ARTICLES

Patients Are Satisfied with Advanced Practice Physiotherapists in a Role Traditionally Performed by Orthopaedic Surgeons

Deborah M. Kennedy, Susan Robarts, Linda Woodhouse

ABSTRACT

Purpose: To measure and compare patient satisfaction with follow-up care in advanced practice physiotherapist (APP) and orthopaedic surgeon clinics for patients following total hip or knee replacement.

Method: Consecutive patients attending either an APP-led or a surgeon-led review clinic were surveyed using a modified nine-item satisfaction questionnaire based on the Visit-Specific Satisfaction Instrument (VSQ-9). Chi-square analyses were used to examine differences in patient characteristics and type of visit. Independent *t*-tests were used to examine potential differences in patient satisfaction.

Results: Of the 123 participants, more than half were aged 65 years or older. Chi-squared analyses revealed no significant difference in participant characteristics (gender, age, and overall health status) between the two different types of clinics. There was a significant difference ($\chi^2_4 = 12.49$, $p = 0.014$) in the distribution of the timing of follow-up appointments. There was no significant difference between the groups in mean overall patient satisfaction scores on the modified VSQ-9 ($p = 0.34$) nor in the mean of the sum of the seven items related to the service provider ($p = 0.85$). Satisfaction scores for most of the service-provider items were above 90/100.

Conclusion: Patients are highly satisfied with the care provided by APPs in follow-up clinics after joint replacement. Evaluation of the patient perspective is essential to any new role involving a shift in traditional practice boundaries.

Key Words: extended scope, hip and knee arthroplasty, osteoarthritis, instrument validity, questionnaire

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RÉSUMÉ

Objectif : Mesurer et comparer le taux de satisfaction relativement aux soins de suivi offerts dans des cliniques de pratique avancée de physiothérapie et de chirurgie orthopédique chez les patients qui ont subi une intervention de remplacement complet de la hanche ou du genou.

Méthode : Des patients consécutifs de cliniques de pratique avancée de la physiothérapie ou de clinique de chirurgie orthopédique ont fait l'objet d'un sondage à l'aide d'un questionnaire modifié de neuf questions visant à mesurer leur satisfaction, inspiré du *Visit-Specific Satisfaction Instrument* (VSQ-9), l'instrument de mesure en neuf critères de la satisfaction à la suite de visites précises. Des analyses khi carré ont été utilisées pour étudier les différences entre les caractéristiques et les types de patients, et les types de visites. Des tests-*t* indépendants ont été utilisés pour étudier les différences potentielles dans la satisfaction des patients.

Résultats : Des 123 patients qui ont participé à l'étude, plus de la moitié étaient âgés de 65 ans ou plus. Les analyses khi carré n'ont révélé aucune différence significative entre les caractéristiques des participants (sexe, âge, état de santé général) des deux types de cliniques. On a toutefois observé une différence considérable ($\chi^2_4 = 12{,}49$, $p = 0{,}014$) dans la répartition et le moment des rendez-vous de suivi. Il n'y avait pas de différence significative entre la moyenne des taux de satisfaction des patients pour le VSQ-9 modifié ($p = 0.34$) ni pour la moyenne de la somme des 7 points ($p = 0{,}85$) concernant le fournisseur des services. Les taux de satisfaction pour la plupart des points relatifs au fournisseur des services étaient de plus de 90/100.

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Conclusion : Les patients sont très satisfaits des soins offerts en pratique avancée de la physiothérapie dans les cliniques de suivi à la suite du remplacement d'une articulation. L'évaluation selon la perspective des patients est essentielle pour la mise en place de tout nouveau rôle impliquant une évolution ou un changement dans les limites de la pratique traditionnelle.

