Exploring Women's Attitudes and Intentions to Seek Care from Nurse Practitioners across Different Age Groups

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RÉSUMÉ

Puisque l'acceptation publique est essentielle à une intégration réussie des infirmières praticiennes dans le système de soins de santé canadien, la présente étude examine de quelle manière les femmes de différents groupes d'âge perçoivent les infirmières praticiennes. Les femmes d'âge moyen avaient généralement une opinion plus positive des professionnels de la santé et étaient plus enclines à indiquer qu'elles demanderaient de l'aide des infirmières praticiennes que les femmes plus âgées et plus jeunes qu'elles. Les répondants des trois groupes d'âge étaient davantage portés à consulter des médecins que des infirmières praticiennes, particulièrement en ce qui concerne les problèmes de santé aigus (par opposition aux questions préventives).

ABSTRACT

Because public acceptance is critical for the successful integration of nurse practitioners into the Canadian health care system, the current study explored how women of different ages perceive nurse practitioners. Middle-aged women held more positive views of health care professionals in general and were more likely to indicate that they would seek help from nurse practitioners compared to younger and older women. Across all three age groups, respondents were more likely to seek help from physicians than from nurse practitioners, especially for acute (versus preventive) health concerns.

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Manuscript received: / manuscrit reçu : 02/10/08

Manuscript accepted: / manuscrit accepté : 19/03/09

Mots clés : infirmières praticiennes, attitudes, intentions

Keywords: nurse practitioners, attitudes, intentions

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Nurse practitioners (NPs) are registered nurses with advanced skills and training (Canadian Nurses Association, 2002) and are distinguishable from other nursing professions because of their extended scope of practice that encompasses some of the skills and abilities previously reserved for physicians alone (Canadian Nurses of Ontario, 2008). For example, NPs have the authority to diagnose and treat common illnesses, prescribe some medications, order some diagnostic tests and refer patients to other health care professionals (Nurses Association of New Brunswick, 2002). Expanding the role of registered nurses is generally recognized as a way of increasing the availability and accessibility of health care in under-serviced areas (e.g., Romanow, 2002; Worster, Sardo, Thrasher, Fernandes, & Chemeris, 2005). Moreover, there is evidence of increased participation of NPs in Canada's health care.

In 2005, there were 1,026 licensed NPs in Canada with 88.7 per cent working in direct care (Canadian Institute for Health Information [CIHI] and the Canadian Nurses Association [CNA], 2006). This number represents an

doi:10.1017/S071498080909014X

increase in NPs across Canada of 41.5 per cent from 2003. In the province of New Brunswick, where the NP role was officially legislated in 2002, there was a 266.7 per cent increase in the number of NPs from 2003 to 2005 (CIHI and CNA, 2006). Given recent government initiatives (e.g., Grow your own nurse practitioner program, Ontario Ministry of Health, 2008), one might forecast a continued increase in the number of NPs, particularly in under-serviced areas.

In this article, we explore the acceptance of NPs by women of different age groups. To accomplish our goal, we focus on how NPs are perceived in contrast to physicians, and explore those situations that would lead women to seek care from NPs. We begin with a brief overview of the relevant literature.

To understand how nurse practitioners can be successfully integrated into the health care system, some research focuses on the role of NPs within the healthcare system (e.g., Bryant-Lukosius, DiCenso, Browne, & Pinelli, 2004) whereas other research focuses on the attitudes and perceptions of NPs by other health care professionals as well as by the public (e.g., Gould, Johnstone & Wasylkiw, 2007; MacDonald & Katz, 2002). For example, through interviews with NPs, Gould et al. (2007) identified acceptance by patients and by other health care professionals as hurdles to be overcome by NPs before they could fulfill their role in the health care system, and NPs also questioned the public's acceptance of their role. Indeed, a common thread across all interviews with NPs in Gould et al. concerned the need to inform the public of what the NP role comprised.

