Developmental phases and factors influencing role development in diabetes specialist nurses: a UK study

SV Llahana, AB Hamric*

Summary

This paper is a report of a nationwide study of diabetes specialist nurses (DSNs) which explored experiences engendered during their role development and factors influencing this process.

The role of the clinical nurse specialists, including that of the DSN, has been described as advanced, flexible and multifaceted. They experience a role development process before being able to function with maximum effectiveness, although limited work exists in the literature which explores this process.

The study was underpinned by Hamric and Taylor's role development model which includes seven phases: orientation, frustration, implementation, integration, frozen, reorganisation, and complacent. A postal questionnaire combining quantitative and qualitative approaches was sent to 653 DSNs working in Great Britain. The response rate was 51% (n=334). Quantitative data were analysed using the SPSS statistical package and qualitative data were analysed using content analysis.

Respondents reported positive and negative experiences engendered during their role development. An additional phase, transition, emerged from respondents' comments and reflected experiences of expert DSNs moving to a different post. Barriers and facilitators to role development were also identified.

Role development is a complex process and is influenced by factors deriving from the work setting, personal characteristics and the nature of the DSN role. Based on findings, strategies are suggested for successful role implementation and for minimisation of the negative developmental phases. Further research is required to examine the relationship between developmental phases and role performance.

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Key words

clinical nurse specialist; diabetes specialist nurse; role development; developmental phases; positive and negative role experiences; barriers and facilitators

Introduction

Definition of the diabetes specialist nurse role. The clinical nurse specialist (CNS) has an advanced, complex, multifaceted and flexible role which focuses on direct patient care and is able to respond appropriately to the needs of patients and/or institutions. The CNS role, introduced in the UK in the early 1980s, includes the following core components (sub-roles): expert practice, consultation, education, research and management/leadership.[1–6] The diabetes specialist nurse (DSN) role followed a very similar path to CNSs in the UK. In 1991, the Royal College of Nursing developed the definition of the DSN[7] and accepted that the DSN role conformed to that of the CNS in terms of role components,[1,2] although it considered other significant and exclusive parameters within the diabetes speciality.[7] Almost 20 years later, this definition was reviewed and endorsed by Diabetes UK.[8] A study which explored the DSN role performance confirmed that UK DSNs perform all five role components comprising the CNS role.[9]

DSNs in the UK, while practising in the sub-roles constituting the CNS role, differ from the CNS prototype in some important respects. DSNs are not uniformly Master's prepared, although the majority hold postgraduate qualifications in diabetes.[5,10] In addition, compared to CNSs in the USA, DSNs (as all CNSs in the UK), although required to be registered with the Nursing and Midwifery Council in order to practise, do not have professional certification for their speciality.[5]

At present there are approximately 1300 DSNs working in the UK.[11] The DSN role has evolved rapidly since the 1980s and includes more advanced clinical responsibilities and nurse prescribing.

Role development. CNSs experience a role development process before being able to function with maximum effectiveness which is due to the multifaceted nature of the role and the continuous changes in patient needs and health environments.[12,13]

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A model of clinical skill acquisition broadly discussed in nursing in the past three decades has been that of Benner, who described five levels of evolving expertise: novice, advanced beginner, competent, proficient, and expert.[14] However, Benner did not study nurses in advanced roles, but rather those who were experts by experience.[15] Another approach to understanding CNS role development has focused on the CNS's experiences and feelings engendered as competence and confidence in practice are developed. Baker identified four theoretical stages of role development for novice CNSs during the initial three years of their career: orientation, frustration, implementation, and reassessment.[16]

Hamric and Taylor[12] undertook a study to explore the role development of CNSs with more varied experience. They surveyed 100 full-time practising CNSs; 42 of them had less than three years of CNS experience and 58 had over three to 16 years of experience.[12] The model of role development emerging from this study included seven phases: orientation, frustration, implementation, integration, frozen, reorganisation, and complacent (Table 1). The first three phases present close similarities to Baker's model, while the other four emerged from content analysis of the responses of more experienced CNSs. Hamric and Taylor found that the experience of these role developmental phases is not totally discrete. Rather, phases are cyclical and may recur according to prevailing situations.[12]