Mots clés : arthroplastie de la hanche ou du genou, arthrose, instrument de validation, portée étendue, questionnaire

INTRODUCTION

The convergence of tough economic times, rising health care costs, and physician shortages have made health care transformation a provincial, national, and international priority. These challenges were the impetus for a number of key initiatives in Ontario, including the Ministry of Health and Long-Term Care's 2004 Wait Time Strategy. Hip- and knee-joint replacement was one of the five key priority areas identified.[1,2] New models of care aimed at improving access to services and reducing wait times for total joint replacement have been developed and implemented. These initiatives have demanded innovation and close collaboration among health care providers and have resulted in new interprofessional models of care. Physiotherapists have emerged as key providers on these teams because of their training and expertise in musculoskeletal disorders and because physiotherapists are primary health professionals to whom patients have direct access (i.e., no referral is required).[3,4]

There is a growing body of research to support new and expanded roles that maximize the unique skill sets of physiotherapists. Childs et al.[5,6] demonstrated that experienced physiotherapists have higher levels of knowledge in managing musculoskeletal conditions than medical students, physician interns, residents, and all physician specialists except orthopaedists. Moore et al.,[7] who examined musculoskeletal clinical diagnostic accuracy using magnetic resonance imaging (MRI) as the gold standard, found no difference between physiotherapists and orthopaedic surgeons practising in a US Army–based community hospital; in fact, the clinical diagnostic accuracy of physiotherapists was higher than that of the non-orthopaedic physician providers. In Bristol, England, a randomized controlled trial compared post-fellowship orthopaedic surgeons to specially trained physiotherapists working in an extended role; the physiotherapists were found to be as effective as the surgeons in the initial assessment and management of patients with musculoskeletal problems.[8] Interestingly, patients were more satisfied with the services provided by the physiotherapists; physiotherapists were also less likely to order radiographs and to refer patients for orthopaedic surgery, which resulted in lower direct hospital costs.

Extended scope or advanced practice roles for physiotherapists arose in the United States following the Vietnam War and have been established for over 20 years in the United Kingdom.[9] In 1986 in the Exeter Health Authority, specially trained physiotherapists performed a triage role for orthopaedic patients awaiting consultation with an orthopaedic surgeon. The success of these extended scope practitioners in improving access to care and reducing orthopaedic wait times led the National Health Service in the United Kingdom to expand this model of service delivery.[10]

In Canada, the role of the extended scope/advanced practice practitioner was first introduced in 1995 with the development of a programme to train physical and occupational therapists at the Hospital for Sick Children in Toronto as specialists in paediatric rheumatology.[11,12] In recent years, as a result of Ontario's wait-list crisis in hip and knee replacement, advanced practice roles have been introduced to help improve access to care for these populations.[13–16]

At the Holland Orthopaedic & Arthritic Centre of Sunnybrook Health Sciences Centre in Toronto, Ontario, the wait-list crisis was the impetus for the introduction of a new model of care for hip and knee replacement in 2005. System-wide changes were implemented alongside the development of an advanced practice physiotherapist (APP) role in order to streamline access to care for patients referred to the Holland Centre and to redistribute follow-up care after hip and knee replacement from orthopaedic surgeons to APPs. These changes represent a shift in roles that may affect patient expectations, since patients are accustomed to seeing an orthopaedic surgeon for initial assessment and ongoing postoperative follow-up. Unmet expectations can decrease patient satisfaction.[17] Patients' perceptions of physiotherapists in this role are therefore crucial to the acceptance and adoption of this new and emerging role.

The aim of the present study was to measure and compare patient satisfaction with postoperative follow-up care in two types of clinics for patients with total hip replacements (THR) and total knee replacements (TKR): APP-led clinics and orthopaedic-surgeon-led clinics. A secondary purpose was to evaluate a modified 9-item satisfaction survey based on the Visit-Specific Satisfaction Instrument (VSQ-9).[18]

METHODS

Patients

A cross-sectional study design was used to evaluate patient satisfaction with the new APP role in providing care following THR or TKR. We used a sample of convenience recruited from consecutive patients attending

either an APP-led or a surgeon-led clinic for postoperative follow-up. Patients were eligible if they had undergone either a primary or a revision procedure. In total, 123 surveys were collected.

