants for faculty nurses as principal investigators. Funding for the 225 projects conducted by nurse principal investigators totaled \$3,053,639 (see Table 4). One-quarter of the funding was obtained from the provincial ministries of health, followed by Health and Welfare, other provincial ministries, and local agencies. Awards at the 150-200,000 dollar level were obtained from SSHRC, local agencies, internal university sources, MRC, and national foundations. The total amount of funding across the schools and faculties ranged from a high of \$493,222 to a low of \$0. Number of funded studies per faculty or school ranged from 0 to 25.

Table 3

All Operating Grants by Funding Source and University, 1988-89

University/School	MRC	Health/		Other	Prov.Min.	Other Prov.	Hat'l Found		Corp'n	Local	Int. Univ.	Other	Total(n)
3.2			5760			700	28				831		7291 (4)
Memorial			3/00	- 0			5000				3030		8030 (2)
St. Francis Xavier								3445		4997		100	8442 (4)
Dalhousie											2000		2000 (1)
Nonc t on				- 3			2000				1000		30600 (3)
tew Brunswick		27600		-			*						
Atlantic total:			5760			790	7000	3445	0	4997	6861	9	56363(14)
	100										2.5		0 (0)
Kull			43241		77438	85812	12180	8000	* -	48142			274813(11)
Laval	133488		60568	1526						8660	2174	69440	413035(16)
AcGill .	133400	34435	00300	1320	6000	26500	5000	1500		38000	25000		136435 (9)
Montreal		34433	1					-			1300	-	1300 (1)
Sherbrooke													0 (0)
Trois-RivQue				151								- 2000	
Quebec total:	133488	171614	103809	1526	83438	112312	17180	9500	9	94802	28474	69440	825583(37)
Lakehead			528-								192	-	720 (6)
Laurentian					-			-			2505		2505 (4)
	590000	32000		2625	456047	35000			5000	81274			1706808(26)
McMaster	,,,,,,,,	47527		2548	160726		6633	29000	2410	58226	9616	6500	323186(25)
Ottawa		*****		1528		49469	1035	17685	10000		6941	3750	90408(11)
Queens		23500							-		3557	-	27057 (4)
Ryerson	67790		29453		54003	15000	112056	97500	2780	36667			526997(27)
Toronto	01170	114270	21423	9218		83854	6986		-	500	7600		108158(16)
Windsor Western Ontario				8952	15362		1000				5325		30639(12)
	45.7700		29981	24871	686138	183323	127710	144185	17688	176667	123931	426917	2816478(131
Ontario total:	657799	217277	CYYOI	240/1	900139	103762	16//14	111192	17.4.4				
Brandon				54	*0					-	3902		3902 (2)
Manitoba					14500	-	11000	21354	20000		3700	12000	82554 (9)
Saskatchewan		48000	1200	34750				-	2780		6500		93230 (7)
		41600			-	80826		-		3000	4500	110826	238952(12)
Alberta		41000						-	**				0 (0)
Athabaska	-	2000	2000		22500	95841		-		13243	5000	-	140584(11)
Calgary		5750	500			14160					4000		24410 (3)
Lethbridge		3/30	,,,,		116500		1004			250	16151		133405(13)
British Columbia			67000		. 10,00					6000			73000 (2)
Victoria			31000	- 5							-		******
Vestern total:	. 0	97350	70700	34750	153500	190827	12004	21354	22780	22493	43753	122826	792337 (59
TOTAL	791287	513841	210250	61147	923096	487162	163894	178484	40468	298959	203019	619183	4490761 (24

several projects had multiple sources of funding.
 Funds for operating grants running over more than the 1988-1989 fiscal year were derived by dividing the total granumber of years of funding.

