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Utilisation of in-consultation supervisor assistance in general practice training and personal cost to trainees: a cross-sectional study

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ABSTRACT

Aim. The aim of the study was to establish whether two previously described barriers to effective in-consultation assistance-seeking by general practice (GP) vocational specialist trainees (ie concern about patient impressions of their competence, and discomfort presenting to supervisors in front of patients) influenced the frequency of trainee in-consultation assistance-seeking from their supervisor. **Methods.** This was a cross-sectional study nested in the Registrar Clinical Encounters in Clinical Training ongoing cohort study of Australian GP trainees. Trainee participants completed contemporaneous records of 60 consecutive patient consultations, including whether supervisory assistance was sought. Trainees also completed a cross-sectional survey including items eliciting their beliefs about patient impressions and their own discomfort in seeking in-consultation supervisory assistance. These were factors of interest in multivariable logistic regression analyses; the outcome factor in both regression models was the seeking of in-consultation supervisory assistance. **Results.** In 2018, 778 trainees (778/876, response rate 89%) completed the cross-sectional survey. No association was found between the odds of in-consultation help-seeking and perceived decrease in patient impressions of trainee competence (OR = 1.09; 95% CI: 0.91, 1.31; $P = 0.36$) or higher comfort presenting outside patients' hearing (OR = 0.9; 95% CI: 0.77, 1.05; $P = 0.19$). **Discussion.** Contrary to expected utility models of help-seeking, trainees may not consider personal discomfort or impression management to be important enough, compared to patient safety and other considerations, to influence decisions regarding in-consultation help-seeking. Clinical supervisors should, nevertheless, consider the potential personal costs to trainees and maintain trainee self-esteem and confidence by providing in-consultation assistance in front of patients as comfortably and effectively as possible.

Keywords: education, family, family practice, general practice, graduate, medical, patient satisfaction, physician-patient relations, physicians, preceptorship, professional role, ReCRnT.

Introduction

In many countries (including Australia, New Zealand, the United Kingdom, Ireland, and the Netherlands), general practice (GP) vocational specialist training is conducted within an apprenticeship-like model incorporating in-practice supervised practice.[1,2] The level of supervision may vary somewhat between countries, and depending on the seniority of the trainee. From the start of their GP placements, Australian GP specialty trainees (known in Australia as 'GP registrars') manage most patient consultations without direct supervision.[3] They seek help from their GP supervisor(s) when they need advice, back-up, and/or reassurance.[4] Trainees may phone, message, or talk face-to-face with supervisors when seeking help, either within or outside the patients' hearing.[5] Appropriate and effective in-consultation supervisor assistance is widely believed to enhance patient and trainee safety and make a valuable contribution to trainee learning.[6] It is therefore important to understand potential barriers to trainee help-seeking.

WHAT GAP THIS FILLS

What is already known: Within the 'apprenticeship-like' model of general practice training operating in many countries, the trainee's in-consultation recourse to real-time supervisor assistance or advice is considered to be essential for both patient safety and trainee learning. Some trainees, however, may feel uncomfortable presenting their concerns or questions to the supervisor in the patient's presence and/or believe that patient impressions of their competence will be adversely affected by calling on supervisory assistance.

What this study adds: Contrary to predictions of utility-based models of behaviour, we found no association of trainees' documented in-consultation help-seeking with either (i) their beliefs about the impact of help-seeking on patient impressions of their competence, or (ii) their levels of comfort/discomfort presenting within the patients' hearing.

Potential barriers for trainees include difficulties accessing supervisor support, time constraints, and lack of confidence in supervisor advice.[4] In our recent cross-sectional study,[5] 97% (693/714) trainees agreed or strongly agreed that their supervisor encouraged them to seek in-consultation advice, and 96% (680/708) agreed or strongly agreed that they were generally satisfied with the assistance provided. Trainees may, however, incur various personal costs during in-consultation assistance, including losing 'face' in front of supervisors[7] and patients.[8] Although both trainees and supervisors make efforts to manage patient impressions by constructing in-consultation assistance carefully in front of patients,[9] 19% of Australian GP trainees in our study believed that patient impressions of their competence decreased after they obtained supervisor assistance during patient consultations.[5] Our recent study also found that 55% of trainees reported being more comfortable presenting their clinical problem outside the patient's hearing.[5] These trainees may tend to defer their help-seeking until after the patient has exited the consultation, rather than seek timely in-consultation assistance (which allows the supervisor to examine the patient, observe the trainee, and modify initial patient management).