The importance of understanding people's perceptions is also highlighted by failures to integrate the NP role into existing health care. For example, in Prince Edward Island, a pilot project for NPs ended prematurely because of a lack of the public's understanding of the NP role (Hass, 2006). This research seems to suggest that public acceptance of nurse practitioners is one factor that is critical for the successful integration of nurse practitioners into the Canadian health care system.

Interestingly, research also shows that community members hold favorable attitudes towards NPs. For example, Mitchell, Dixon, Freeman, and Grindrod (2001) asked clients in a family medical centre about their perceptions and comfort with NPs and found that overwhelmingly participants reported support for NP services. Other research shows that health care consumers are satisfied with the care they receive from NPs (e.g., Bryant & Graham, 2002; Knudtson, 2000; Mundinger, Kane, Lenz, Totten, Tsai, Cleary et al., 2000).

One possible interpretation of divergent perceptions and attitudes of nurse practitioners may have to do with the influence of age and educational attainment. For example, those with favorable attitudes towards NPs tend to be younger, more educated (Knudtson, 2000), and less familiar with the duties associated with the profession (e.g., Berry, Courtenay & Bersellini, 2006; Knudtson, 2000). Similarly, the NPs interviewed by Gould et al. (2007) were uncertain as to whether acceptance by clients was consistent across age groups. That is, this sample of NPs expected older clients to be less accepting of their role. Thus, a number of interesting issues remain unexplored.

First, it is unclear whether age differences exist in terms of attitudes towards NPs. Second, it is unclear whether attitudes towards NPs differ from attitudes towards physicians. Given that NPs offer services traditionally provided by physicians, it seems reasonable to determine whether attitudes towards these two professions differ. Third, little is known about community members' intentions to seek help from NPs. That is, the importance of identifying prevailing attitudes is underscored by the evidence that attitudes predict behaviour (e.g., Ajzen & Fishbein, 1977; Ajzen, 1991; 2001); however, the more proximal predictor of seeking help is one's intention to do so. Thus, a thorough understanding of public perceptions of NPs should include intentions as well as attitudes. Yet a fourth issue concerns whether people's intentions to seek help from NPs are bounded by health concerns. Specifically, given the relatively new role of NPs in New Brunswick (since 2002), one might expect that people perceive them to be an alternative to family physicians for some, but not all, health concerns.

Overview of current study

The purpose of the current investigation was to explore attitudes towards nurse practitioners. We focus on the attitudes of women because women are more likely to seek medical help than men are (e.g., Mansfield, Addis & Mahalik, 2003), and thus women may be a cohort that is likely to be familiar with the NP role.

The present descriptive quantitative study expands on previous research that explores public perceptions of NPs in three ways. First, we investigated the attitudes that different age groups of female health care consumers have towards NPs. Second, we compared the attitudes women have towards NPs with the attitudes women have towards a more familiar profession, family physicians. Third, we investigated participants' intentions of seeking care from NPs for different categories of health care concerns, namely, minor acute health concerns versus preventive health concerns.

Method

Participants

In total, 196 women from three age groups participated in the study. Young women were students in an

https://doi.org/10.1017/S071498080909014X Published online by Cambridge University Press

introductory psychology course who received course credit for participating. Young participants filled out the surveys in small supervised groups on campus. To recruit middle-aged and older participants, a separate group of students in second-year psychology courses were asked to take questionnaire packets home to a middle-aged or older woman in their families (i.e., each student took one questionnaire). Thus, the middle-aged and older participants were not related to the young women in the study. Questionnaires were returned to the researchers via mail. This recruiting strategy provided the important advantage of having a sample similar in cultural and socioeconomic characteristics across the three age groups. Most participants (94%) were of European descent (Caucasian).

Young Adults

The 93 female undergraduates (M_{age}=19.63, SD=0.87) had on average one year of post-secondary education. Participants were asked to rate their health "compared to others of the same age and sex" on a scale ranging from 1 (poor) to 5 (excellent); 15 per cent rated their health as excellent, 53.8 per cent as very good, 28 per cent as good, and 3.2 per cent as fair.