Developmental phase	Description and characteristics of each developmental phase
Orientation phase	• Enthusiasm, optimism, eager to prove self to setting • Anxious about ability to meet self- and institutional expectations • Expects to make change
Frustration phase	• Discouragement and questioning as a result of unrealistic expectations (either self or employer); difficult and slow-paced change; resistance encountered • Feelings of inadequacy in response to the overwhelming problems encountered; pressure to prove worth
Implementation phase	• Returning optimism and enthusiasm as positive feedback received and expectations realigned • Organisation and reorganisation of role tasks, modified in response to feedback • Implementing and balancing new sub-roles • Regaining sense of perspective • May focus on specific project(s)
Integration phase	• Self-confident and assured in role • Rated self at advanced level of practice • Activities reflect wide recognition; influence in area of speciality • Continuously feels challenged; takes on new projects; expands practice • Either moderately or very satisfied with present position • Congruence between personal and organisational goals and expectations
Frozen phase	• Self-confident; assured in role • Rated self at intermediate or advanced practice level • Experiencing anger/frustration reflecting experience • Conflict between self goals and those of organisation/supervisor • Reported sense of being unable to move forward due to forces outside self
Reorganisation phase	• Reported earlier experiences that represent integration • Organisation experiencing major changes • Pressure to change role in ways that are incongruent with own concept of clinical nurse specialist role and/or self goals
Complacent phase	• Experiences self in role as settled and comfortable • Variable job satisfaction • Questionable impact on organisation

Table 1. Role development phases of the clinical nurse specialist. (Reproduced by permission of Elsevier & WB Saunders, from: Hamric AB, Taylor J. In 'The clinical nurse specialist in theory and practice', 2nd edn. 1989;41–82.)[12]

Methods

Aims. The purpose of the present study was: to explore the role development of DSNs in the UK, guided by the Hamric and Taylor model[12] and to compare their experiences with those of CNSs in the USA; and to suggest strategies that can assist DSNs (and the general population of CNSs) in the process of their role development.

Design. Permission was obtained to use the instrument by Hamric and Taylor[12] in the current study. The questionnaire included four sections:

- Demographic details.
- Definitions of the seven developmental phases (Table 1) were cited in the questionnaire, and DSNs were asked to indicate the extent to which they experienced each phase at any point in their career using a five-point Likert scale, from '1 = not at all' to '5 = to a great extent'. An open-ended question in this section asked DSNs to describe why they had (or had not) experienced each phase.
- Respondents were also asked to indicate the phase they were currently experiencing.
- Finally, DSNs were asked to list the most helpful facilitators and the greatest barriers in their role development.

A panel of seven experts, four researchers and three DSNs were invited to review the questionnaire

in order to establish its content validity; one of the authors from Hamric and Taylor[12] participated in the panel of experts. The revised questionnaire was pre-tested in a pilot study with a sample of 30 DSNs working in Northern Ireland, with a 63% (n=19) response rate.[17]

Sample and data collection. Conducted in 2001, this was a nationwide study and included all DSNs working in the UK full- or part-time in diabetes care on the Diabetes Specialist Nurse National Directory.[18] The main study included 653 DSNs: 628 female and 25 male; DSNs (n=30) involved in the pilot study were excluded from the main study.

Participants were provided with a prepaid addressed envelope and were asked to complete and return the questionnaires anonymously. A reminder follow-up letter was sent to all participants three weeks after commencing the survey. Returning the questionnaire indicated consent to participate in the study.

Ethics. Ethics committee approval was obtained from the university where this study was conducted. Permission was also obtained from Diabetes UK to access the DSN Directory; Diabetes UK is a national charitable organisation for patients with diabetes and health care professionals working in this area.

Data analysis. The quantitative data were analysed using the Statistical Package for Social Sciences (SPSS), version 13. Descriptive statistics were used to analyse frequencies of responses. The responses to the open-ended questions were analysed by adopting a content analysis approach. This approach classifies the words in a text into a few categories according to their emerging themes and concepts, as guided by their theoretical importance.[19]

Developmental phase	Not at all n (%)	Limited extent n (%)	Moderate extent n (%)	Considerable extent n (%)	Great extent n (%)
Orientation	18 (5)	66 (20)	71 (21)	120 (36)	59 (18)
Frustration*	27 (8)	102 (31)	81 (24)	86 (26)	38 (11)
Implementation**	12 (4)	46 (14)	93 (28)	137 (41)	46 (14)
Integration**	18 (5)	28 (8)	91 (27)	126 (38)	71 (21)
Frozen*	91 (27)	87 (26)	71 (21)	66 (20)	19 (6)
Reorganisation*	148 (44)	69 (21)	67 (20)	36 (11)	14 (4)
Complacent*	195 (58)	87 (26)	35 (11)	17 (5)	–

* Negative phase. ** Positive phase.