Subjective expected utility approaches, such as the theory of planned behaviour,[10] are commonly used to understand help-seeking in workplaces.[11] These theories predict that trainee perceptions of increased personal costs, effort and discomfort will tend to decrease help-seeking. Any decrease in help-seeking in front of patients would have implications for patient and trainee safety, and trainee learning.

Expected utility models, although plausible, have not been tested in clinical training; we do not know if these personal costs are actually associated with the frequency of trainees seeking supervisory assistance in front of patients. If expected utility models were to hold in the context of in-consultation registrar help-seeking, we would expect that registrars who believe patient impressions of their competence decrease when they seek assistance, or who feel discomfort doing so, would seek help less often than other registrars. The aim of this study was to test this hypothesis by investigating associations of GP trainees accessing in-consultation supervisory assistance with their concerns about (1) decreased patient impressions of their competence, and (2) increased discomfort presenting the clinical problem within the patient's hearing. We refer to these two costs as 'patient-related barriers' henceforth in this article.

Methods

Data collection

The study was conducted in 2018 within the Registrar Clinical Encounters in Clinical Training (ReCEnT) project, an ongoing multisite cohort study described in detail elsewhere.[12] In ReCEnT, participants complete contemporaneous written records of 60 consecutive patient consultations once in each of their three (6-month full-time equivalent) GP training terms. These records provide clinical and educational data about each consultation, including whether or not in-consultation supervisor assistance or advice was sought.[12] Trainees also complete a cross-sectional questionnaire each term. The questionnaire elicits personal and training practice demographics. For the data collection included in the current analysis, this questionnaire included questions regarding the two patient-related barriers discussed above (see Supplementary Table S1 for the full questionnaire). ReCEnT is a routine component of trainees' education/training programs.[13,14] Trainees may also elect to provide consent for the data to be used for research purposes. There are two ReCEnT data collection 'rounds' each year, coinciding approximately with the mid-point of trainees' 6-month training terms.

The current analysis was a cross-sectional analysis performed on one round of ReCEnT data collection in 2018. A 'round' of data collection comprises patient encounter data for 60 consecutive consultations from each participating registrar, plus one questionnaire completed by each registrar.

Trainees from four Australian states and territories (encompassing 44% of Australian GP trainees) participated in this round.

Approach to analysis

The outcome factor was supervisor assistance being sought by the trainee during the consultation.

The study factors were:

(1) trainee perceived changes in patient impressions of trainee competence after obtaining in-consultation supervisory assistance (dichotomised into Decreases a

lot/Decreases somewhat and Does not change/Increases somewhat/Increases a lot), and

(2) trainee comfort presenting outside patients' hearing, compared to inside their hearing, (dichotomised into Much less comfortable/Somewhat less comfortable/Neither more nor less comfortable and Somewhat more comfortable/Much more comfortable).

Independent variables considered as potential confounders were related to trainee, practice, patient, and consultation factors, as listed in Supplementary Table S2.

Analyses were conducted at the consultation level.

Descriptive statistics included frequencies for categorical variables and mean with standard deviation for continuous variables.

Logistic regression was used to test associations with the outcome of supervisor assistance being sought in the consultation. Two multivariable regression analyses were conducted, with one of the two study factors included in each, together with potentially confounding variables.

Univariate and multivariable logistic regression analyses were undertaken. Regression analyses were performed within the generalised estimating equations (GEE) framework to account for repeated measures on trainees. An exchangeable working correlation structure was assumed. All covariates with a P-value <0.20 in the univariate analysis were considered in the multiple regression model. Once the model with all significant covariates was fitted, model reduction assessed covariates with $P > 0.20$ in the multivariable model. These were tested for removal, and if removal did not substantially change the model, the covariate was removed from the final model. A substantive change to the model was defined as any covariate in the model having a change in the effect size (odds ratio) of greater than 10%.

The regressions modelled the log-odds that a supervisor was called into the consultation.

Associations were considered significant at the conventional 0.05 level.

Analyses were programmed using STATA 14.1 and SAS V9.4.

Ethics approval

The ReCEnT study has approval from the University of Newcastle Human Research Ethics Committee Reference H-2009-0323.

