

## **The Social Context of Skill Enhancement: Training Decisions of Occupational Health Nurses**

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A model of mid-career training decisions was examined in a survey of 270 occupational health nurses in the U.K. The model proposed that distinct factors define the facilitation and deterrence of educational involvement, each of which has an impact on employees' interest in pursuing educational programs. Educational interest mediated the impact of facilitators and deterrents on participation in both formal educational programs and autodidaxy. Situational and personal characteristics of employees predicted participation as well. The existence of a training department within the organization and the availability of collegial support also had an impact on actual training involvement, but not on nurses' interest in pursuing training. The article discusses influence of organizational context on the development of professional efficacy through mid-career training. It considers as well suggestions for educational policy for organizations employing occupational health nurses and for the nursing profession.

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**KEY WORDS:** education; occupational training; nursing; careers, decision making.

### **INTRODUCTION**

The social context is directly relevant when employees make decisions to enhance their occupational skills. Candy (1991) emphasized the role of personal autonomy in the pursuit of autodidaxy, which is the self-directed pursuit of education without participation in formal educational programs. He pointed out that autonomy tends to produce more autonomy. While

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personal attitudes and self-efficacy expectations are clearly related to individual commitments to enhance occupational skills, these decisions are also constrained and shaped through interactions with employers and with training providers. It is not surprising for employers to support training which increases employees' potential for fulfilling the roles which employers value. Training providers, be they internal training departments, independent consultants, or professional colleges, adapt their offerings to employers' priorities to remain organizationally or financially viable. Training providers do not merely respond to demand from trainees and employers. They reflect their values and competencies in the manner in which they provide training, the skills they promote, and the way that training components are combined in programs. In fact, in many organizations a weak training department is one which merely reacts to demand without pursuing coherent educational goals.

This study investigates the manner in which constraints and supportive conditions inherent in an occupation shape employees' interest in mid-career training. It focuses on the relationship of both personal interest and occupational conditions with actual participation in training.

### **OCCUPATIONAL HEALTH NURSING**

Occupational health nurses provide nursing services to employees in occupational settings. While these services often include clinical assessments and interventions, they include health promotion and education to a greater extent than those of nurses in medical settings. The role of occupational health nurses presents them with particular challenges in regard to training. While they share with their clinically based colleagues the responsibility "to furnish evidence that they have taken steps to enhance their professional development. . ." (UKCC, 1986, 1990), their jobs may provide them with fewer opportunities to do so.

In the U.K., the vast majority of nurses are employed in the National Health Service (NHS). The NHS finances their basic, post-basic, and continuing education. NHS colleges and schools of nursing provide courses or, alternatively, nurses may be seconded to attend specialist courses provided by other educational institutions. Nurses who are not NHS employees may not have access to courses held in NHS premises. While many of these courses may be appropriate to the occupational nurses' clinical responsibilities, few will encompass their responsibilities for the promotion of health and the prevention of illness and injury in the workplace.

In light of these considerations occupational health nursing provides a unique perspective on health care training. These nurses must make decisions regarding educational involvement in organizational contexts, which

vary as to the availability of in-house or external educational opportunities. As such, their choices are likely to reflect the interaction of their personal initiative with their employers' priorities, which may not emphasize education participation.

### A MODEL OF EDUCATIONAL INVOLVEMENT

Understanding the decisions people make about mid-career educational involvement requires a consideration of their social and organizational context. The issues which facilitate or deter educational participation go beyond individual initiative to encompass qualities of the employing organization, the policies professional bodies, and the availability of appropriate programs. Within this context individuals make choices which further their pursuit of a variety of goals which are often mutually enhancing. These goals include the building of occupational skills, the intrinsic rewards of learning, the enhancement of professional credentials, and the improvement of working conditions or benefits. While the pursuit of only one of these goals may occasionally determine participation in an educational program, opportunities that address themes common to a variety of these goals are expected to facilitate participation to a greater extent.

In contrast, issues which impede the attainment of these goals or which compete with them for personal resources of time and energy will deter educational participation. Employees weigh such deterrents as well as factors which facilitate their goals in making a decision about educational participation.