Table 2. Extent of respondents' experience of each phase (n=334)

Results

Demographics

The overall number of questionnaires returned was 341 of which seven were not used as incomplete, giving a final response rate of 51% (334 DSNs). Eighty-nine (27%) DSNs were working part-time and 245 (73%) full-time; 97 (29%) DSNs were based in hospital, 43 (13%) in the community and 194 (58%) were working between hospital and community.

With regard to academic qualifications, 264 (79%) respondents had undertaken further postgraduate education, 65 (20%) of whom held a Master's degree. Duration of employment in current DSN post ranged from three months to 23 years (mean 7.7 years; SD 5.1). For 248 (74%) respondents, this was their first DSN post; the remaining 86 (26%) had held more than one DSN post.

Role development phases

Based on the definition of each phase, the developmental phases were categorised in three distinct groups as *positive* phases (*implementation* and *integration*), *negative* phases (*frustration*, *frozen*, *reorganisation* and *complacent*) and *orientation*. Although 38% of DSNs stated that they were experiencing integration at the time of the study, more than half (58%) were experiencing a negative phase, i.e. 20% frozen, 17% reorganisation and 16% complacent. Only 4% were experiencing implementation and no one was in the orientation phase.

A wide range of responses was obtained from participants regarding the extent of their experience of each phase at any point in their careers (see Table 2). Every phase was experienced by at least one respondent.

Following content analysis of the open-ended questions which described the reasons for experiencing (or not) each phase, responses were divided into the following three categories: (1) factors derived from respondents' work setting; (ii) respondents' personal characteristics; and (iii) role characteristics.

Orientation phase and 'transition': an additional phase. More than half of DSNs in this study (Table 2) experienced this phase to a considerable or greater extent and this was associated with either positive or negative experiences.

Respondents who reported positive experiences of this phase had an induction programme and support from their team and management, as illustrated in this comment: *'I joined a happy, established and experienced team who were willing to listen to new ideas and support new staff.'*

On the other hand, lack of a mentor and support were identified as factors which slowed down the progress of many respondents' role development, with one DSN commenting: *'…I did not know what I did not know.'*

Respondents were also asked to indicate any other role development experiences which were not reflected in the seven phases by Hamric and Taylor. An eighth phase, the transition phase, emerged from the analysis of these comments which is similar to orientation but reflected characteristics of competent DSNs moving to a new post.

The majority of the 86 (26%) respondents who held a second, third or fourth DSN post described this phase; they had experienced implementation and integration in their previous DSN posts. *'This was my second post as a DSN; therefore, I entered this post with more confidence and enthusiasm,'* noted one respondent.

Based on the results of this study, the definition of the transition phase is as follows:

- Eagerness in improving area of practice when moving to a new DSN post. Previous experience is recognised in the new setting.
- Competence and advanced level of practice within the role.
- Feelings of anxiety are related to orientation into a new work setting rather than to the role knowledge base.

Positive developmental phases: implementation and integration. Factors deriving from respondents' work settings, such as lack of support, staff shortages, increased workload, and lack of understanding of the role by management and other health professionals, were the main obstacles to the occurrence of positive phases. One DSN stated: *'I was left on my own to cope'*, while another DSN found it *'...difficult to implement new ideas working with a team "stuck" in old fashioned ways'*.

On the other hand, respondents identified similar reasons for the occurrence of implementation and integration phases, although they reported a higher level of practice, self-confidence and competence in the integration phase. For more than half of respondents, experience of positive phases was attributed to the initiation and successful implementation of a project or initiative. One respondent reported *'…choosing projects which can be implemented in a short time span and evaluate results fairly quickly'* as a strategy to reach implementation. Most respondents had reached integration following promotion and successful implementation of major projects such as nurse-led clinics, expansion of primary care services, setting up and delivering diabetes teaching programmes and prescribing protocols. Respondents' opinions were respected and they were able to influence decisions regarding provision of diabetes care.

The strength of the positive phases arose from good communication and support, recognition and positive feedback from colleagues, management and patients.

Personal characteristics such as self-confidence, optimism, enthusiasm, good planning and solving abilities, motivation, role competency, interpersonal skills and *'…perseverance in achieving planned goals and personal expectations'* had contributed to positive phases. The multifaceted and challenging nature of the DSN role, autonomy, independence, flexibility, and *'…freedom from usual barriers for development'* were also cited.

