

Changes in the School-to-Work Transition for Canadian Nursing Program Graduates

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Le présent article examine les changements dans la transition école-travail qu'ont connus les diplômés des programmes de sciences infirmières au niveau collégial et universitaire au Canada entre 1978 et 1992. On a pour cela utilisé les données provenant de quatre sondages nationaux parmi les diplômés, sondages effectués par Statistiques Canada. En étudiant les quatre cohortes de diplômés des programmes de sciences infirmières (1 976 diplômés en 1978, 1 982 diplômés en 1984, 1 986 diplômés en 1988 et 1 990 diplômés en 1992), on peut établir des tendances prépondérantes pendant cette période. Les tendances à l'emploi observées comprennent une augmentation marquée dans les emplois à mi-temps environ deux ans après l'obtention du diplôme (avec une baisse correspondant dans les emplois à plein temps), et une augmentation reliée aux postes temporaires (avec des emplois permanents en baisse). Ces données semblent indiquer que la transition école-travail pour les diplômés des programmes de sciences infirmières devient de plus en plus difficile. On examine les répercussions qu'auront ces conclusions empiriques sur la transition école-travail pour ce groupe de diplômés du niveau post-secondaire. On se penche également sur les effets de changements importants sur le marché du travail (passage d'un manque grave d'infirmières dans le milieu hospitalier à la fin des années 80 aux licenciements du personnel infirmier, aux suppressions de lits et aux fermetures d'unités de soins et d'hôpitaux au début des années 90).

This paper investigates changes in the school-to-work transition for graduates of Canadian community college and university nursing programs between 1978 and 1992, using data from four different National Graduates Surveys conducted by Statistics Canada. By examining four distinct cohorts of nursing program graduates (1976 graduates in 1978, 1982 graduates in 1984, 1986 graduates in 1988, and 1990 graduates in 1992), we can identify salient trends over time. These observed employment trends include a marked increase in part-time employment approximately two years after graduation (with a corresponding decline in full-time employment), and an associated increase in temporary positions (with declining permanent employment). These data suggest that the school-to-work transition for graduates of nursing programs has become more difficult over time. Implications from these empirical findings on the school-to-work transition for this segment of post-secondary graduates are discussed. The impact of significant labour market changes (transition from an acute shortage of nurses in hospital settings in the late 1980s to nursing layoffs, bed closures, and ward and hospital shutdowns in the early 1990s) is also addressed.

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Introduction and Literature Review

By examining the school-to-work transition experiences of Canadian post-secondary graduates, we can improve our understanding of the early career experiences of a highly trained segment of the labour force and increase our knowledge of how the labour market functions. By investigating different cohorts of post-secondary graduates over a large time frame (1978 to 1992), we can identify important trends in employment experiences. This paper focuses on graduates of Canadian community college and university nursing programs in order to enhance our knowledge of how nursing graduates make the transition to the labour market up to two years after completing their post-secondary programs.¹

One baseline model that can be used to explore the school-to-work transitions of post-secondary graduates is the human capital model (Becker, 1975), which predicts that personal investments in education (through specialized training to obtain credentials) will lead to greater success in the labour market (higher-status occupations). This model is limited, however, since it focuses almost exclusively on the supply side of the labour market (on the educational/skill attributes of individual workers), while largely neglecting employers and work organizations (Krahn & Lowe, 1988, p. 73-77). The nursing market has undergone significant changes in recent years, moving from an acute shortage of nurses in hospital settings in the late 1980s (particularly in large metropolitan areas such as Toronto), to layoffs, bed closures, and ward/hospital shutdowns in the early 1990s. Such dramatic labour market changes are expected to have a direct impact on employment opportunities and outcomes for recent nursing graduates, which cannot be accounted for by the human capital model.

Recent research on the school-to-work transition in the post-industrial societies of Canada, the United States, and Britain has pointed to some disturbing trends, including marked growth in part-time employment and underemployment of graduates. In Canada, there has been dramatic growth in part-time employment in general (Krahn, 1991; McKie, 1992), and the increase has been particularly strong among youth (Betcherman & Morissette, 1994, p. 2-3). According to Ashton and Lowe (1991, p. 2), youth (which would include post-secondary graduates entering the labour force for the first time) are disproportionately affected by problems related to the "increasingly insecure nature of employment throughout the industrialized world." Betcherman and Morissette (p. 12) conclude that "with the onset of the recession...youth labour market outcomes have deteriorated consider-

ably." Research by Krahn and Lowe (1991, p. 168) demonstrates that, although the school-to-work transition has not completely broken down in Canada, "the process has been prolonged and made more difficult." Increasing trends toward part-time employment and underemployment among youth have fostered yet another trend, toward "life-long learning" (Ashton, Green, & Lowe, 1993, p. 136-138), exemplified by people who "stay on longer at school and make a more gradual transition to the labour market."