APP Background Information

At the Holland Centre, APPs are specially trained physiotherapists whose scope of practice has been extended through the use of medical directives. Specifically, the APPs are authorized, by delegation from the orthopaedic surgeons, to order diagnostic tests such as x-rays, laboratory tests, and ultrasound investigations under specific conditions. In addition to their entry-level physiotherapy practice degrees, all APPs hold research Master's Degrees and have expert-level orthopaedic knowledge gained through extensive clinical work experience (5–28 years) and postgraduate courses. Multiple role domains are emphasized in the Holland Centre's APP role profile, including (1) expert clinical practice and in-depth knowledge, (2) professional and organizational leadership, (3) research and scholarship, (4) education and professional development, and (5) collaboration. All APPs completed an intensive 3-month Practice Development Program developed based on the University of Toronto's Orthopaedic Surgery Residency Program. Evaluation of each APP is based on clearly defined competency criteria modelled after the CanMeds 2005 Physician Competency Framework.[19] Specific details of the role and its development have been published elsewhere.[16]

In their new role, the APPs function as the surgeon would, in that they take the patient's history, perform the clinical examination, order appropriate investigations, formulate clinical diagnoses, and make appropriate recommendations for management. As physiotherapists, they bring additional value in assessment of movement impairments, knowledge of community/treatment resources, and an emphasis on patient education.

Project Design

The survey reported here was conducted as part of a formal programme evaluation of the APP service. As noted earlier, this new service was added as part of the standard of care for patients at the Holland Centre. At our institution, performance evaluations fall under the rubric of quality improvement and, for this reason, implied consent for completion of evaluation surveys is considered acceptable by the organization's ethics review board. At the time of this evaluation, not all of the surgeons' practices had been transitioned to the new care model, under which the APP performs the postoperative follow-up visits. The survey was distributed in the APP-led clinics and in the clinics of the two senior surgeons with the largest clinic volumes who had not yet changed to the new model. An outpatient clinic nurse handed all patients who attended these clinics a copy of the questionnaire and asked them to drop the completed questionnaire into a locked drop box just outside the clinic at the end of their appointment. Patients were advised by the nurse that this process was confidential, that the instructions were at the top of the survey, and that the nurse was available to answer any additional queries. A physiotherapy assistant retrieved the completed surveys and entered the responses into a database. All surveys were anonymous, and none of the practitioners providing the care in the clinics were aware of the responses.

Measures

We conducted a thorough review of the literature to examine what satisfaction tools had been used in prior work involving extended scope/advanced practice physiotherapist roles. It was important for our purposes to find a survey that contained items pertaining to outpatient clinic visits, with questions relevant to the follow-up of patients with hip and knee replacements. We also needed a tool that did not include questions about treatment, since the provider's role in this case is not treatment based. Our needs eliminated the validated tool developed by Goldstein et al.[20] for measuring satisfaction with physical therapy. Nor could we use a condition-specific satisfaction survey, such as the Leeds Patient Satisfaction Questionnaire, which assesses satisfaction among patients attending a rheumatology clinic, as many of the questions pertain to the management of a chronic condition, and the circumstances of our study would have required omitting two sub-scales.[21] Other studies reporting on satisfaction with clinic visits have not used standardized tools, or have used combinations of tools in order to tap important features of satisfaction.[8,22] We selected the 9-item Visit-Specific Satisfaction Instrument (VSQ-9) because it is the current downsized version of the 30-item Group Health Association of America (GHAA) Consumer Satisfaction Survey, a standardized and valid tool used by Campos et al. in a Canadian study assessing satisfaction with the physical therapy practitioner in paediatric rheumatology.[11] The VSQ-9 has been standardized across different care settings and has been used to compare levels of satisfaction between different care providers.[23] The tool assesses aspects of satisfaction experienced during a specific visit and assessed at the end of that visit.

To evaluate satisfaction with the new APP role, we revised the VSQ-9[18] (see Appendix for modified questionnaire). The first two items of the original VSQ-9 (length of time waiting for an appointment and convenience of office location) were removed to make room for items that related to responding to patient queries (item 4) and advice and information about exercise and

returning to activities (item 6). These changes were based on patient feedback from a semi-structured focus group (unpublished data). Item 5 was reworded from "an explanation of what was done for you" to "an explanation of the results of the assessment." Item 7 and item 8 needed minor rewording to be specific to the "healthcare providers seen in the clinic"; item 9 remained unchanged from the original version. Although the first two items addressed clinic processes (see Appendix), items 3–8 were structured to assess satisfaction with the health care provider (APP or orthopaedic surgeon) or the service delivered, and item 9 was a global assessment of satisfaction with the visit overall. Each item used the previously studied and recommended five-choice evaluation response scale (1 = excellent, 5 = poor).[24] Responses then underwent a linear transformation to a 0–100 score, with *excellent* scored as 100 and *poor* scored as 0, as recommended by the developers.[18] Each of the nine items was thus transformed to a score out of 100, and an overall score was created by averaging scores across all items.