Middle-Age Adults

The middle-age group comprised 51 women (M_{age} = 46.53, SD=8.53). Compared to others of the same sex and age, 17.6 per cent rated their health as excellent, 45.1 per cent as very good, 29.4 per cent as good, and 7.8 per cent as fair or poor. Of these participants, 84.3 per cent reported completion of at least high school, 2 per cent of participants reported a total of 11 years of education, and 2 reported a total of 8 years of education. In this group, 12 per cent did not report educational attainment.

Older Adults

The older-adult group comprised 52 women born before 1945 (M_{age}=71.75, SD=7.79). Compared to others of the same sex and age, 7.7 per cent rated their health as excellent, 30.8 per cent as very good, 55.8 per cent as good, and 5.8 per cent as fair. Finally, 57.1 per cent reported having at least graduated from high school, 23.1 per cent reported 9 to 11 years of formal education, and 17.2 per cent reported 8 or fewer years of formal education. In this group, 2.6 per cent did not report educational attainment.

Procedure and materials

Following ethical guidelines and approval from the Research Ethics Board, participants read an information letter outlining the purpose of the study, signed a consent form, and completed the three surveys described below.

Familiarity with NPs

To determine participants' level of familiarity with NPs, we asked participants three questions. First, participants were asked to indicate how familiar they were with NPs on a scale from 1 (not at all familiar) to 5 (very familiar). Second, we asked participants if they currently see an NP for health care. Finally, we asked participants if there was an NP in their geographical area.

Attitudes

Attitudes towards doctors were assessed using the subscale of positive attitudes towards doctors from the Attitudes towards Doctors and Medicine Scale (Martineau, 1990). Martineau's scale comprises 15 items that assess attitudes towards physicians and to medicine. In the current study, the subscale comprised 4 items and for each item (e.g., "Doctors are important in keeping us healthy"), participants rated agreement ranging from 1 (strongly disagree) to 6 (strongly agree), and totals were averaged such that possible scores ranged between 1 and 6 with higher numbers indicating more favorable attitudes. The internal consistency reliability in the current sample was 0.72 indicating adequate reliability.

To assess attitudes towards NPs, we adapted the 15 items from the Attitudes towards Doctors and Medicine Scale (Martineau, 1990) such that each item pertained to NPs. Participants rated their agreement ranging from 1 (strongly disagree) to 6 (strongly agree) on 15 items (e.g., "Nurse practitioners are important for providing health care"). Totals were rescaled to be on a common metric with the measure of attitudes towards doctors. Thus, totals were averaged such that possible scores ranged between 1 and 6 with higher numbers indicating more favorable attitudes. The internal consistency reliability in the current sample was 0.90 indicating good reliability.

Scenarios

Six scenarios describing health concerns were used. Three scenarios described the symptoms of acute problems (i.e., a sore throat, ear infection, and a rash) and three described preventive health issues (i.e., diabetic diet/weight loss, breast exams/pap smears, and immunizations). For each scenario, participants were asked to rate, on a 5-point scale, ranging from 1 (very unlikely) to 5 (very likely) the likelihood that they would see an NP and the likelihood of seeing a family physician for this problem. One score reflecting participants' likelihood of seeing an NP for acute problems was computed by summing responses for the three acute scenarios, and the internal consistency reliability coefficient was 0.88. A second score was computed by summing responses for the

https://doi.org/10.1017/S071498080909014X Published online by Cambridge University Press

three preventive health scenarios, and the internal consistency reliability was 0.78. Similarly, two scores were computed to index the likelihood of seeing a family physician for acute problems (Cronbach's alpha = 0.69) and for preventive health scenarios (Cronbach's alpha = 0.51).