In considering the school-to-work transition in the broader context of patterns of gender segregation (in both educational attainments and occupational outcomes), we must also recognize that although increasing numbers of women are to be found in traditional male fields, such as engineering and business, women with post-secondary education remain concentrated in education and nursing (Krahn, 1991, p. 30). This paper focuses on the employment outcomes for predominantly female graduates of Canadian nursing programs. Earlier research has shown that there is a strong empirical link between education and occupation for nursing graduates, with the vast majority being employed in nursing jobs two years after graduation (Clark & Zsigmond, 1981). However, Meltz and Stager (1984, p. 33) caution that past linkages between education and occupation may not be reliable indicators for planning and prediction "if new occupations become available and economically desirable for graduates of a given field of study." Recent dramatic changes in the nursing labour market (notably hospital layoffs) imply a reduction of in-field employment opportunities for new graduates. This may result in increasing numbers of nursing graduates seeking better employment opportunities outside their chosen field.

Research Methods and Data Presentation

Over the years, Statistics Canada conducted a series of large-scale National Graduates Surveys of recipients of degrees or diplomas from Canadian post-secondary institutions. These large sample surveys were designed to examine employment outcomes during the first two years after graduation, along with the relationship between educational attainments and subsequent employment experiences. National Graduates Surveys were conducted in 1978, 1984, 1988, and 1992, based, respectively, on 1976, 1982, 1986, and 1990 post-secondary graduates. Some key standardized measures of the school-to-work transition for these labour force entrants are examined with a view to identifying recent trends and patterns.

Each of the National Graduates Surveys conducted by Statistics Canada is based on a systematic probability sample design, disproportionately stratified by key variables of province, level, and field of study (Clark & Zsigmond, 1981; Clark, Laing, & Rechnitzer, 1986; Statistics Canada, 1988, 1989, 1992), permitting unbiased estimation of population parameters.² A weighting factor is applied to all survey data, to account for different sampling fractions for each region and type of education program. All statistics provided in the data tables shown here are population estimates for the numbers and percentages of post-secondary graduates in the larger population. The magnitude of sampling error for each statistic has been checked, and for cases of high sampling variability (between 16.6 and 25.0%) this has been denoted in data tables with an asterisk – such estimates should be interpreted with caution. To avoid implying greater statistical precision in population estimates than is reasonable, all population counts or totals provided in each of the data tables have been rounded to the nearest 50 units (i.e., the last two digits rounded to “00” or “50”), as recommended by Statistics Canada.

The basic sociodemographic profile of graduates of Canadian nursing programs changed modestly between 1976 and 1990. In terms of gender mix, the proportion of male graduates increased across the four surveys (from 2.7 to 9.1% for community college graduates, and from 1.6 to 4.5% for university graduates). Average ages of nursing program graduates also increased modestly across the first three surveys, and then declined with the latest survey. For community college graduates, average ages were 24.3 years in 1976, 26.3 in 1982, 28.5 in 1986, and 26.2 years in 1990, while for university graduates average ages were 27.4, 29.3, 31.8, and 30.3 years, respectively, across the four surveys. Modest increases in age distributions may reflect the increasing proportion of part-time enrolment in post-secondary education programs across the country over time, and may also be a function of an increasing proportion of mature experienced registered nurses who are now pursuing post-secondary credentials in nursing.³

Table 1 profiles trends in full-time and part-time employment of nursing program graduates and all other graduates across the four National Graduates Surveys. The vast majority of nursing graduates – well in excess of 90% across the four surveys – were employed two years after graduation. If we look at employed graduates only, we see that the proportion of community college nursing graduates employed on a part-time basis increased dramatically across the four surveys, from about one in 10 in 1978 to more than one in five by 1992. Part-time employment also increased markedly for university nursing graduates,

Table 1

*Employment Status for Job Two Years Post-Graduation
by Program Type and National Graduates Survey*