In addition to the modified VSQ-9, the following demographic information was collected: patient age group, timing of the postoperative visit, gender, and overall health. Patients also answered the question, "What is your overall satisfaction level with your hip or knee replacement surgery?" since our aim is to have high patient satisfaction regardless of the physical outcome. Five response options were provided: *very satisfied*, *satisfied*, *neutral*, *dissatisfied*, and *very dissatisfied*. The questionnaire was designed with the modified VSQ-9 on the front page and the remaining questions on a separate page.

Statistical Analyses

Because of the modifications made to the VSQ-9, we performed an exploratory principal-components analysis (PCA), using Oblimin rotation with Kaiser normalization, in SPSS version 11.5 (SPSS Inc., Chicago, IL). The PCA was based on the data from all participants. We applied the eigenvalue > 1 guideline for including factors. Reliability of the VSQ-9 was examined using Cronbach's alpha as a measure of internal consistency. As no gold standard exists for measuring patient satisfaction, we applied a construct-validation process. We hypothesized that patient satisfaction, as measured by the modified VSQ-9, might have a positive association with the outcome of the hip- or knee-replacement surgery.

Chi-square analyses were used to examine differences in patient characteristics (age group, gender, overall health status) and type of visit between the traditional surgeon-led clinics and the APP-led clinics. Potential differences in patient satisfaction between surgeon-led and APP-led clinics were examined by performing *t*-tests for independent samples. The relationship between overall patient satisfaction with the services provided (modified VSQ-9) and overall satisfaction with the hip- and knee-replacement surgery was examined using Pearson's correlation coefficient.

Differences were deemed significant at $p < 0.05$.

RESULTS

The response rate was excellent: over 90% of patients in both surgeon-led and APP-led clinics completed the questionnaire. As a result of the high response rate and high patient volumes in the two traditional surgeon-led clinics, a total of 60 surveys had been collected after running a single clinic for each surgeon. As the typical volume for an APP clinic was 15–20 patients, it took 4 clinics to obtain a similar sample of 63 patients from these clinics.

The sample included some patients who had undergone more than one joint-replacement surgery; in total, there were 99 knee replacements and 67 hip replacements among the participants. The majority of these procedures were primary unilateral surgeries; fewer than 10% were revisions (knee: 8%; hip: 9%). Women made up the larger proportion of the sample (APP clinic: 58%; surgeon clinic: 60%), and more than half the patients were 65 years of age or older (see Table 1). Chi-square analyses revealed no significant difference in gender ($\chi^2 = 0.25$, $p = 0.62$), age (see Table 1), or overall health status (see Table 2) between APP-led and surgeon-led clinics. However, there was a significant difference in the distribution of the timing of follow-up appointments between the two clinics (see Table 3).

Modified VSQ-9

The PCA revealed that the component loadings for all nine items were greater than 0.598, providing strong evidence that a common underlying theme is being assessed. Two components that emerged with eigenvalues of 5.49 and 1.15, respectively, accounted for 73.81% of the variance. As shown in Table 4, following the Oblimin rotation, items 3–7 loaded on the first factor

Table 1 Frequency Distribution of Patient Age by Clinic Type*

Age	*Surgeon Clinic (n = 60)* n *(%)*	*APP Clinic (n = 63)* n *(%)*
< 44 yrs	1 (2)	4 (6)
45–54 yrs	6 (10)	7 (11)
55–64 yrs	19 (32)	17 (27)
65–74	26 (43)	21 (33)
> 75 yrs	8 (13)	14 (22)

* $\chi^2_4 = 4.09$, $p = 0.40$
APP = advanced practice physiotherapist

Table 2 Frequency Distribution of Patient Overall Health by Clinic Type*

Patient Overall Health	*Surgeon Clinic (n = 60)* n *(%)*	*APP Clinic (n = 63)* n *(%)*
Excellent	6 (10)	7 (11)
Very Good	33 (55)	27 (43)
Good	16 (27)	26 (41)
Fair	4 (7)	3 (5)
Poor	1 (2)	0