Finally, a number of respondents, employed in their position for >10 years, reported 'movement in and out' of the integration phase as their role evolved throughout years, with one noting: *'There are occasional knock-backs, but generally practice grows and expands – some problem is releasing tasks to take on new roles.'*

Negative developmental phases: frustration, frozen, reorganisation, complacent. Although many respondents were in negative phases at the time of the study, over half of respondents experienced each of the negative phases, except frustration, only to a limited extent or not at all. Personal characteristics and factors deriving from respondents' work settings, similar to those reported in positive phases, were major determinants of absence or limited experience of negative phases. Absence of complacent phase, as one DSN noted, was because: *'Diabetes care and research are changing so much that there is never a feeling of stagnation.'*

Most respondents who experienced a negative phase to a moderate or greater extent related this to the lack of support, understanding and recognition of the value of their role, and incongruence of role expectations and conflict between respondents and other parties or the employing organisation.

The second most frequently mentioned reason was increased workload and constraints on resources, as illustrated in this comment by a DSN who was experiencing a frozen phase: *'Workload is too high and* [there is] *very little support. There is no real scope for individual creativity, development or research.'*

Other factors that caused negative phases were absence of role models, working in isolation, lack of peer support and conflicts within the team. For respondents who had experienced reorganisation, this had created changes to which they had to adapt and assume new responsibilities within their role (or exclude others), not congruent with their expectations, such as undertaking a great amount of managerial activities.

The complacent phase occurred for most DSNs who experienced it when change of post was considered or when personal or family commitments took priority. Short intervals of a complacent phase were perceived by some respondents as a pleasant phase to be in from time to time, especially following successful implementation of a stressful project; one DSN said: '[I am] *…allowing time to enjoy my achievement.'*

	Facilitating factors	n (%)	Barriers	n (%)
1	Peer support and networking with other DSNs	90 (27)	Pressure due to staff shortages and heavy workload	77 (23)
2	Supportive and encouraging health care team	38 (11)	Lack of resources and financial restrictions	73 (22)
3	Positive personal characteristics and attributes	35 (11)	Lack of support by management	59 (18)
4	Support for role by management and organisation	31 (9)	Lack of understanding of the DSN role	38 (11)
5	Length of experience in the DSN post	30 (9)	Lack of role models, peer support and role isolation	14 (4)
6	Support and recognition of DSN role by medical staff	23 (7)	Lack of support and conflict with medical team	14 (4)
7	Flexibility and autonomy in role performance	23 (7)	Negative attitudes and professional jealousy from other health care professionals	13 (4)
8	Education and training related to diabetes care	15 (5)	Personal characteristics such as lack of determination, self-confidence, competence and problem solving abilities	12 (4)
9	Education and continuous professional development	13 (4)	Politics and conflict within the organisational structure	12 (4)
10	Having a mentor/role model and clinical supervision	12 (4)	Lack of funding and restrictions on study leave for further formal education and professional development	10 (3)

Table 3. Facilitating factors and barriers to DSN role development and the frequency of their citation by respondents (n=334)

Facilitators and barriers to role development

Approximately 80% of respondents answered this question; more than 15 factors that acted as facilitators and barriers to overall role development were identified. The 10 most frequently reported factors and the number of respondents citing each specific factor are listed in Table 3 (some respondents cited more than one facilitator and/or barrier).

Discussion

Orientation and transition phases. Findings of this study suggested that most DSNs who reported positive experiences of orientation and transition had support and had been allowed time to become familiar with the role and work setting. A structured orientation plan should be organised for newly employed DSNs whether they are neophytes or experienced. It should be appropriately designed to inform the DSN not only about the role itself, but also about the organisational structure, philosophy and policies.[12,13] Bamford and Gibson have identified four areas which can prepare CNSs for their role: 'a pre-existing educational pathway, a training post for the future CNS role, a team member to act as a role model, and a tailor-made orientation programme.'[20]

Positive phases: implementation and integration. Most DSNs attributed the occurrence of positive phases to the opportunity to undertake new projects and introduce improvement to their practice. Hamric and Taylor suggest that a focus on short-term projects is a facilitating strategy for these phases, particularly implementation.[12] During integration, as the CNS has gained positive feedback and recognition relating to the effectiveness of the role, more time can be devoted to areas of scholarly interest such as research, writing and other outside professional activities.[21] In the present study, a number of DSNs related the experience of positive phases to further academic education and research involvement.