National Graduates Survey

Year of Graduation	1976	1982	1986	1990
Year of Survey	1978	1984	1988	1992

COMMUNITY COLLEGE GRADUATES

Nursing Program Graduates

Employed Full-Time	89.9%	87.3%	84.1%	77.9%
Employed Part-Time	10.1	12.7	15.9	22.1
Weighted Total	5,200	4,400	6,150	5,950

All Other Program Graduates

Employed Full-Time	94.5%	89.2%	87.3%	88.8%
Employed Part-Time	5.5	10.8	12.7	11.2
Weighted Total	17,950	43,300	67,750	44,450

UNIVERSITY GRADUATES

Nursing Program Graduates

Employed Full-Time	95.1%	90.9%	82.8%	85.3%
Employed Part-Time	4.9*	9.1*	17.2	14.7*
Weighted Total	1,000	2,050	3,100	1,750

All Other Program Graduates

Employed Full-Time	88.5%	88.8%	89.4%	88.2%
Employed Part-Time	11.5	11.2	10.6	11.8
Weighted Total	52,200	81,700	102,050	103,150

* High sampling variability associated with this population estimate

Source: Statistics Canada National Graduates Surveys including

(1) 1978 Survey of 1976 Graduates, (2) 1984 Survey of 1982 Graduates,

(3) 1988 Survey of 1986 Graduates, and (4) 1992 Survey of 1990 Graduates

from approximately one in 20 in 1978 to one in seven in 1992. By comparison, the level of part-time employment has been relatively stable over the 1982-1992 decade for non-nursing community college and university graduates, ranging from 10 to 12%. These data suggest that the growing trend towards part-time employment among college- or university-educated labour force entrants is strongest among graduates of nursing programs. These three surveys asked graduates employed on a part-time basis to indicate why they held part-time jobs. Among nursing graduates, the most commonly cited reason was that full-time

work could not be found. Hence in many cases part-time employment is not a stated preference but an involuntary result of the unavailability of full-time jobs.

Graduates responding to each of the four surveys were also asked to indicate whether they were employed in permanent or temporary positions two years after graduation. Table 2 reveals that while the majority of all post-secondary graduates had found permanent jobs two years after graduation, there was an increasing trend towards tempo-

Table 2

*Permanent or Temporary Job Two Years Post-Graduation
by Program Type and National Graduates Survey*

<i>National Graduates Survey</i>				
Year of Graduation	1976	1982	1986	1990
Year of Survey	1978	1984	1988	1992
COMMUNITY COLLEGE GRADUATES				
Nursing Program Graduates				
Permanent Position	94.3%	93.2%	85.9%	83.5%
Temporary Position	5.7	6.8	14.1	16.5
Weighted Total	5,150	4,300	6,150	5,950
All Other Program Graduates				
Permanent Position	89.6%	81.4%	70.8%	79.9%
Temporary Position	10.4	18.6	29.2	20.1
Weighted Total	17,950	41,150	65,650	42,550
UNIVERSITY GRADUATES				
Nursing Program Graduates				
Permanent Position	93.7%	88.1%	88.1%	83.2%
Temporary Position	6.3*	11.9*	11.9	16.8*
Weighted Total	1,000	2,000	3,050	1,700
All Other Program Graduates				
Permanent Position	78.1%	73.0%	76.0%	74.1%
Temporary Position	21.9	27.0	24.0	25.9
Weighted Total	54,900	76,100	96,550	96,950

* High sampling variability associated with this population estimate

Source: Statistics Canada National Graduates Surveys including
(1) 1978 Survey of 1976 Graduates, (2) 1984 Survey of 1982 Graduates,
(3) 1988 Survey of 1986 Graduates, and (4) 1992 Survey of 1990 Graduates

rary employment over the time frame examined. Among community college nursing graduates, approximately one in 20 was employed in temporary positions in 1978, the figure increasing to about one in six by 1992. A very similar trend is found for university nursing graduates over time. By comparison, the level of temporary employment among non-nursing graduates is markedly higher than that found for nursing graduates in each of the survey years. Also, there is a less consistent, non-linear, trend in the level of temporary employment among graduates of non-nursing programs across the four surveys.