The model guiding this study combined individual appraisals of facilitators and deterrents with measures of personal and employment situation to predict educational involvement. The model, displayed in Fig. 1, considers two types of educational involvement: autodidaxy, which permits a wide degree of individual discretion, and formal education, which requires more extensive interaction of learners with training providers.

The model predicts that deterrents and facilitators will have an indirect impact on participation in both types of education through their shaping of educational interests. The facilitators and deterrents include the employees' appraisals of policies and practices of employers and professional groups, as well as the availability and convenience of training venues. In contrast, situational and demographic features have a direct impact on both types of participation with necessarily having an impact on both types of participation without necessarily having an impact on educational interest.

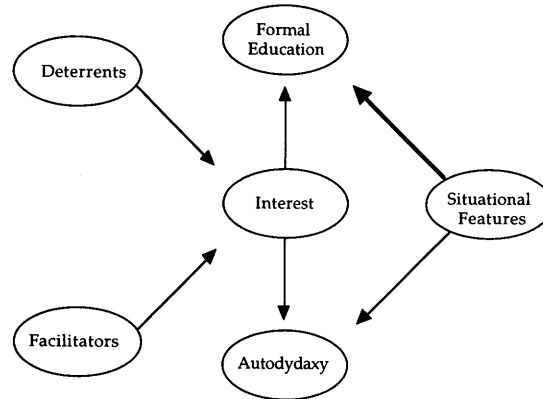


Fig. 1. Hypothesized model of mid-career training.

The model makes three substantive predictions about the continuing education involvement. First, it implies that deterrents and facilitators influence educational interest in a distinct manner; they are not the opposites of one dimension, but each has a unique relationship with interest. Second, educational interest mediates the impact of facilitators and deterrents on formal educational involvement and autodidaxy. This relationship is expected to be more complete with autodidaxy than with formal educational involvement as the former is more within individual discretion. Third, individuals' personal and occupational situations influence educational involvement in a manner beyond the influence of interests.

## METHOD

### Participants

The Nursing Advisors of the Employment Medical Advisory Service maintain an informal, but fairly extensive, register of occupational nurses working in England, Scotland, and Wales. They provided the researchers with a randomly selected sample comprising 10% of their register, totaling 413 names. The researchers mailed questionnaires to these nurses. Of these, 21 were returned due to invalid addresses. A total of 270 usable questionnaires from the 392 mailed to valid addresses were returned, yielding a response rate of 68.9%.

The respondents reflected the demographic profile of occupational health nurses in being predominantly female (92.3%). They were mostly married (69.3%) rather than single (15.9%), or other (14.8%). The age

distribution was as follows: 22–34 years (12.6%), 33–44 years (33.7%), 45–54 years (40.7%), 55–64 years (13.0%). The great majority (85.2%) were Registered General Nurses entered on Part 1 of the Single Professional Register (SPR) of the UKCC. The next largest group were enrolled nurses entered on Parts 2 and 7 of the register. Roughly half (51.1%) had the Occupational Health Nursing Certificate; 68 respondents had other post-registration nursing qualifications. A small number had attained higher general educational qualifications: Higher National Certificate (12), Diploma (4), Degree (2). The overall demographic profile of these respondents reflected that of the membership of the registry.

Over 80% of this sample had more than 5 years experience in occupational health nursing; half had more than 10 years. They worked in a variety of industries including resource extraction, manufacturing, retailing, services, and government organizations. The large majority worked days only (92.6%). Many respondents were the only nurse at their place of employment (35.9%), while others worked with 1–4 nursing colleagues (38.9%), 5–9 colleagues (14%), or more (11.2%). The overall demographic profile of these respondents reflected that of the membership of the registry. A more detailed description of the characteristics of this population is available in Dorward (1988).

### Instruments

The questionnaire assessed a variety of constructs pertaining to educational interest, participation, and employment situation. Cronbach's alpha provided a measure of inter-item reliability when appropriate. These are reported in Table I. Overall, they indicated an acceptable degree of inter-item reliability.