Results

A total of 806 trainees (96%, 806/876 of all eligible trainees) provided data on consultation content, including in-consultation assistance-seeking, from 47 915 consultations. The cross-sectional survey was completed by 778 trainees (89%, 778/876). Of respondents, 58% (469/806) were female, 17% (141/806) obtained their primary medical degree outside Australia, and 61% (494/806), 10% (78/806) and 29% (234/806) were training in Terms 1, 2 and 3, respectively. See Table 1 for a summary of participant and practice demographics.

Table 1. Summary of trainee participant demographic information ($n = 806$).

Variable	Statistics or class	Frequency (%) or mean (s.d.)
Trainee gender	Female	469 (58%)
	Male	337 (42%)
Trainee Australian or overseas primary medical qualification	Australian	665 (83%)
	Overseas	140 (17%)
Trainee term of training (1–3)	Term 1	494 (61%)
	Term 2	78 (10%)
	Term 3	234 (29%)
Trainee working part-time or full-time in general practice	Part-time	176 (23%)
	Full-time	588 (77%)
First term at current practice	Yes	714 (90%)
	No	83 (10%)
Rurality of current practice (Australian Standard Geographic Classification-Remoteness Area (ASGC-RA))	Remote	1 (0.2%)
	Outer regional	81 (10%)
	Inner regional	216 (27%)
	Major city	507 (63%)
Practice bulk bills fully	Yes	311 (40%)
	No	466 (60%)
Socio-economic Index for Area – Index of Relative Disadvantage (SEIFA-IRSD) – decile[A]	Mean (s.d.)	5.4 (3)
Size of current training practice	≤5 FTE GPs	332 (44%)
	≥FTE GPs	427 (56%)

FTE, full-time equivalent. [A]More disadvantaged locations indicated by lower SEIFA decile.

Trainees sought in-consultation assistance from GP supervisors during 11.4% (95% CI: 10.7–12.2) of their consultations. A number of factors were associated with the frequency of this assistance (see Tables 2 and 3, and Supplementary Table S2).

There was no association in the univariate and multivariable analyses between perceived decrease in patient impressions of trainee competence and in-consultation help-seeking (OR 1.09, 95% CI [0.91, 1.31], P-value 0.36) (see Table 2).

There was also no association between relatively higher trainee comfort presenting outside patients' hearing and in-consultation help-seeking (OR 0.9 [0.77, 1.05], P-value 0.19) (see Table 3).

Table 2. Univariate and multivariable models with outcome 'seeking in-consultation supervisor assistance': association with trainee perceptions of patient impressions of their competence.

Factor group	Variable	Class	Univariate		Adjusted	
			OR (95% CI)	*P*	OR (95% CI)	*P*
	Trainee perceptions of patient impressions of their competence	*Decrease*	*1.16 (0.95, 1.41)*	*0.15*	*1.09 (0.91, 1.31)*	*0.35*
Registrar factors	Registrar gender	Female	1.25 (1.07, 1.45)	0.005	1.26 (1.07, 1.48)	0.005
	Term	Term 2	0.62 (0.47, 0.82)	<0.001	0.66 (0.46, 0.95)	0.023
		Term 3	0.35 (0.29, 0.42)	<0.001	0.40 (0.33, 0.49)	<0.001
	Registrar full-time or part-time	Part-time	1.16 (0.97, 1.40)	0.10	1.25 (1.04, 1.51)	0.020
	Worked at practice previously	Yes	0.50 (0.38, 0.66)	<0.001	0.64 (0.46, 0.89)	0.009
Patient factors	Patient age group	0–14	1.17 (1.06, 1.28)	0.001	1.34 (1.21, 1.48)	<0.001
		35–64	1.12 (1.03, 1.21)	0.005	1.11 (1.02, 1.21)	0.017
		65+	1.21 (1.10, 1.33)	<0.001	1.23 (1.11, 1.37)	<0.001
	Patient gender	Female	0.91 (0.86, 0.97)	0.002	0.90 (0.84, 0.96)	0.002
	Patient/practice status	New to registrar	0.76 (0.71, 0.81)	<0.001	0.80 (0.74, 0.85)	<0.001
		New to practice	0.92 (0.83, 1.02)	0.12	0.81 (0.72, 0.90)	0.002
Consultation factors	Chronic problem	Yes	1.11 (1.04, 1.19)	0.002	0.95 (0.88, 1.03)	0.24
	Consulted electronic or hard-copy resources	Yes	0.65 (0.56, 0.76)	<0.001	0.61 (0.53, 0.71)	<0.001
	Consultation duration		1.05 (1.05, 1.06)	<0.001	1.06 (1.06, 1.06)	<0.001
	Number of problems		1.09 (1.05, 1.14)	<0.001	0.87 (0.83, 0.91)	<0.001

Table 3. Univariate and multivariable models with outcome 'seeking in-consultation supervisor assistance': association with trainee comfort presenting to supervisors.

