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Abstract

The role and merits of highly inductive research designs in qualitative health research are well established, and there has been a powerful proliferation of grounded theory method in the field. However, tight qualitative research designs informed by social theory can be useful to sensitize researchers to concepts and processes that they might not necessarily identify through inductive processes. In this article, we provide a reflexive account of our experience of using a theory-driven conceptual framework, the Normalization Process Model, in a qualitative evaluation of general practitioners' uptake of a free, pilot, language interpreting service in the Republic of Ireland. We reflect on our decisions about whether or not to use the Model, and describe our actual use of it to inform research questions, sampling, coding, and data analysis. We conclude with reflections on the added value that the Model and tight design brought to our research.

Keywords

coding; immigrants / migrants; qualitative analysis; reflexivity; research design

The field of qualitative health research is currently characterized by highly inductive qualitative research designs involving the use of grounded theory methods and emergent conceptual frameworks (Bryant & Charmaz, 2007; Glaser & Strauss, 1967; Miles & Huberman, 1994). Much has been written about the important process of generating and verifying grounded theories (see Charmaz, 2006). However, there has been less attention directed to the work of “conceptual entrepreneurs” (Bryant & Charmaz, p. 17) and the grounded theories they have developed in terms of how these are used and applied by other researchers, and whether or not they enhance knowledge, understanding, and interpretation of the issues under investigation. Layder (1998) argued that orienting concepts derived from social theory can sensitize researchers to relevant issues, processes, and interpretations that they might not necessarily have identified themselves using an inductive approach. Also, the use of orienting concepts highlights the scope for qualitative research to test or further explicate preexisting theory (Miles & Huberman). Some qualitative health researchers have reported the use of preexisting orienting concepts or theories to shape qualitative analyses (see Colón-Emeric et al., 2010; Dale, Polivka, Chaudry, & Simmonds, 2010; Griffiths et al., 2010; Jensen & Bute, 2010; Morrow et al., 2011; Ponc & Frisby, 2010; Sawyer, Deatrick, Kuna, & Weaver, 2010; Shamos, Harwig, &

Zindela, 2009; Wuest & Hodgins, 2011). However, there are few reflexive accounts of how researchers decide whether or not to apply so-called “tight” research designs (Miles & Huberman) in their work and, if they do, what their experience is of doing so (although Wuest & Hodgins reflected on the challenges of coding data using a grounded theory developed from a previous study). Such reflexivity can make important contributions to the general quality of individual studies (Alvesson & Skoldberg, 2000), but also to specific fields of research or communities of researchers (e.g., Hutchinson, Marsiglio, & Cohan, 2002).

In this article, we describe our use of a contemporary, theory-driven conceptual framework, the Normalization Process Model (May, 2006), which was generated over time from a series of inductive qualitative studies (see May et al., 2009), to inform the design and analysis of our qualitative evaluation of general practitioners' uptake of a free, pilot, language interpreting service in the Republic

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of Ireland. We offer a reflexive account of this process, and argue that our use of theory constituted thick description (Geertz, 1973) and also provided conceptual density (Strauss & Corbin, 1998), an important outcome for researchers using social theory in qualitative health research (Layder, 1998). This article should be of interest to other qualitative health researchers interested in using the Normalization Process Model, or indeed any other social theory in qualitative health research.

In the next section we describe the Normalization Process Model (NPM) and summarize our study aims, context, and methods. We report how we employed the NPM as our conceptual framework, describing initial concerns about its use and how it informed our research questions, sampling decisions, data analysis, and coding. We also reflect on the added value that the NPM brought to our research.

The Normalization Process Model

The NPM is an applied theoretical model developed from a series of sociological, qualitative health service research studies that were designed to address questions of relevance to service users, practitioners, and policy makers (May, 2006). It provides a framework for understanding how and whether complex interventions¹ become routinely embedded in health care practice (i.e., normalized). It is novel because it offers a conceptual framework about implementation processes that is derived from empirical generalizations developed within studies of implementation and integration processes, rather than being derived from plausibly useful constructs embedded in other theories (May et al., 2010). The NPM has been further developed as a mid-range theory known as the Normalization Process Theory (NPT; May & Finch, 2009).

The NPM focuses on the work of implementation, that is, the integration and workability of complex interventions. If a complex intervention can be integrated smoothly into an organizational setting and is workable alongside other tasks and duties, then it is likely to become routine, i.e., normalized. The NPM analyzes integration and workability with reference to four constructs: (a) interactional workability (IW), i.e., how the work is enacted by the people doing it; (b) relational integration (RI), i.e., how the work is understood within the networks of people around it; (c) skill set workability (SSW), i.e., how the work fits with existing divisions of labor; and (d) contextual integration (CI), i.e., how the work is sponsored or controlled by the organization in which it is taking place (see May, 2006).