*Continuing Education Involvement.* Two items assessed current involvement in continuing education:

1. Are you at present undertaking an Open University course?
2. Have you attended any course/conference/seminar/workshop in the past five (5) years?

Positive answers to these questions were counted to produce one score, continuing education, which ranged from 0 to 2.

One item assessed intention to enhance qualifications in occupational health: Would you be interested in obtaining a diploma or degree with specialization in occupational health?

A positive answer was assigned a code of 1; a negative answer a zero.

The use of a one-item and a two-item scale for measuring continuing education involvement constrains the quantitative analysis. The brief scales reflected concerns about shortening the size of the lengthy questionnaire.

Table I. Means Standard Deviations, Cronbach's Alphas, and Correlations Among Variables in the Study<sup>a</sup>

Variable	Mean	SD	$\alpha$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
1 Soc/psych	23.06	3.72	.81																					
2 Admin	28.11	5.53	.87	.403																				
3 Comm.	14.76	3.73	.81	.449	.569																			
4 Occ health	22.95	3.72	.78	.428	.543	.493																		
5 Clinical gen.	16.45	3.14	.78	.314	.282	.160	.375																	
6 Clinical occ.	19.38	3.55	.77	.452	.479	.320	.540	.578																
7 Practical fac.	28.62	3.62	.78	.289	.355	.319	.312	.245	.313															
8 Career fac.	13.28	1.72	.64	.142	.139	.249	.193	.096	.166	.358														
9 Social fac.	7.72	2.02	.82	.055	.100	.081	.044	.118	.110	.244	.302													
10 Practical det.	13.15	3.82	.83	-.043	-.114	-.042	-.111	.056	-.032	-.042	-.096	.265												
11 Duplication	15.44	3.43	.76	-.249	-.214	-.211	-.274	-.278	-.290	-.218	-.145	.137	.329											
12 Disincentives	2.60	1.02	.61	-.054	-.065	-.051	-.080	.013	-.040	-.082	-.040	.164	.163	.101										
13 OH diploma	1.34	.52	. .	.144	.240	.180	.139	.022	.122	.169	.117	.003	-.014	-.133	-.065									
14 Continuing ed.	1.10	.33	. .	-.057	-.006	.057	-.125	-.151	-.075	-.080	-.019	-.038	.006	.096	-.111									
15 Grade	3.08	.98	. .	.84	-.014	-.131	.021	.219	.209	.227	-.047	.018	.011	.104	.141	-.127								
16 Other nurses	1.35	.48	. .	-.010	.040	.098	-.043	-.201	-.013	-.127	-.032	-.039	-.069	.088	-.059	-.065	.199	-.321	.265					
17 Journals	19.88	5.29	.65	.039	.215	.234	.207	-.063	.156	.050	.104	-.020	-.124	-.070	-.024	.079	.098	-.254	.270	.100				
18 Training dept	1.22	.46	. .	.002	.057	.109	-.052	-.098	-.046	-.011	.009	.010	-.120	.034	-.095	.046	.204	-.122	.270	.100				
19 Sex	1.92	.27	. .	.115	.023	.060	.054	.010	.021	.124	.076	-.031	-.092	-.126	-.047	.028	-.006	.051	-.089	.101	.040			
20 Age	3.54	.87	. .	-.070	.003	-.038	.049	.012	-.041	-.079	.023	.166	-.075	.015	-.075	-.264	.009	-.110	.155	.045	-.050	-.065		
21 Years OH	10.58	6.80	. .	-.177	-.018	-.125	-.046	-.076	-.057	-.069	.001	.011	-.210	-.046	-.167	-.226	.035	-.256	.228	.174	-.003	-.006	.503	

<sup>a</sup> $p < .05$ ,  $r = .148$ ;  $p < .01$ ,  $r = .194$ .

The focus of these items on objective issues (e.g., course participation) rather than global opinions reduces the need for a multiple items: the items are not attempting to ascertain a latent variable but a matter of fact.