Results

Familiarity with NPs

Participants reported an average level of familiarity with NPs of 2.59 on a 5-point scale ($SD = 1.18$) indicating some knowledge of the profession. Interestingly, although 44.9 per cent of participants indicated that there was an NP in their area, 93.4 per cent indicated that they did not currently see an NP for their health care. Older women were significantly less familiar with NPs ($M = 2.18$, $SD = 1.20$) than either middle-aged ($M = 2.73$, $SD = 1.32$) or young women ($M = 2.74$, $SD = 1.05$), $F(2, 188) = 4.32$, $p = 0.02$, $\eta^2 = 0.04$.

Attitudes towards doctors and NPs

A 2 (Profession: physicians vs. NP) × 3 (Age group: young, middle-aged, old) mixed ANOVA was conducted to evaluate age differences in attitudes towards doctors and NPs. The within-subjects variable was profession and the between-subjects variable was age group. A trend showed that participants held more favorable attitudes towards NPs ($M = 4.19$, $SE = 0.05$) compared to physicians ($M = 4.04$, $SE = 0.07$), $F(1, 193) = 3.50$, $p = 0.06$, $\eta^2 = 0.02$. A main effect for age group was that middle-aged participants ($M = 4.35$, $SE = 0.08$) held more favorable attitudes overall (collapsed across both professions) compared to young ($M = 3.95$, $SE = 0.08$) and old participants ($M = 4.03$, $SE = 0.08$) whereas there were no differences between young and old participants, $F(2, 193) = 8.32$, $p < 0.01$, $\eta^2 = 0.08$. The interaction between profession and age group was not significant, $F(2, 193) = 0.72$, $p = 0.49$, $\eta^2 = 0.01$.[1] Because educational attainment may have impacted participants' attitudes, we included years of education as a co-variate, and the pattern of results did not change from what is reported here.

Intentions to seek help

A 3 (Age group: young, middle-aged, older) × 2 (Scenario: acute, preventive) × 2 (Profession: NP vs. family physician) mixed ANOVA was used to evaluate age differences in likelihood of seeking help from two different professions as a function of health care need.[2] Within-subjects variables were "scenario" and health care professionals, and the dependent variable was likelihood of seeking help.

The main effect for age group was not significant ($F(2, 193) = 1.07$, $p = 0.34$, $\eta^2 = 0.01$), thus there were no differences across age groups in overall likelihood of seeking help. The main effect for health concern (scenario) was also not significant ($F(1, 193) = 1.35$, $p = 0.25$, $\eta^2 = 0.01$), thus, there was no difference in willingness to seek help as a function of whether the health concern was acute or preventive. There was a significant main effect for health care professional with participants being more willing to seek help from family physicians ($M = 12.83$, $SE = 0.16$) than NPs ($M = 9.48$, $SE = 0.24$), $F(1, 193) = 167.69$, $p < 0.01$, $\eta^2 = 0.47$.

The interaction between age group and health concerns was not significant, $F(2, 193) = 0.98$, $p > 0.05$, $\eta^2 = 0.01$. There was, however, a significant interaction for age group and health care professional, $F(2, 193) = 5.89$, $p < 0.01$, $\eta^2 = 0.06$. As can be seen in Table 1, the tendency for women to be more willing to seek help from family physicians than from NPs was strongest for young and old women. One-way ANOVAs comparing the age groups across each profession (collapsed across scenario types) revealed that middle-aged women were significantly more likely to seek help from NPs compared to younger women but not compared to older women ($F(2, 193) = 3.45$, $p = .03$, $\eta^2 = 0.04$), and there were no differences among the three age groups in likelihood of seeking help from family physicians, $F(2, 193) = 1.83$, $p = 0.16$, $\eta^2 = 0.02$.

There was also a significant two-way interaction for type of health concern and health care professional, $F(1, 193) = 17.08$, $p < 0.01$, $\eta^2 = 0.08$. Although there is an overall tendency for respondents to be more willing to seek help from family physicians, participants were more willing to seek help from NPs for preventive ($M = 9.85$, $SE = 0.27$) versus acute ($M = 9.11$, $SE = 0.26$) concerns. This trend was reversed for physicians such that respondents were more willing to seek help from physicians for acute ($M = 13.01$, $SE = 0.20$) versus preventive ($M = 12.65$, $SE = 0.19$) concerns. The three-way interaction between age group, type of health concern, and professional was not significant, $F(1, 193) = 0.26$, $p > 0.05$, $\eta^2 < 0.01$.