Table 3

Relationship between Education and Job Two Years Post-Graduation by Program Type and National Graduates Survey

<i>National Graduates Survey</i>				
Year of Graduation	1976	1982	1986	1990
Year of Survey	1978	1984	1988	1992
COMMUNITY COLLEGE GRADUATES				
Nursing Program Graduates				
Closely Related	86.6%	90.9%	88.5%	92.9%
Partially / Not Related	13.3	9.1	11.5	7.1
Weighted Total	5,200	4,200	6,100	5,900
All Other Program Graduates				
Closely Related	60.5%	56.5%	46.0%	55.6%
Partially / Not Related	39.5	43.5	54.0	44.4
Weighted Total	17,950	40,300	67,550	44,150
UNIVERSITY GRADUATES				
Nursing Program Graduates				
Closely Related	75.4%	75.7%	64.7%	82.9%
Partially / Not Related	24.6	24.3	35.3	17.1*
Weighted Total	1,000	2,000	3,100	1,750
All Other Program Graduates				
Closely Related	41.1%	46.0%	46.0%	56.2%
Partially / Not Related	58.9	54.0	54.0	43.8
Weighted Total	54,750	73,900	101,550	102,550
* High sampling variability associated with this population estimate				
Source: Statistics Canada National Graduates Surveys including				
(1) 1978 Survey of 1976 Graduates, (2) 1984 Survey of 1982 Graduates,				
(3) 1988 Survey of 1986 Graduates, and (4) 1992 Survey of 1990 Graduates				

Post-secondary graduates were queried about their completed educational programs and their subsequent employment two years after graduation, to determine whether they were closely, partially, or not related. The expressed relationship between education and employment two years after graduation is a derived measure, based upon responses to two survey questions.⁴ High proportions of nursing graduates indicated that their education and subsequent employment were closely related, relative to graduates of non-nursing programs. This is especially true for graduates of community college nursing programs, with approximately nine in 10 graduates signifying a close relationship between education and employment. Beyond this, no consistent (i.e., linear) trends evident over time were reflected across the four surveys. A higher proportion of graduates (both nursing and all others across the two institution types) reported that education and employment were partially or not related in 1988, relative to the other survey years.

Finally, survey respondents were asked if they would select the same educational program if they had the choice to make again. While a clear majority of all post-secondary graduates reported that they would choose the same program again, there were some marked differences on this indicator across the four survey years. Among community college and university nursing graduates, the proportion selecting the same program decreased between 1978 and 1988, before increasing substantially in 1992. A similar though much weaker pattern is found for graduates of all non-nursing programs. Across the first three surveys, a higher proportion of university nursing graduates indicated they would select the same education program than graduates of community college nursing programs. The percentages found between graduates of the two types of nursing programs are closer by the 1992 survey.

These differences between community college and university nursing graduates may reflect the broader range of employment options or opportunities available to nursing graduates holding university degrees. University graduates, including those with specialization in nursing, could potentially find jobs outside of the nursing profession (i.e., teaching, health administration), which would not be accessible to graduates of shorter, specialized community college nursing programs.

Table 4

*Selection of Same Educational Program Again
by Program Type and National Graduates Survey*

National Graduates Survey

Year of Graduation	1976	1982	1986	1990
Year of Survey	1978	1984	1988	1992

COMMUNITY COLLEGE GRADUATES

Nursing Program Graduates

Yes, Would Select Same	72.7%	70.0%	62.9%	80.9%
No, Would Not Select Same	27.3	29.3	37.1	19.1
Weighted Total	5,500	4,600	6,200	5,650

All Other Program Graduates

Yes, Would Select Same	72.4%	63.9%	67.1%	76.5%
No, Would Not Select Same	26.6	35.6	32.9	23.5
Weighted Total	19,800	48,600	76,450	48,650

UNIVERSITY GRADUATES

Nursing Program Graduates

Yes, Would Select Same	82.9%	75.9%	72.5%	78.7%
No, Would Not Select Same	17.1	24.0	27.5	21.3*
Weighted Total	1,000	2,150	3,150	1,750

All Other Program Graduates

Yes, Would Select Same	73.3%	71.9%	71.5%	76.0%
No, Would Not Select Same	26.7	27.6	28.5	24.0
Weighted Total	63,450	96,450	115,150	118,800

* High sampling variability associated with this population estimate

Source: Statistics Canada National Graduates Surveys including
(1) 1978 Survey of 1976 Graduates, (2) 1984 Survey of 1982 Graduates,
(3) 1988 Survey of 1986 Graduates, and (4) 1992 Survey of 1990 Graduates