The NPM was designed to perform two functions for health care researchers. First, it is designed to be of practical value: to enhance understanding about the manner in which new ways of thinking, acting, and organizing become embedded in health care systems. Second, it is designed to be a conceptual map: researchers who use the

NPM can be sensitized to key issues and areas of focus that are relevant to process evaluations of complex interventions and to the organization of implementation processes. Following Layder (1998), the NPM provides orienting concepts that have been drawn from modern theorists, and comes from a substantive area of empirical analysis: the field of implementation science. It has been used successfully by other researchers to advance the depth of understanding about implementation processes. For example, Elywn, Legare, Edwards, van der Weijden, and May (2008) reported that the NPM analysis was instrumental in extending knowledge about implementation problems for decision support technologies (DSTs) in routine health care settings. Specifically, research relating to DSTs has been focused mainly on issues of interactional workability, but Elwyn and colleagues' NPM analysis identified that factors related to divisions of labor and health care, and the organizational contexts in which DSTs are implemented, were key problems that were poorly understood and warranted more attention. The focus of the NPM was relevant to our recent qualitative evaluation of implementing a complex intervention in routine general medical practice, to which we now turn.

Study Aim, Context, and Methods

This article is based on an empirical study, an evaluation of uptake of a free, pilot, language interpreting service in general practices in the Health Service Executive (HSE) Eastern Area, Republic of Ireland. Ireland experienced a period of unprecedented inward migration during 2000, and the study area had one of the highest concentrations of migrants in the country (Central Statistics Office, 2008). General practitioners identified language barriers as one of the major challenges for them in a newly multicultural Ireland (Crowley, 2003). In response, in 2005 the HSE initiated a language interpreting service for general practices, provided by a commercial agency employing mainly internally trained interpreters.² It was made available in the first instance to general practitioners in one region for a 6-month trial period to establish uptake and patterns of use. The intention was to then extend the service to all parts of Ireland; however, despite the calls from general practitioners for access to interpreters, their uptake of the pilot service was extremely low. The HSE decided to extend the time frame to continue monitoring uptake and patterns of use. We were commissioned to qualitatively evaluate general practitioners' uptake of the service, to explore the gap between their expressed interest in having access to interpreters and their low uptake of the pilot service. Our specific remit was to identify key levers and barriers to the use of interpreted consultations in routine general practice.

Following Campbell et al. (2000) and Greenhalgh, Voisey, and Robb (2007), we conceptualized the interpreted consultation as a complex intervention because it (a) incorporates a number of different components at once, e.g., policy developments, resource allocation, administrative actions, and a triadic rather than dyadic interaction in a cross-cultural medical consultation; (b) involves actions by and interactions between general practitioners, administrative staff, interpreting company, interpreters, and service users with limited English proficiency (LEP); and (c) introduces new tasks to the work of the general practitioners and administrative staff, among others.

The first author, Anne MacFarlane, is a sociologist and primary care health service researcher. She is an experienced NPM user who has contributed to the development of and coauthored papers about the NPM and the NPT (May, Finch, et al., 2007; May et al., 2009), and she proposed that the NPM provided a theory-driven conceptual framework for the commissioned evaluation. The second author, Mary O'Reilly-de Brún, is a cultural anthropologist specializing in participatory action research (O'Reilly-de Brún & de Brún, 2010) who was introduced to the NPM during the course of this study.

At the outset we experienced some tensions around using the NPM as a predetermined conceptual framework. There was interest in the Model and its utility, driven by MacFarlane, but at the same time both of us were more used to inductive approaches to qualitative analysis. We did not wish to force data into predetermined codes or categories (Layder, 1998) because of an attachment to the NPM, which could lead to its use in an uncritical manner (see Thorne, 2011). There was also some tension for pragmatic reasons: The time frame for the evaluation was short (9 months), and we wondered whether we would have sufficient time for a thorough theoretical analysis using the NPM. We resolved these tensions by agreeing to assess the potential utility of the model at each stage of the study, and make stage-by-stage decisions about its use. This was in keeping with the NPM, which was designed to be highly flexible in application and can be used at one or more points in a qualitative study (May et al., 2010). It also gave us the opportunity to consider whether the NPM would grow or recede in importance following Layder's views about the provisional use of orienting concepts in qualitative research.