*Educational Interests.* One section of the questionnaire assessed respondents' interests in 40 topics within occupational health, on which interest was rated from 1 "not at all" to 4 "very interested." These 40 topics included aspects of (1) administration (e.g., management, industrial relations), (2) occupational health (e.g., occupational hygiene, epidemiology), (3) social/psychological issues (counseling, mental health at work), (4) communication skills (e.g., interviewing, public speaking), (5) general clinical skills (e.g., first aid), and (6) occupational health clinical skills (e.g., audiometry, spirometry). A principal components factor analysis confirmed that responses to these interest items clustered within these five topics. Items within each topic area were summed to produce the five interest scores. An oblique factor analysis was largely consistent with the principal components analysis; subsequent analyses used the principal components results, because the model testing analysis addressed the correlations among the factors.

*Facilitators of Education Involvement.* A section of the questionnaire assessed factors which respondents perceived to encourage their involvement in continuing education, by asking "How important are each of the following to you when considering attending a course/conference? Responses ranged from 1 "not important" to 4 "most important." These items provided three measures: social facilitators (e.g., exchange ideas, meet others in OH field), practical facilitators (e.g., in a convenient location, employer will pay), and career facilitators (e.g., credit toward further qualification, knowledge of UKCC plans). A factor analysis confirmed that items clustered into these three areas. These issues did not make reference to specific course content, as did the training interests measure described above. The examples given here indicate that the facilitators include the respondents' appraisals of the expectations and values of employers and professional groups.

*Deterrents to Education Involvement.* A section of the questionnaire assessed factors which respondents perceived to discourage their involvement in continuing education, by asking "How much would each of the following discourage you from attending a course/conference? Responses ranged from 1 "not important" to 4 "most important." These items provided three scores: duplication/irrelevance (e.g., already knowledgeable on the subject, unable to put theory into practice in this post), career disincentives ((e.g., no increase in salary for attending, no credit toward further qualification), and practical deterrents (e.g., can't afford the cost, employer will not release me). A factor analysis confirmed that items clustered into these

three areas. As with the facilitators measure, the deterrents included the respondents' appraisals of the expectations and values of employers and professional groups.

*Journal Reading.* To assess autodidaxy in addition to formal education involvement, respondents indicated their reading of nine professional journals with wide circulation among nurses in the U.K. They also had the option of extending the list with additional journals. In response to the question, "Which of the following journals do you read?" they rated each journal from 1 "never" to 4 "frequently." The sum of these items yielded one score, journal reading.

*Demographic or Situational Characteristics.* The questionnaire assessed two aspects of current employment situations. Respondents indicated whether they worked alone or with other nurses. They also indicated whether the organization for which they worked maintained a training department. Nurses' qualifications were recorded as grade, which ranged from 1 for a chief nurse to 7 for an enrolled nurse. The questionnaire also assessed sex, age, and years in occupational health.

## RESULTS

### Situations, Interests, and Educational Involvement

Table I displays the means, standard deviations and correlations among the variables in the study. The lowest alpha was for the two-item disincentives measures (.61); all others were above .70.

The correlations indicate a high degree of correspondence among the interest items: an interest in one topic area is generally associated with interests in other areas, although the factor analysis confirmed distinct clusters of interest. The correlations among facilitators also indicated consistency among them. The intercorrelations among the three categories of deterrents were not as strong. The correlations of the facilitators with the deterrents indicate that they are not simply the opposite of one another. The only significant negative correlation between them was that of duplication with practical facilitation; social facilitation was positively correlated with practical deterrents and with disincentives.

Practical and career facilitators were significantly correlated with most of the interest areas, while social facilitators were not. Duplication was the only deterrent which was significantly correlated (negatively) with interests. Social/psychological, administration, and communication interests were associated with intention to pursue an occupational health diploma, while only interest in general clinical skills was associated with current continuing education involvement. Administration, communication, occupational



health, and occupational clinical interests were associated with journal reading. Nurses of lower grade tended to express greater interest in clinical skills, both general and occupational, gave greater importance to practical facilitators, and reported less involvement in continuing education. Nurses who worked alone were more interested in general clinical skills than were those who worked with other nurses. They reported less current involvement in education, and were less inclined to read journals.