* $\chi^2_4 = 4.13$, $p = 0.40$
APP = advanced practice physiotherapist

Table 3 Frequency Distribution of Timing of Follow-Up Visit by Clinic Type*

Timing of Follow-Up Visit	*Surgeon Clinic (n = 60)* n *(%)*	*APP Clinic (n = 63)* n *(%)*
6- to 8-week visit	11 (18)	3 (5)
6- to 9-month visit	11 (18)	21 (33)
1-year visit	3 (5)	9 (14)
Annual visit after first year	28 (47)	20 (32)
Other	7 (12)	10 (16)

* $\chi^2_4 = 12.49$, $p = 0.014$
APP = advanced practice physiotherapist

Table 4 Results of the Principal-Components Analysis Using All Modified VSQ-9 Items

	Pattern Matrix Loadings	
Modified VSQ-9 Items	*Component*	
	1	*2*
4. Answers to your questions	0.94	− 0.06
6. Advice and information about exercise/activities	0.94	− 0.10
5. Explanation of results of the assessment	0.92	− 0.10
7. Technical skills of the healthcare providers	0.72	0.24
3. Time spent with the healthcare providers	0.71	0.25
1. Getting through to the Outpatient Clinic by phone	−0.09	0.86
2. Length of time waiting once you arrived	0.004	0.80
9. The visit overall	0.42	0.614
8. Personal manner of the healthcare providers	0.45	0.47

Rotation method: Oblimin with Kaiser normalization

and items 1–2 loaded on the second factor. Items 8 and 9 demonstrated factor complexity, showing moderate loadings on both factors, but loaded higher on factor 2. To explore this finding further, a second PCA was performed that eliminated the global satisfaction item (item 9), recognizing that it would be influenced by all other items. As Table 5 shows, item 8 then loaded higher on factor 1. Based on these findings, it was decided to include items 8 and 9 with factor 1 (items related to the service provider's care) and items 1 and 2 with factor 2 (items related to clinic processes). In terms of reliability, Cronbach's alpha was high at 0.90 for the modified VSQ-9. Based on the PCA, coefficient alpha was 0.93 for items 3–9 and 0.61 for items 1 and 2.

Table 5 Results of the Principal-Components Analysis Removing Item 9

	Pattern Matrix Loadings	
Modified VSQ-9 Items	*Component*	
	1	*2*
4. Answers to your questions	0.94	− 0.06
6. Advice and information about exercise/activities	0.94	− 0.12
5. Explanation of results of the assessment	0.92	− 0.10
7. Technical skills of the healthcare providers	0.75	0.21
3. Time spent with the healthcare providers	0.73	0.23
8. Personal manner of the healthcare providers	0.50	0.43
1. Getting through to the Outpatient Clinic by phone	− 0.05	0.88
2. Length of time waiting once you arrived	0.05	0.78

Rotation method: Oblimin with Kaiser normalization

Table 6 Patient Satisfaction Scores for the Modified VSQ-9 Service-Provider Items

Modified VSQ-9 Service Provider Questions	*APP Mean Score (95% CI)*	*Surgeon Mean Score (95% CI)*
3. Time spent with the healthcare providers	86.9 (82.0–91.8)	86.7 (81.7–91.6)
4. Answers to your questions	92.1 (88.2–96.0)	92.9 (89.3–96.5)
5. Explanation of the results of the assessment	92.1 (88.3–95.8)	90.0 (85.4–94.6)
6. Advice and information about exercise and returning to activities	92.9 (89.2–96.5)	88.8 (83.9–93.6)
7. Technical skills of the healthcare providers	92.5 (88.6–96.3)	90.83 (87.3–94.5)
8. Personal manner of the healthcare providers	94.4 (91.4–97.5)	95.8 (93.4–98.3)
9. Visit overall	88.5 (84.4–92.5)	91.3 (87.5–95.0)