Discussion

A number of salient trends and patterns were observed across the four cohorts of graduates of Canadian nursing programs that highlight change in the school-to-work transition of nursing graduates over time. With respect to employment outcomes, it must be emphasized that the overwhelming majority of nursing graduates (well in excess of 90%) were employed two years after graduation; there is no evidence from

any of the surveys of an unemployment problem among Canadian nursing graduates. However, increases in part-time and temporary employment among nursing graduates across the four surveys points to increasing underemployment. The fact that "unavailability of full-time jobs" was the reason most commonly cited by nursing graduates for part-time employment is further evidence of the increasingly involuntary nature of part-time and temporary employment for a sizeable portion of Canadian nursing graduates. The nursing profession is not unique in terms of underemployment. Recent empirical research shows that the school-to-work transition has become increasingly difficult and prolonged for a large segment of labour force entrants across fields and professions.

Data from the four National Graduates Surveys reveal a close match between completed post-secondary studies and subsequent early career employment for the vast majority of nursing graduates, much more so than for graduates of non-nursing programs. Most nursing graduates were subsequently employed in jobs for which their educational program was designed, and in positions that required skills acquired through their post-secondary programs. This is not surprising, since post-secondary programs provide advanced, specialized training in nursing practice, which would serve as an *entrée* to subsequent employment in the profession, specialized training suited for specialized jobs in nursing.⁵ The close match between education and subsequent employment found for nursing graduates is certainly consistent with predictions based on the human capital model.

The nursing labour market has changed significantly in the 1990s, with downsizing of health-care institutions resulting in layoffs of large numbers of nursing staff. However, the impact on recent graduates (as reported by 1990 graduates surveyed in 1992) has not been as severe as expected given the scope of staff reductions in hospitals and other settings. Over 94% of these recent community college and university nursing graduates were employed in 1992, although higher proportions were employed in part-time and temporary jobs relative to previous cohorts of graduates. Consistent with earlier survey results, the vast majority of 1990 graduates, from nursing programs and post-secondary programs in general, indicated they would choose the same education if they had the decision to make again: at the time of the latest survey, in 1992, approximately four in five nursing graduates indicated they would choose the same education program again. Hence, despite current nursing labour market problems the vast majority of recent graduates still believe significant advantages are to be gained from completing post-secondary programs. This empirical evidence is

entirely compatible with the human capital model, which highlights investment returns from completing specialized post-secondary programs in nursing.

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Footnotes

1. "Nursing programs" include community college and university programs leading to a diploma or degree in "nursing." Programs designed for training nursing assistants (or practical nurses) and nursing aides are excluded from this classification.
2. These large-scale surveys are considered representative of the larger population of university and community college graduates across Canada for each of the respective cohort years. One important limitation to generalization of data results should be noted: for the 1978 survey of 1976 graduates, post-secondary institutions in the province of Quebec did not participate and hence graduates from educational programs in Quebec were excluded. Accordingly, statistical results from the first in this series of National Graduates Surveys can be generalized to the larger population of Canadian post-secondary graduates, excluding those from Quebec.
3. It is probable that many graduates of university nursing programs in particular will have acquired nursing training some time earlier (perhaps in a hospital program), and then returned to school to upgrade their credentials. Unfortunately, the National Graduates Surveys data sets do not provide sufficient detailed information to distinguish and separate those entering the labour force for the very first time from experienced nurses returning to school.
4. The two survey questions were, "Was your job [two years after graduation] one for which your program was designed?" and "In that job, did you use any of the skills acquired through the educational program?" An affirmative response to both questions signified that education and job were "closely related." A positive answer to one of the two questions denotes that the two were "partially related" and negative answers to both questions indicated that education and employment were "not related." For the purposes of this analysis, the latter two categories of the derived relationship variable were collapsed together, due to the very small numbers and proportions of cases found in the "not related" category. The small numbers and proportions create problems with high levels of sampling variability, which in turn precludes publicly releasing population estimates for this smallest category.
5. It is not possible to examine detailed occupation profiles for graduates due to data suppression on the Statistics Canada micro data tapes (designed to preserve anonymity and confidentiality of data on individual survey respondents). However, occupational classification is captured using two-digit (major group) Standard Occupational Classification (SOC) codes developed by Statistics Canada. Examining these available data across the four surveys, it is apparent that over three-quarters of university nursing program graduates and over four in five community college nursing program graduates were employed (two years after graduation) in "medicine and health" occupations (SOC major group 31).

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