### A Model of Education Involvement

The correlations described above depict a complex pattern of relationships among interest areas, career stage, occupational situation, and educational involvement. While the distinct relationships are informative in themselves, they may also represent underlying themes. A LISREL analysis tested the model depicted in Fig. 1. The analysis employed both the confirmatory factor analysis in conjunction with the structural equation functions of LISREL 7 (Jöreskog & Sörbom, 1989).

The factor analytic function confirmed that the various measures of work situation, demographics, facilitators, and deterrents to participation could be summarized as three latent exogenous variables: situational or demographic characteristics, deterrents, and facilitators (see Fig. 2). A high score on the latent variable, situational characteristics, indicated a relatively young, inexperienced nurse of lower grade working as the only nurse in an organization without a designated training department. Sex was not included in this analysis, because it was too highly skewed to meet the LISREL distribution requirements (i.e., 92.6% female).

The deterrent latent variable comprised the three deterrent measures: duplication, disincentives, and practical deterrents. Similarly, the facilitators latent variable comprised the three facilitator measures: social facilitators, practical facilitators, and career facilitators. The grouping of the three deterrent and three facilitator measures into two latent variables indicated a common theme underlying the measures. At the same time their differentiation into facilitators and deterrents confirms the expectation that deterrents are not simply the opposite of facilitators. In addition to these predicted factor loadings, two deterrent measures—career deterrents and practical deterrents—had significant cross-loadings on situational characteristics. Whereas these measures comprised items making direct reference to the employers' support for education, these cross-loadings were retained in the subsequent analyses.

The factor analysis of the endogenous measures also confirmed three latent variables: Interest, formal education, and autodidaxy (See Fig. 3). All six interest measures loaded positively on the interest latent variable.

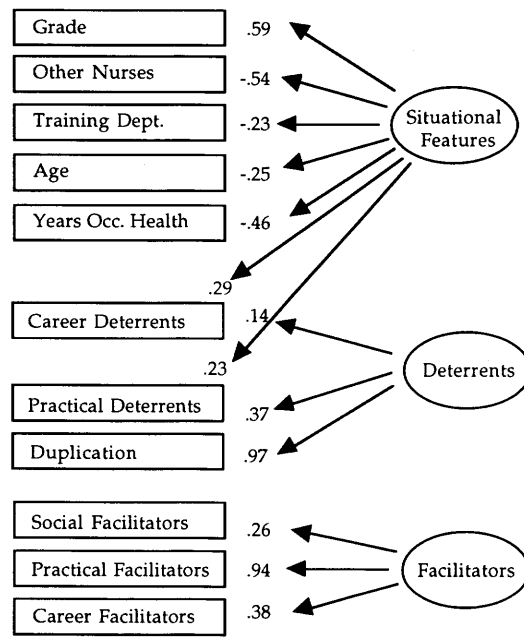


Fig. 2. Factor loadings for latent exogenous variables.

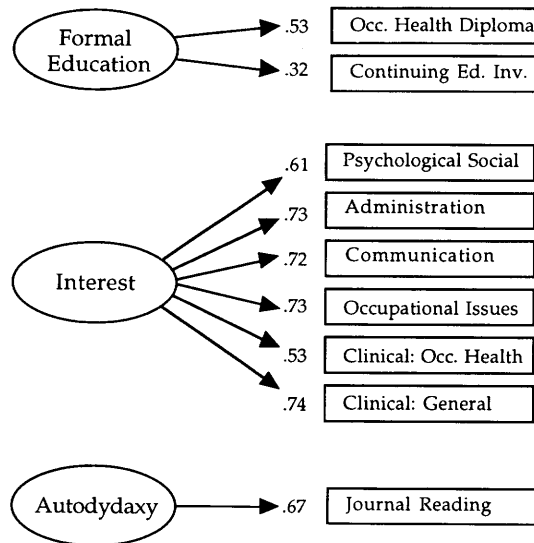


Fig. 3. Factor loadings for latent endogenous variables.