CI = confidence interval; APP = advanced practice physiotherapist

Patient Satisfaction

Satisfaction scores for most of the service-provider items were $\geq 90/100$ (see Table 6). Independent *t*-tests revealed no significant difference between APP-led and surgeon-led clinics in mean overall patient satisfaction scores for the modified VSQ-9 or in the mean of the sum of items 3–9 (factor 1; see Table 7). However, there was a significant difference in the mean score for items 1–2 (factor 2) in favour of the surgeon-led clinics. In

Table 7 Comparison of Patient Satisfaction Scores by Provider

	Surgeon Clinic Mean Score	*APP Clinic Mean Score*	t *df = 121*	p
All items (Mean score items 1–9)	89.8	87.6	0.95	0.34
Process items (Mean score items 1–2)	86.3	69.8	4.26	< 0.001
Service-provider items (Mean score items 3–9)	90.9	91.3	− 0.18	0.85

df = degrees of freedom; APP = advanced practice physiotherapist

terms of overall satisfaction with the joint replacement, just over 90% of patients indicated that they were either very satisfied (64.8%) or satisfied (25.4%) with their hip or knee replacement; only 5% were dissatisfied, and a further 5% were neutral. Pearson correlation analyses revealed a modest ($r = 0.43$) but significant ($p < 0.001$) relationship between the average score for all items on the modified VSQ-9 and overall satisfaction with the hip and or knee replacement surgery.

DISCUSSION

The primary aim of this study was to measure and compare patient satisfaction with care in APP-led and surgeon-led clinics for patients following hip or knee replacement. The results of our satisfaction survey were positive and provided early evidence that patients accept and are satisfied with APP providing the required long-term follow-up after hip and knee replacement. Our findings parallel those of several studies demonstrating high patient satisfaction with advanced practice/extended scope physiotherapists in diverse roles.[8,11,22,25–27]

As demonstrated by the PCA, two factors emerged, the first related to service provision by the health care provider and the second related to clinic processes. Scores were high for both APP-led and surgeon-led clinics for the service-provider items (see Table 6); however, the scores on the clinic-process items (Items 1 and 2) were higher for the surgeon-led clinics, with a significant difference in means between the two types of clinics (see Table 7). The higher scores for the surgeon-led clinics are believed to have resulted from uncontrollable clinic-process factors at the time of the survey. In the early stages of APP role implementation, the outpatient staff were not as familiar with the APP clinic procedures, which resulted in expedited processing of patients in the surgeon-led clinics. This difference has now been eliminated through regular communication with outpatient staff, clearer guidelines around the operation of the APP clinics, and greater role acceptance overall.

Although most of the clinic characteristics (see Tables 1 and 2) were the same, there was a significant difference in the distribution of the timing of follow-up appointments (see Table 3). This finding reflects the practice pattern of the APPs: because of the novelty of the role, the surgeons preferred to see patients for their first 6-week follow-up, at which point those patients with primary hip or knee replacements and no postoperative complications (the majority) were then scheduled for ongoing follow-up with the APP. An algorithm was developed for the APPs that provides the decision-making framework for indicating when a surgeon consultation is required. In the event that a significant clinical or radiological variance is identified at later follow-up, patients are transferred back to the surgeon's list until the variance is resolved. Overall, we observed high patient satisfaction across the range of follow-up time points.

The modified Visit-Specific Satisfaction Instrument (VSQ-9) may be useful to other sites developing similar roles. We found it very user friendly, taking less than 10 minutes to complete. Internal consistency was high, except for the two-item factor, which may be explained by the limited number of items. As hypothesized, there was a moderate and statistically significant correlation between satisfaction as measured by the modified VSQ-9 and overall satisfaction with the hip and knee replacement surgery, providing evidence for convergent construct validity.

Obtaining the patient's perspective, and evaluating patient satisfaction in particular, is important to the early evaluation of any new role aimed at improving patient care and is essential when the new role involves a shift in traditional practice boundaries. Notwithstanding the importance of establishing appropriate skill transfer, improvement strategies such as this can be derailed by the absence of broad stakeholder buy-in. Our experience was that knowledge of patient satisfaction helped to secure support from first-contact outpatient staff, as well as from surgeons, and facilitated the process changes required for patients to be scheduled for APP postoperative follow-up. The positive feedback received during this study contributed to the development of key talking points for first-contact staff to use when introducing the change in practice to patients returning for follow-up review. Having secured buy-in across the organization, we expanded the APP role in 2006 to include referral triage and initial assessment of patients referred to the Holland Centre. The new model of care is now considered standard practice within the organization, a Centre of Excellence earmarked to double surgical

volumes over the next few years. Our evaluation strategy follows a structure–process–outcome framework in order to build on current research in extended scope/advanced practice roles and meet the need for evaluation of health outcomes and cost effectiveness.[10] Several other studies are currently in process to evaluate the triage and assessment components of the new role.