Table 4

Funding Sources of Operating Grants (Faculty Nurse as Principal Investigator) 1988-89

University/School	MRC	Health/ Welfare		Other	Prov.Min Health	Prov.	Net'l Found	Found	Corp'n	Agency	Int. Univ.	Other Source	Total(n)
Memorial			5760			700					831		7291 (4)
St. Francis Xavier							5000				3030		8030 (2)
Dathousie		-	0.5	0.00				3445	***	4997			8442 (4)
Moncton		-			-						2000		2000 (1)
New Brunswick		27600					2000				1000		30600 (3)
Atlantic total:	0	27600	5760			700	7000	3445	0	4997	6861		56363(14)
Mull											-		0 (0)
Lavel			43241	-	77438	85812	12180	8000		48142			274813(11)
McGill	107488	125752	60568	1526						8660		69440	375608(14)
Montreal		34435			6000	26500	5000	1500		38000			136435(10)
Sherbrooke		-	-		-			-			1300		1300 (1)
Trois-Riv Que	-	-						-	-				0 (0)
Quebec total:	107488	160187	103809	1526	83438	112312	17180	9500	0	94802	28474	69440	788150(35)
Lakehead			528								192		720 (6
Laurentian			-		-						2505		2505 (4)
AcMaster		32000	-	2625	320444				5000	44958	88195		493222(19)
ottava *		47520	-	2548	156784		4970	29000	2410	58226	3500		304955(24)
Queens				1528		44903	1034	19	10000		6941	3750	68175 (9:
tyerson		23500									3557		27057 (4)
Toronto	48131	114250	29453		34003		112056	3500	278	34167			390838(25)
Vindsor		-	-	9218		83854		-			7600		100672(15
Western Ontario				8952	15362		1000			500	5325	-	31139(12
Ontario total:	48131	217270	29981	24871	526590	143757	119060	32519	17688	137851	117815	3750	1419283(11
Irandon						-					3902		3902 (2
Manitoba					14500		11000	21354	20000		3700	12000	82554 (9
Saskatchewan		48000	1200	34750				-	2780		6500		93230 (7
Alberta		41600			-	78326				3000	4500	110826	236452(11
Athabaska		-		-	-				*				0 (0
Calgary		2000	2000		22500	95841				13243	5000		140584(11
ethbridge		5750	500			14160					4000		24410 (3
ritish Columbia				-	116500		1004			250	16151		133405(13
Victoria	-		67000							6000		-	73000 (2
Western total:	0	97350	70700	34750	153500	188327	12004	21354	22780	22493	43753	122826	789837(58
TOTAL	155610	502407	210250	61147	763531	445096	155244	66818	40968	260143	196903	196016	3053639(22

Funds for operating grants running over more than the 1988-1989 fiscal year were derived by dividing the total
grant by the number of years of funding.

Foci of the research projects. Table 5 summarizes the characteristics of the funded and unfunded projects. The studies involved all age groups. Projects focussed most frequently on the young or middle aged adults, followed by a combination of age groups, children and adolescents, the elderly, and maternal populations. Clinical practice studies predominated, followed by a combination of functional types, education studies, research methods studies and administration studies. For the nursing practice studies, the most frequent studies were multifocal in their classification. The second most frequent studies focussed on health promotion, followed by curative or restorative care studies and last, studies of illness prevention and maintenance of functioning.

Table 5

Foci of Research Projects, 1988-89

Variable		#Projects	
Population			
	Elderly	41	
	Maternal	23	
	Child/adolescent	47	
	Middle-aged/young adult	95	
	Combination	76	
	Not applicable	21	
	Missing	2	
	Other	70	
Primary Area	a of Study		
	Practice	180	
	Education	43	
	Administration	10	
	Research methodology	11	
	Combination	44	
	Not applicable	15	
	Missing	10	
	Other	62	
Focus of Hea	dth Care		
	Health promotion	64	
	Prevention	29	
	Curative/restorative	42	
	Maintenance	27	
	Combination	74	
	Not applicable	69	
	Missing	18	
	Other	52	

Research personnel funding. Four faculty members received career scholar funding from the Ontario Ministry of Health (n=3) and NHRDP (n=1). Eight faculty received fellowship awards from the following sources: national foundations, internal university sources, NHRDP, provincial ministries of health, and other sources (a hospital foundation and an overseas scholarship). The number of awards given varied from 9 in the Ontario region to 0 in the Atlantic region.