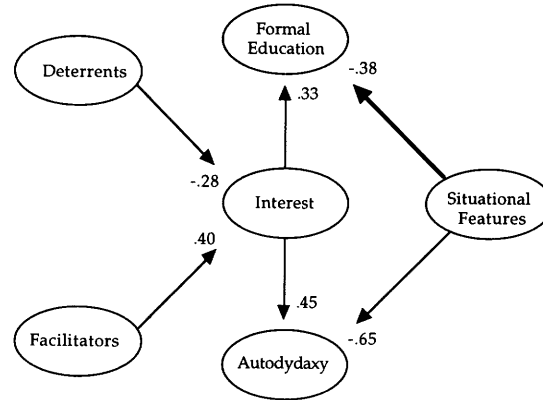


Fig. 4. LISREL structural analyses.

Intention to pursue the occupational health diploma and continuing education involvement both loaded on formal education. Journal reading was the only measure of autodidaxy in this analysis. There were no substantial cross-loadings to be addressed among the endogenous variables.

The structural analysis simultaneously examined the relationships among these latent variables, testing the model depicted in Fig. 1. The results of this analysis confirmed the significance of the paths predicted for the model (see Fig. 4). Examination of the modification indices did not indicate any other paths among these variables would enhance the model. The overall fit of the Proposed Model was acceptable (see Table II) with a GFI greater of .900 and a ratio of GFI to degrees of freedom of less than 2.00.

A central point of the model considered here is the role of educational interests as a mediator of the relationships of facilitators and deterrents with formal education and autodidaxy. For comparison purposes, an analysis compared the proposed model with two other models. The No Mediator Model retained the paths from deterrents and facilitators to in-

Table II. Model Comparison

Model	df	$\chi^2$	GFI	AGFI	RPNFI
Proposed model	153	272.01	.906	.871	.811
No mediator	150	280.98	.903	.865	.793
Reversed	151	267.77	.908	.872	.801
Structural null	168	626.69	.799	.749	
Null model	184	1313.86	.592	.534	

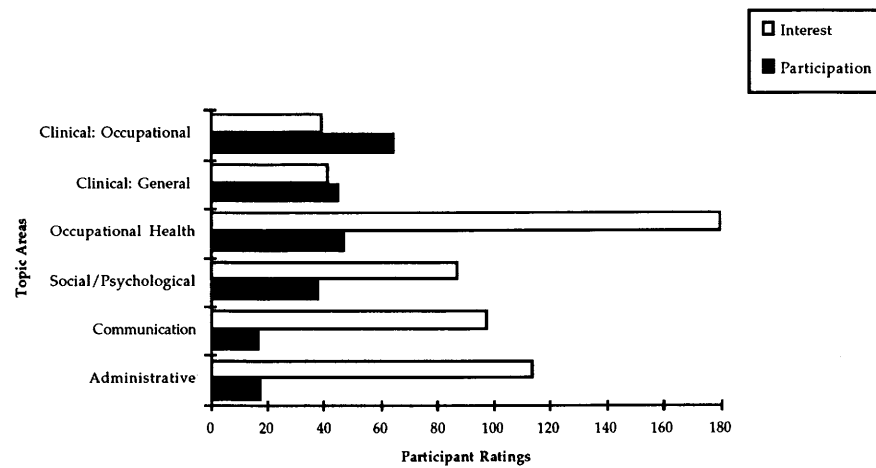


Fig. 5. Availability and interest in training topics.

terest, but removed the mediating paths from interest to formal education and autodidaxy. Instead, the model added direct paths from facilitators and deterrents to both formal education and autodydaxy. Second, the Reversed Model reversed the direction of the relationships of interest with the other two outcome variables. This model proposed that involvement in formal education or autodidaxy would increase expression of interest. The comparisons displayed in Table II indicated that the proposed model provided the best fit, according to the relative parsimonious normed fit index (RPNFI) proposed by Mulaik et al. (1989), who noted it provide the most precise differentiation among structural aspects of models which included a factor analytic component. The precision was needed to display the small advantage of the proposed model over the competing models. The GFI and AGFI calculated by the LISREL program give less emphasis to a model's parsimony.