To determine whether women's likelihood of seeking help was impacted by how familiar they were with the NP profession, we included familiarity as a co-variate

Table 1: Age differences in likelihood of seeking help from nurse practitioners and family physicians

	Young	Middle-aged	Older
	M (*SE*)	*M* (*SE*)	*M* (*SE*)
Nurse practitioners	8.74 (0.34)	10.23 (0.46)	9.47 (0.46)
Family physicians	12.96 (0.22)	12.38 (0.30)	13.14 (0.30)

https://doi.org/10.1017/S071498080909014X Published online by Cambridge University Press

and the pattern of results was unchanged. Familiarity did interact with profession ($F(1, 187)=7.24$, $p<0.01$, $\eta^2=0.04$) and bivariate correlations between familiarity and profession showed that increased familiarity of NP profession was significantly associated with likelihood of seeking help from NPs ($r=0.15$, $p=0.04$) but not associated with likelihood of seeking help from physicians, $r=-0.08$, $p=0.23$. We also included years of education as a co-variate to examine whether differences could be accounted for by educational attainment, and as in the previous analysis, the pattern of results was unchanged.

Discussion

In this study, we sought to examine the acceptance of the NP profession by exploring women's attitudes towards and intentions to seek care from NPs. The results showed that (a) attitudes towards NPs were more favorable than those towards physicians, (b) middle-aged women held the most positive attitudes towards nurse practitioners, and (c) women were more likely to seek care from NPs for preventive versus acute health concerns. We discuss each of these findings in turn.

Attitudes towards NPs

Consistent with previous research (e.g., Mitchell et al., 2001), attitudes towards NPs were more favorable than those towards physicians. Despite this finding, participants were more likely to seek care from physicians than from NPs. This disparity in the link between attitudes and intentions highlights the complexities associated with help-seeking behaviour. It is possible that participants did not have a thorough understanding of the NP role and did not believe that NPs could provide care for the scenarios described in the study. Of course, it is also possible that participants were fully aware of the services that NPs can provide, felt positive about these services, but still preferred to obtain care from their own family physician whenever possible.

Age differences in attitudes

Whereas previous research (e.g., Knudston, 2000) showed that young age is associated with more positive views of NPs compared to older age, we found that the middle-aged women held the most positive attitudes toward NPs and showed less preference for physicians over NPs when seeking care. It is interesting to speculate as to the causes for the age differences in attitudes that we obtained. One possible explanation is that middle-aged women have the unique combination of being both familiar with NPs and concerned with health (either for themselves or for older loved ones), which suggests that as the middle-aged cohort ages, they will be more likely to access care from a diverse team of health care professionals. Additionally, middle-aged participants may be more knowledgeable about the role of NPs. Future research that includes a more in-depth inquiry of the knowledge that women of different age groups have of NPs would contribute to understanding differing attitudes. Such work could also help to explain why we found that increased familiarity with NPs was associated with more positive attitudes whereas previous research found the opposite result (e.g., Berry et al., 2006). It may be that perceived availability of health care services is also important. Indeed, individuals who have been unable to find a family physician may be more positive about NPs especially when they are knowledgeable about the expanded professional role for which NPs are trained.