Table 6

Canadian University Schools/Faculties of Nursing Support of Research Personnel and Trainees by Funding Source and University, 1988-89

University/School	HHEDP	Prov Min	Het'l	ing Source	Other	TOTAL	TOTAL	Total d
		of Health	Found	Source		3	Awards	Awarde
Hemorial								
Dalhousie								
St. Francis Xavier								
Moneton								
New Brunswick								
Atlentic total:				-				0
Mutt								
Lavel								
McGill	10000000			PROPERTY STREET		1220,000,000		
Montreal	18000			40000		58000	4	3
Sherbrooke	(1)			(3)				
Trois-Rivières								
ILOIR-KIAIGLGE								
Quebec total:	18000			40000		58000	4	3
	(I)			(3)				
Lakehead								
Laurentian								
McHaster		54700*				54700	1	1
		(1)						
Ottawa		26545	12760		2000	41305	3	2
		(1)	(1)		(1)			-
Queens		32960*				32960	1	1
		(1)						
Ryerson					2000			
Toronto		48555*	17500		500 (1)	66555	4	2
Vindsor		(,,	(.,		(,,			
Western Ontario								
Ontario total:		162760	30260		2500	195520	•	4
		(4)	(3)		(5)	177720		
Brandon								
Manitobe		12500				12500	1	1
A3111 (000		(1)				12300		
Saskatchevan		,						
Alberte								
Athabaska								
Calgary	19600					19600	1	1
	(1)							
Lethbridge								
British Columbia	33773*					33773	1	1
Victoria	(1)							
TICLUI I								
Vestern total:	53373	12500				65873	3	3
TOTAL	71373	175260	30260	40000	2500	319393	16	12
•	(3)	(5)	(3)	(3)	(2)			

*Career Scientist

Discussion

Nursing research manpower in Canadian schools of nursing appears to be very inadequate. Eighty-four percent of part-time faculty are reported not to be engaged in research, and the majority of full-time faculty have 1-10% of their workload allocated to research. These poor results may reflect the reality of heavy teaching loads that faculty are asked to carry, or, they may reflect the difficulty some deans may have had in responding to the workload question as it was posed. In defense of the question's reliability, the ORCAUSN survey has produced consistent results over the last five years: the majority of full-time faculty devote 1-10 percent of their time to

research. However, the validity of the question can be raised as an issue. In some universities, faculty unions and associations have mandated workload percentages for scholarly work. The deans may not be reflecting those mandates but, rather, the actual percentage their faculty devote to research. Alternatively, many other schools have limited time devoted to research, in part, because of the clinical courses offered during intercession and the summer semesters. Given the time allocated for holidays, the proportion remaining for research is indeed miniscule. In future surveys, a distinction should be made between mandated time for scholarly work and actual time devoted to research. However, even if deans are stating the reality, rather than the mandate, the fact remains that research is indeed a small part of a faculty member's workload.

It is noteworthy to observe that a profession of over a quarter of a million nurses and over a thousand nursing faculty has only four career scientists devoting 75 percent of their time to research. These statistics should improve over the next three years as NHRDP/MRC development awards are reported; however, the numbers are still small for the size of the profession we serve and the important research questions that need answering.

It is encouraging to note the substantial number of projects (390) being conducted by faculty and the appropriate emphasis on practice research. However, 38% of the studies are not funded, and many funded studies are underfunded. The reasons for the lack of funding must be explored. Is it lack of faculty grantsmanship skills; inadequate protected time to make grant applications; or, the poor fit between faculty research problems or methods and mandates or preferences of funding agencies? Probably, a combination of causes exist. More effort needs to be directed toward assisting faculty to obtain large-scale grants for their projects. Mechanisms for adjusting research workloads should be explored so that faculty have the time to make these major grant applications. Strategies for improving the fit between our research problems and approaches and those of the funding agencies must be developed.