#### Participation and Interest in Training Activities

The relationship of training interest with participation is constrained by the availability of training programs. In addition to assessing participants' interest in six topic areas of occupational nursing, the survey recorded their participation in continuing education programs within these topic areas. Figure 5 suggests that the availability of programs does not reflect interest. The chart indicates for each topic area the number of participants who gave the highest interest rating to an item within that topic

(interest) and the number who had attended a training program on that topic within the past 5 years (participation). While the availability of training programs pertaining to clinical skills, both general and occupational, was adequate for the demand, the availability of training programs pertaining to the other four topic areas fell far short of demand, as indicated by interest.

## DISCUSSION

The results provide confirmation of a model of continuing education involvement which emphasizes employees' appraisals of their goals in interaction with other stakeholders. The model indicates that the interactions of occupational health nurses with their employers, training providers, and professional groups are part of the process which shape their interests and their eventual involvement in formal education and autodidactic activities. While the model recognizes the essential role played by individual interest and initiative in the pursuit of mid-career education, it gives consideration to the consequential role of situational features shaped by both individual career paths and occupational contexts. While the analysis favored the proposed model over two alternative models, its support was not definitive. The need for additional research with a wider range of measures is discussed.

The structural analysis of latent variables in this study facilitates the generalizability of the results. Although the measures used in the study were specifically tailored to occupational health nurses in the U.K. who were confronting professional challenges of a particular time, the analysis put the focus on underlying themes. For example, the latent variable, educational interests, represented a motivation to pursue any or all of the full range of topics pertinent to the field of occupational health nursing in which the participants were currently employed. As such, this latent variable has implications for professional efficacy expectations (Leiter, 1991, 1992), in that they indicate a support for enhancement of professional skills and commitment. The initial factor analysis of this measure, and comparisons among the expressions of interest in the various aspects of occupational nursing indicated that nurses were quite diverse in the specific targets of their interest. This pattern suggests that the latent variable of educational interest represents a motivation to pursue skill enhancement which is comparable to that of people working in diverse occupational contexts.

Similarly, the latent variables of deterrents and facilitators of educational involvement represent general themes underlying the specific items measuring the constructs. The analysis confirmed the expectation that employees' understanding of deterrents and facilitators would each have a

distinct relationship with educational interests. For example, organizational policies which facilitate participation frequently fail to address directly the barriers individual encounter when attempting to pursue education. An employer may provide release time for employees who wish to enhance their skills and facilitate their career advancement of employees, but allocate insufficient funds to offset training costs. Or employees may have considerable family or community responsibilities which deter their educational involvement despite their access to release time or training funds.

The results of the analysis departed from expectations in two ways. First, two of the deterrent measures loaded with the situational characteristics. This pattern suggests that the latent variables—situational characteristics and deterrents—represented two aspects of the deterrents—represented two aspects of the deterrent items. The deterrents factor itself represented employees' appraisals of barriers to educational involvement in the most general sense. In contrast, the loadings on the situational characteristics represent the more objective qualities of those deterrents which are pertinent to the occupational situation, such as employers' willingness to provide support for educational participation. The second departure from expectations was the finding that path from situational characteristics to autodidaxy was stronger than its path to formal educational involvement. It may be that situational characteristics and qualities of the employing organizations have a particularly strong impact on individuals' initiative to pursue self-directed education and the availability of journals of interest to occupational nurses. Alternatively the finding may indicate that statistical qualities of the journal reading variable made it more sensitive than the formal education measure.