Factor group	Variable	Class	Univariate		Adjusted	
			OR (95% CI)	*P*	OR (95% CI)	*P*
	Trainee comfort presenting clinical problem outside of patients hearing	*More comfortable*	*0.94 (0.80, 1.10)*	*0.42*	*0.90 (0.77, 1.05)*	*0.19*
Registrar factors	Registrar gender	Female	1.25 (1.07, 1.45)	0.005	1.28 (1.09, 1.51)	0.003
	Term	Term 2	0.62 (0.47, 0.82)	0.001	0.66 (0.46, 0.95)	0.025
		Term 3	0.35 (0.29, 0.42)	<0.001	0.40 (0.33, 0.49)	<0.001
	Registrar full-time or part-time	Part-time	1.16 (0.97, 1.40)	0.10	1.25 (1.03, 1.51)	0.021
	Worked at practice previously	Yes	0.50 (0.38, 0.66)	<0.001	0.63 (0.45, 0.87)	0.006
Patient factors	Patient age group	0–14	1.17 (1.06, 1.28)	0.001	1.34 (1.21, 1.48)	<0.001
		35–64	1.12 (1.03, 1.21)	0.005	1.11 (1.02, 1.21)	0.016
		65+	1.21 (1.10, 1.33)	<0.001	1.24 (1.11, 1.37)	<0.001
	Patient gender	Female	0.91 (0.86, 0.97)	0.002	0.90 (0.84, 0.96)	0.002
	Patient/practice status	New to registrar	0.76 (0.71, 0.81)	<0.001	0.80 (0.74, 0.85)	<0.001
		New to practice	0.92 (0.83, 1.02)	0.12	0.81 (0.72, 0.90)	0.002
Consultation factors	Chronic problem	Yes	1.11 (1.04, 1.19)	0.002	0.95 (0.88, 1.03)	0.24
	Consulted electronic or hard-copy information resources	Yes	0.65 (0.56, 0.76)	<0.001	0.61 (0.53, 0.70)	<0.001
	Consultation duration		1.05 (1.05, 1.06)	<0.001	1.06 (1.06, 1.06)	<0.001
	Number of problems		1.09 (1.05, 1.14)	<0.001	0.87 (0.83, 0.91)	<0.001

Discussion

Main findings

We found no association between seeking in-consultation supervisory assistance and either of the two patient-related barriers we investigated. Trainee factors that were positively associated with in-consultation supervisory assistance included female trainee gender, having completed a previous term at the practice, and earlier stage of training.

Comparison with previous literature

Although there is some Australian and international literature on registrar in-consultation help-seeking,[4–8,15–18] no previous studies have investigated the actual frequency of in-consultation supervisory assistance in relation to trainee perceptions of patient-related barriers, despite the plausibility of the prediction that increased barriers would be associated with reduced help-seeking. The absence of these associations is therefore an unexpected and interesting finding that warrants some discussion.

Commonly used strategies for obtaining supervisor assistance (by phone from the trainee consulting room, and face-to-face with both patient and supervisor)[5] unfold in front of the patient. Trainees who are uncomfortable presenting within the patient's hearing may, however, leave the patient in their consulting rooms during the consultation in order to seek supervisory assistance outside their hearing.[5] Trainees may also find moving away from patients useful to reduce cognitive load and formulate their clinical problem.[8] However, this strategy tends to be inefficient because trainees often wait for the supervisor to exit their own consulting room, as trainees are generally reluctant to interrupt supervisor consultations by knocking on their consulting room doors.[4]

It is possible that subjective comfort and saving face simply do not weigh heavily enough, compared to patient safety and other factors, for trainees to weigh the former into their help-seeking decisions. This would be plausible where trainees are less concerned about patient impressions (including particularly challenging or confrontational patients, or regular patients of other GPs, with whom they do not anticipate any ongoing relationship). However, trainees would be expected to try and maintain favourable patient impressions in the case of most patients, to maintain their reputation and build a patient base. Nevertheless, trainees may believe that the personal comfort and self-presentation agendas of a medical professional are relatively unimportant in the clinical workplace. The willingness and ability to seek help effectively and appropriately are indeed considered to be aspects of medical professionalism, and medical professionalism has been characterised as demanding a substantial discounting of costs to self.[19] Help-seeking despite high costs to the help-seeker may therefore be seen as evidence of trainee professionalism and indeed altruism. These costs may nevertheless have an impact on trainee self-esteem, confidence, and morale.