Last, the nursing profession must lobby for better allocation of health research funding. According to the Reference List of Health Science Research in Canada, \$378.5 million was spent on Health research in Canada for 1988-89. This list contains 80 percent of the funding for university and hospital research in Canada. Therefore, a conservative estimate of the percentage allocated to Nursing would be less than one percent. It is difficult to estimate the level of funding that is needed to register an impact on nursing practice. However, it is clear that a level of less than one percent of the total funding is not sufficient for the largest health professional group in Canada. The 3.05 million dollars received for nursing research also fades in comparison to 1986-87 spending of over 5 billion dollars for hospital nursing salaries alone (Statistics Canada, 1990).

In conclusion, the first annual CAUSN survey of research activities has produced evidence of the amount and scope of nursing research in Canada. The survey has identified the severe underfunding of Canadian nursing research and has provided a useful benchmark against which to track future progress and trends.

REFERENCES

- Medical Research Council, (1988). Reference List of Health Science Research in Canada, 1988-89. Ottawa: Medical Research Council.
- Mohide, E.A. & O'Connor, A.M. (June, 1986). Report on the Research Activities in the Ontario University Schools/Faculties of Nursing, 1983-84. Submitted to: The Ontario Region of the Canadian Association of University Schools of Nursing (ORCAUSN).
- Mohide, E.A., O'Connor, A.M., & Cameron, S.J. (June, 1989). Report on the Research Activities in the Ontario University Schools/Faculties of Nursing, 1986-87. Submitted to: The Ontario Region of the Canadian Association of University Schools of Nursing (ORCAUSN).
- Mohide, E.A., O'Connor, A.M., & Cameron, S.J. (September, 1987). Report on the Research Activities in Ontario University Schools/Faculties of Nursing, 1984-85. Submitted to: The Ontario Region of the Canadian Association of University Schools of Nursing (ORCAUSN).
- O'Connor, A.M., Cameron, S.J., Mohide, E.A. (September, 1989). Report on the Research Activities in the Ontario University Schools/Faculties of Nursing, 1987-88. Submitted to: The Ontario Region of the Canadian Association of University Schools of Nursing (ORCAUSN).
- O'Connor, A.M., Cameron, S.J., & Mohide, E.A. (May, 1988). Report on the Research Activities in the Ontario University Schools/Faculties of Nursing, 1985-86. Submitted to: The Ontario Region of the Canadian Association of University Schools of Nursing (ORCAUSN).
- Statistics Canada, (1990). Hospital Annual Statistics. 86-87. Ottawa: Statistics Canada.

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RÉSUMÉ

Activités de recherche dans les écoles et facultés de sciences infirmières des universités canadiennes en 1988-89

Le présent article résume les résultats du premier sondage annuel de l'ACEUN sur les activités de recherche dans les écoles et facultés de sciences infirmières des universités canadiennes. Les données recueillies portent sur les chercheurs, les projets de recherche et le soutien des équipes de chercheurs. Du premier juillet 1988 au 30 juin 1989, 78 % des professeurs à plein temps et 8 % des professeurs à temps partiel ont participé activement à 390 projets de recherche. Sur les 459 chercheurs en exercice, 37 % avaient reçu une subvention de chercheur principal. Au total, les professeurs de sciences infirmières travaillant comme chercheurs principaux ont recu 3 053 639 \$ pour 225 projets. En 1988-89, 169 études non subventionnées ont été effectuées. La recherche a surtout porté sur l'exercice clinique. Huit bourses de recherche et 4 prix de chercheur de carrière d'un montant de 319 393 \$ ont été attribuées à des professeurs de sciences infirmières. Ces données révèlent une importante disproportion entre le financement de la recherche en sciences infirmières et celui de l'ensemble des recherches en sciences de la santé dont il représente moins d'un pour cent (< 1 %). L'insignifiance de la somme est d'autant plus criante si l'on tient compte du grand nombre d'infirmiers en exercice et de la grande variété des domaines de recherche qu'il y a lieu d'approfondir.