The importance of the employment situation is emphasized by both the structure of the situational characteristics variables, as well as its relationships with formal education and autodidaxy. The structure of the variable indicated that relatively young, inexperienced nurses of lower grade were generally working as the only nurse in organizations without a designated training department. These nurses are the ones who could benefit most from the support of colleagues and of ongoing, structured training programs. The relationships of this cluster with the outcome measures indicated that not only did they lack the benefit of internal training programs, but they were less likely to be involved in formal education or autodidaxy. This did not reflect a lack of interest in education. The analysis specifically tested for a path from situational features to educational interest. Its lack of significance indicated that relatively young, inexperienced nurses of lower grade working alone in organizations without a designated training department were no less (or more) interested in training topics than were other nurses. However, their situational constraints deterred their educa-

tional involvement. It remains to be seen whether the structure which the UKCC and national boards are bringing to continuing education in nursing will be sufficient to offset these deterrents, or whether they will simply add another pressure to nurses who are struggling with limited options (E.N.B.N., 1991).

The contrast between participants' training interests and the availability of training programs matching those interests may indicate conflict about the role of occupational nurses. While individual nurses appear to have embraced the profession's view of a nurse as a broadly competent professional, employers and training providers support a more constrained role. Nurses are able to find and obtain support for attending programs which strengthen their clinical skills, but not those which address managerial, communication, and social/psychological concerns, or even issues of specific relevance to occupational health, such as epidemiology. These results suggest that the skills being developed among occupational health nurses in the U.K. are predominantly those pertaining to individual clinical treatment. This constrained role for nursing is in stark contrast to the potential in occupational health for broader-based preventative programs addressing systematic workplace or lifestyle health problems and promoting wellness. The correlations of journal reading with educational interests suggest that nurses are compensating for the absence of training programs through autodidaxy. While this solution may provide them with information and skills, it is unlikely to enhance their credentials and recognition.

Additional research is needed which considers nurses' decisions to pursue continuing education in relation to independent data from employers and potential service providers in their area. Studies which test this model with nurses working in health service settings and with employees in industries which employ occupational health nurses would help to establish the generalizability of the results. More work is needed to integrate such studies on educational involvement with models of professional efficacy.

Multiple sources of information would strengthen subsequent studies. The questionnaire which provided the basis of this study primarily used items which requested factual reports of involvement rather than general ratings of opinions, it would be strengthened by including multiple sources of information, and additional items measuring central constructs, such as the intrinsic rewards of learning. Although recent research (Spector, 1987) have found that questionnaire data was less susceptible to method variance than previously supposed, the influence of trivial correlations on model testing cannot be entirely discounted (Bagozzi & Yi, 1990; Williams, Cote, & Buckley, 1989).

These results indicate that the development of organizational policies to promote training demand multifaceted strategic planning. While goals and objectives which encourage the enhancement of skills are likely to make an impact on employees' interest in pursuing education, they are insufficient on their own to assure action. The results suggest that initiative which address specific barriers to involvement will enhance those which encourage participation.

The situation of occupational health nurses is of particular interest in the context of current initiatives in the U.K. and North America toward health promotion as a more substantial component of health care systems. The position of these nurses in occupational settings provides them with the potential to play a considerable role in health promotion, and in the identification and amelioration of systemic factors leading to illness. However, fulfilling this role requires a continual enhancement in skills as programs to enhance health become more far-reaching and sophisticated. There is room for a more active role for professional bodies, especially the national boards, in both facilitating occupational health nurses' endeavors to pursue education and in helping them to address barriers in their personal circumstances and more emphatically in their employment situations. The mandate to show evidence for continuing post-basic education must be promoted with employers outside of the NHS as well as with individual nurses.

The most problematic circumstance identified in this survey was that of occupational health nurses working as the only nurse in smaller organizations which lacked an internal training function. These nurses, who tended to have less extensive experience and training, were more inhibited from participation in education, regardless of their personal interest in doing so. The problem pertained not only to formal education, which involves costs and disruption of organizational routine, but also in journal reading, which would seem to be more within an individual's discretion. Further research could focus on the extent to which the constraints on autodidaxy are a function of a lack of resources (i.e., journals), the absences of supportive colleagues, or time pressures in these more limited worksettings. Finally, the inconsistencies between nurses' expressed interest in a wide range of training topics and the narrow range of available programs suggests that training providers and employers continue to view occupational nursing as a clinically based role. Promoting a broader nursing role is a matter of training as well as function.