The main factors for positive phases identified in both the current and Hamric and Taylor[12] studies came from respondents' work setting. Similar findings were reported by Bamford and Gibson[20] and included support, recognition and positive feedback from management, colleagues, health professionals and patients/carers.

Negative phases: frustration, frozen, reorganisation and complacent. Unlike implementation and integration, these phases share a negative and non-productive character in relation to role development.[13] Factors associated with negative phases in the present study were similar to those identified by Hamric and Taylor.[12] The prevailing factor was incongruence of role expectations between DSNs and other parties within their work setting, i.e. management, health professionals, and patients/carers.

The findings of this study support the assertion that a certain degree of role stress is inevitable in organisations and, in the short term, can often be a motivating factor for moving into positive phases. However, if uncorrected over a long-term period, role stress may be detrimental not only for DSNs but also for individuals with whom they work.[22] The DSN, therefore, should engage in periodic

self-assessment to recognise early signs of characteristics associated with these phases and take proactive steps to deal with the negative feelings.[13] This is even more important during the frustration phase, as the literature notes that CNSs have not reached an advanced level of practice and have not yet developed 'self-defence' role strategies. Neophyte CNSs are particularly vulnerable and initiation of honest discussion is an important strategy in clarifying problematic role issues before they become serious.[12,13]

Another factor identified by DSNs in the present study as contributing to negative phases was lack of understanding of their role by other parties. This resulted in lack of support, isolation and controversial dynamics within the working environment. Bamford and Gibson reported that although CNSs can describe the key components of their role, some cannot clearly explain their role to others.[20] Bigbee and Amidi-Nouri advise that role clarification should be a priority, if not the most important objective, in the process of role development of a CNS.[23]

If others do not understand the benefits of the role, they will not support and accept DSNs; rather they may try to marginalise their contributions or even eliminate the role. A strategy by which DSNs can achieve this objective is the dissemination of their role description to all health professionals with whom they work. This should be well written and concise but long enough to state exactly who DSNs are and what they provide in that particular setting. Moreover, as Hamric and Hanson state, graduate educational programmes need to prepare CNSs to have a clear understanding of their role and to have the ability to describe it to others.[24]

Study limitations and changes in the DSN role in the last decade. The main limitation is that data were collected almost 10 years ago and the role development of the DSN in the UK and factors influencing this process may have changed since then. However, it is very difficult to support this assumption as there is no further literature since the current study which explores the role development of DSNs (or the general CNS population) in the UK or other countries. A nationwide study by James *et al* compared the evolvement of the DSNs from 2000–2007 and found that their role has changed to include more advanced clinical activities and complex service provision.[10] However, there was no mention of role development and how these changes may have affected (if at all) this process.

There has been a significant increase in the number of patients with diabetes and the pressure on the health care system is currently more noticeable than ever. This may have had a negative impact on DSNs' role development and their experiences engendered during this process. However, it is important to note that the DSN workforce has almost doubled[10,11] since this study was undertaken and this may have had a positive effect on role development as there are more job opportunities and peer support. Similarly, advances in diabetes care require nurses to undertake further academic qualifications which may also add to workload pressures. However, as this was one of the main factors reported by DSNs to enhance role development, one can assume that this factor had a positive effect on this process.

Despite the above changes, it would be inappropriate to conclude that DSNs experience a role development different from what they did 10 years ago, and one can assume that this process has remained the same. This assumption is supported by the fact that Hamric and Taylor[12] reported findings similar to the present study even though the former was conducted over 20 years ago. This suggests that experiences engendered during the role development process remain the same throughout the years and can be generalised to the overall population of CNSs in different countries.

Conclusion

The process of role development of the DSN in the UK has been explored in this paper and findings are consistent with those found in CNSs in the USA.[12] A recent search of the literature revealed no more recent research on DSN or CNS role development. The Hamric and Taylor model provided a useful framework for understanding the role development experiences of DSNs. Respondents described the experiences and feelings engendered during the development of their role and emphasised that positive phases maximise the potential of DSN role performance. DSNs, and other CNSs and their employing organisations, must give attention to facilitating positive developmental phases and removing barriers to role implementation. Further research needs to focus on the relationship between the developmental phases and CNS role performance. It should also examine the effectiveness of facilitators and strategies to enhance role development and impede negative developmental phases.

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Conflict of interest statement

There are no conflicts of interest.

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