LIMITATIONS

The satisfaction survey was implemented early in the introduction of the APP role; it will therefore be important to confirm these findings in additional interprofessional clinics where APPs are involved in the pre- and postoperative review of patients undergoing total joint replacement. It is encouraging that satisfaction with the new role was so high, given the role's infancy at the time of the study. It is important to recognize that we made minor modifications to the wording of the VSQ-9 to better capture the nature of the health care provider's role in arthroplasty follow-up. These changes may have affected the psychometric properties established for the original version; for this reason, we re-examined the properties of the modified version.

CONCLUSION

Patient satisfaction is an important measure of the patient's experience with health care. Establishing high patient satisfaction with advanced practice physiotherapists is therefore critical to the further development of these new models of care, which help to decrease wait times and streamline care. The modified VSQ-9 appears to be a useful tool to evaluate patient satisfaction with new advanced practice roles in an orthopaedic clinic environment. Our findings affirm that patients accept APPs as providers of their postoperative follow-up care after total hip or knee replacement.

KEY MESSAGES

What Is Already Known on This Topic

Extended scope/advanced practice roles in which physiotherapists serve as primary care providers for patients with musculoskeletal disorders are well established in the United Kingdom. The fact that such roles have been sustained and expanded to other countries and other areas of practice is a testament to their success in improving access to care. Physiotherapists working alongside orthopaedic surgeons develop expert-level clinical skills and have been shown to outperform non-orthopaedic physicians and other health care providers with insufficient training in musculoskeletal assessment. In Canada, we are seeing legislative changes that will foster inter-professional models of care. As with the development of any new practitioner role, there is a need to evaluate the process, structure, and outcomes to establish effectiveness. The 9-item Visit-Specific Satisfaction Instrument (VSQ-9) has been validated for use in physician-led outpatient clinics in various settings in the United States, but it had not been tested for use in evaluating satisfaction with other health care providers in an arthroplasty population.

What This Study Adds

Many of the studies on extended scope/advanced practice roles have been conducted internationally. This study was conducted in a Canadian setting with a representative sample of patients undergoing total joint replacement. Our results demonstrated high patient satisfaction with physiotherapists in an advanced practice role providing care for patients following hip and knee replacement. Considering the growing need for new and expanded roles that maximize the unique skill sets of physiotherapists, it is important to have standardized tools for evaluation. Our preliminary reliability and validity findings offer support for the use of the modified 9-item Visit-Specific Satisfaction Instrument (VSQ-9) as a simple, useful tool.

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APPENDIX

Patient Satisfaction Survey: Outpatient Clinic Visit

We are interested in your feedback about the services we provide so that we can make improvements. Here are some questions about the visit you just made to the Outpatient Clinic. Your answers are anonymous and confidential. To ensure your survey counts, please answer each question.

Date: (year/month/day)_____.

In terms of your satisfaction, how would you rate each of the following?

(Circle one number in each line)	Excellent	Very Good	Good	Fair	Poor
1. Getting through to the Outpatient Clinic by phone—□ Not Applicable	1	2	3	4	5
2. Length of time waiting once you arrived for your appointment	1	2	3	4	5
3. Time spent with the healthcare providers you saw in Clinic for your review	1	2	3	4	5
4. Answers to your questions	1	2	3	4	5
5. Explanation of the results of the assessment	1	2	3	4	5
6. Advice and information about exercise and returning to activities	1	2	3	4	5
7. The technical skills (thoroughness, carefulness, competence) of the healthcare providers you saw in Clinic for your review	1	2	3	4	5
8. The personal manner (courtesy, respect, sensitivity, friendliness) of the healthcare providers you saw in Clinic for your review	1	2	3	4	5
9. The visit overall	1	2	3	4	5

Adapted from GHAA/Davies & Ware (1991)