The overall frequency of in-consultation supervisory assistance in our study (11.4% of all consultations) is higher than that reported using the same protocol with a smaller number of Australian GP trainees between 2010 and 2013,[16] although we found the same trainee and patient factors to be associated with help-seeking frequency as in the previous study.[16] Trainee factors that were positively associated with seeking more in-consultation supervisory assistance included female trainee gender, earlier stage of training (with Term 1 trainees seeking supervisory assistance in 14.5% of their consultations, and Term 3 trainees seeking this assistance in only 5.6%), and not having completed a previous term at the practice. Trainees also sought assistance less frequently for patients who were previously known to the practice and/or the trainee. Factors associated with trainee perceptions of the two patient-related barriers[5] and other factors associated with the seeking of in-consultation supervisory assistance[16] have been previously reported and are not discussed further here.

Strengths and limitations of this study

This study had a large sample size and achieved a high response rate for cross-sectional studies of GPs.[20] A limitation was that the study was restricted to in-consultation help-seeking from GP supervisors and did not explore interactions with pre-consultation or post-consultation help-seeking, or help-seeking from other sources within or outside the training practice. We may not have included all factors that influence these complex decisions, and new factors may have arisen in the pandemic and post-pandemic context; for example, we have not attempted to measure consultation complexity or trainee concerns about patient safety or supervisor infection, which may interact with other considerations. Supervisor preferences (unmeasured in our study) are also likely to play a role in registrar decisions about seeking in-consultation assistance.

Rates of help-seeking were self-reported contemporaneously, rather than directly observed. Our findings may not transfer to other training contexts in inpatient settings or where patient impressions and regard may be less important to trainees, although we believe that they will be of interest in many health professional clinical training contexts where trainees seek supervisory assistance in the presence of patients. International differences in GP scope and training should be considered in translating findings to other systems of GP training. Two aspects of the Australian context in particular are likely to have an impact on registrar help-seeking: Australian GP registrars work for at least 2 years as junior doctors prior to entering GP training, and the clinical supervision in general practice of new registrars is less regulated and more *ad hoc* than in some other international contexts.[21] Models of training, registrar pay and conditions, and supervisor remuneration also differ internationally.

Implications for practice and further research

Subjective expected utility approaches, such as the theory of planned behaviour, may not be sophisticated enough to apply usefully to complex clinical decisions such as whether or not to seek supervisory assistance. GP trainees negotiate a complicated matrix of clinical, social, and psychological risks as they care for patients and consider whether, when, and how to seek help. Any in-consultation assistance that ensues is often only one episode in a series of supervisory and patient activities and relationships, which unfold over time, as is often the case with naturalistic decisions in the 'real world'.[22] Trainees are likely to weigh heavily both patient safety and being (and being seen to be) professional. It is important, nevertheless, for supervisors to be aware that trainees may be uncomfortable and concerned about patient impressions of their competence when seeking assistance in front of patients, and take steps to manage these encounters without increasing trainee discomfort. Debriefing conversations between trainee and supervisor after in-consultation supervisory assistance may be useful to identify these steps.[23]

Our findings merit further exploration with qualitative research methods, including the exploration of how trainees and supervisors may manage help-seeking comfortably and effectively within the patient's hearing. Further studies of in-consultation help-seeking using direct observation (in person or using video-recordings) of registrar consultations and discourse analysis[24] are likely to provide rich data. Patient views about trainee help-seeking and supervisory assistance also warrant further exploration.

Conclusions

Trainee concerns about previously identified patient-related barriers were not found to change their actual frequency of seeking in-consultation supervisory assistance, suggesting that subjective expected utility approaches to trainee help-seeking are inadequate. It is nevertheless important for clinical supervisors to maintain trainee confidence and self-esteem as they provide this assistance in front of patients.

Supplementary material

Supplementary material is available online.

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Data availability. The data that support this study cannot be publicly shared due to ethical or privacy reasons.

Conflicts of interest. The authors declare no conflicts of interest.

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