Intentions to seek care from NPs

Consistent with previous research showing that NPs are evaluated differently than are physicians (e.g., Mitchell et al., 2001), participants in our study were more likely to indicate that they would seek help from NPs when the health concern was preventive versus acute in nature. This finding may be indicative of participants' limited understanding of the scope of practice for NPs. That is, preventive health care falls under the domain of care for other nursing professions, and participants may not be distinguishing NPs from other health care providers. Alternatively, respondents may have understood that the scope of practice of NPs is wider than that of other nursing professions yet still preferred to seek care for acute conditions from physicians. Further research could explore the reasons for these preferences. For example, physicians may be preferred because of their more extensive training, or because of perceptions that they can more effectively refer to specialists if a need arises, or simply because of a long-standing relationship between the respondent and her own family physician. Moreover, the reasons for preferring the physician over the NPs could very well differ across age groups. Of course, the results we obtained may reflect the scenarios we chose to include for acute and preventive care, and further research using other health care problems may uncover different results.

Willingness to seek care from NPs may also be inferred from the finding that most (93%) reported not seeing an NP for health care. Whereas this might reflect the limited availability of NPs in New Brunswick, 44 per cent of participants indicated that NPs were in the area. Taken together, these results suggest that there is a continued need to increase the public's awareness of the NP role and their scope of practice.

https://doi.org/10.1017/S071498080909014X Published online by Cambridge University Press

Limitations

The current study is not without limitations. The sample comprised a convenience sample of women limiting the generalizability of our findings. Future research using representative samples of women of different age groups would contribute to the literature. Moreover, given that men are more reluctant to seek health care and are less likely to comply with medical treatment than are women (e.g., Oksuzyan, Juel, Vaupel, & Christensen, 2008), it would be of interest to explore whether men differ from women in their perceptions of NPs. Finally, although we did not find evidence that level of education impacted participants' attitudes or intentions, a more diverse sample with participants of varying educational levels would better address the role of education in attitudes and intentions.

A second limitation concerns the measures used in the current study. Specifically, we assessed knowledge of the NP role using three questions that arguably do not fully capture people's understanding of the profession. Future research may want to include items that reflect the actual practices of NPs. For example, participants could be given a checklist of tasks (e.g., administering medication, reading an X-ray) and asked to indicate whether this falls under the scope of practice for NPs. Additionally, our attitude measures for physicians and NPs were not identical, and although conceptually they are comparable in that they were an index of favourability, using the same questionnaires for both professions would be advisable.

In conclusion, the results of this study support previous research that illustrate the public's positive attitudes towards NPs, and extend previous research by showing that such attitudes do not automatically translate into a likelihood of seeking services from NPs. The barriers perceived by NPs with respect to public acceptance are real, and one key to successful integration of the profession into the health care system may be continued education and publicity.

Notes

1 To determine whether women's attitudes towards the two professions were impacted by how familiar they were with the NP profession, we included familiarity as a co-variate, and the pattern of results was unchanged.

2 Given the low-reliability coefficients for the scenarios involving physicians, a one-way repeated measures ANOVA was conducted to evaluate differences across scenarios. For the acute scenarios involving NPs, there were no significant differences across scenarios, $F(2, 366) = 0.76$, $p > 0.05$, $\eta^2 < 0.01$. Similarly, for the prevention scenarios involving NPs, there were no significant differences across scenarios, $F(2, 356) = 2.66$, $p > 0.05$, $\eta^2 = 0.02$. For the acute-care scenarios involving family practitioners, respondents indicated they would be more willing to see a physician for a rash ($M = 4.59$, $SE = 0.07$) compared to a sore throat ($M = 4.21$, $SE = 0.09$) or an ear infection ($M = 4.20$, $SE = 0.09$), $F(2, 382) = 13.18$, $p < 0.05$, $\eta^2 = 0.07$. For the prevention scenarios involving family practitioners, respondents indicated they would be less willing to see a physician for a diabetic diet counseling ($M = 3.56$, $SE = 0.11$) compared to breast exam/pap smear ($M = 4.651$, $SE = 0.06$) or immunization ($M = 4.51$, $SE = 0.08$), $F(2, 376) = 70.23$, $p < 0.05$, $\eta^2 = 0.27$. The primary analysis was repeated using only two scenarios for the physicians, and the pattern of results did not differ from what is reported here.

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