The NPM as a Conceptual Framework: Research Questions and Study Sample

Drawing from past experiences, we generated research questions relevant to our study aims and objectives (e.g., O'Reilly-de Brún's background in applied anthropology

prompted our interest in exploring how organizational culture might impact on implementation work, and we generated research questions around that). In addition, we used the NPM to prompt, guide, and structure other research questions, brainstorming questions for each of the four NPM constructs. This approach broadened the questioning base of the study to include queries on issues that, initially, we might not have considered. For example, the NPM encouraged us to develop questions about informal policies operating at local levels as well as formal national policies (part of CI). Similarly, we developed questions about the extent to which the work of implementation was or was not compatible with existing professional identities (part of SSW). Here are key questions we asked for each of the four constructs:

- Contextual integration: What are the formal and informal policies, operating at local and national levels, that might influence implementation? What is the capacity and will of general practices to do the implementation work?
- Skill set workability: Who needs to do what to streamline the interpreted consultation into routine practice, and are these implementation tasks compatible with these people's existing workload, skills, and professional identity?
- Relational integration: Do all relevant people involved in implementing interpreted consultations trust each other and have confidence in the work that they are there to do as individuals or groups? Do they trust the interpreted consultation as an authentic medical consultation?
- Interactional workability: Is there clarity about appropriate roles and behavior in the triad of an interpreted consultation? Do all three people believe that the work of the consultation is achievable/achieved? Is the overall impact of the consultation congruent, and is there a sense of meaningfulness about the immediate interaction for all parties involved?

The emphasis for sampling and recruitment was on identifying information-rich cases, participants who were understood to have knowledge and experiences relevant to the phenomenon under investigation (Patton, 1990). The funders of the study had a particular interest in the experiences and views of general practitioners, and the original study remit included general practitioners as the sole participant group. However, we encouraged inclusion of a broader group of participants so that experiences and views of implementation and normalization could be examined across stakeholder groups. This was prompted by our experience of using a multiperspectival approach in qualitative research (e.g., Kane & O'Reilly-de Brún,

Table 1. Overview of Number of Participants and Data Generation Encounters

Number of Participants	Data Generation Encounters
18 General practitioners	33 One-to-one interviews
4 General practice administrators	4 One-to-one interviews
2 Independent interpreters	1 Focus group
2 Service user representatives	2 One-to-one interviews
14 Service user representatives	2 Focus groups
1 Company manager	1 One-to-one interview

2001; MacFarlane, Murphy, & Clerkin, 2006; MacFarlane, Singleton, & Green, 2009; O'Reilly-de Brún, Delaney, Gilligan, & Bailey, 2002), and by our awareness that the NPM encourages analysis of experiences across stakeholder groups, given that implementation of complex interventions involves a range of stakeholders and is influenced by both individual and collective action. The funders agreed to the inclusion of a wider stakeholder group of general practice administrators, representatives of ethnic minority service users, and representatives of the interpreting community. Although we were pleased about this, it brought additional pressure by extending the remit of the study, but not the time frame. We had to account for this as we proceeded.

Table 1 shows an overview of the number of participants and data generation encounters (Gergen & Gergen, 1991; Guba & Lincoln, 1989) in the study. For pragmatic reasons, we used a combination of individual interviews (Kvale, 1996) and focus groups (Kreuger & Casey, 2000).³ Fieldwork took place from February to July and September to October, 2008. Interviews and focus groups were digitally taped with participants' consent, and were transcribed verbatim by a professional transcriptionist who had signed a confidentiality agreement.

The NPM as a Conceptual Framework: Coding and Analysis

As data were generated and analysis began, we had to carefully consider the use of the NPM to guide coding and analysis, in keeping with our agreement to make stage-by-stage decisions about the potential utility of the Model (Layder, 1998; May et al., 2010). We agreed to adopt a two-stage approach to our analysis: Initially, we conducted an inductive thematic analysis using the constant comparative method (Silverman, 2006), and subsequently we mapped the emergent themes onto the NPM

constructs. This approach had been used successfully in other NPM research (e.g., Mair, Hiscock, & Beaton, 2008), and made sense for us for two interrelated reasons. First, given that the NPM was a very new conceptual framework at the time of our study (2007 to 2008), it was prudent to test the robustness of its concepts against emergent themes. Second, as mentioned above, we were working to a tight time frame; completing the inductive thematic analysis provided us with security that we could deliver a thorough and clear analysis from the qualitative fieldwork to the funders and participant stakeholders if, for any reason, the NPM analysis was not completed on time.

O'Reilly-de Brún, who is very familiar with emic approaches to analysis (Kane & O'Reilly-de Brún, 2001; Pelto & Pelto, 1970) but new to the NPM, led the inductive thematic analysis, thus ensuring that the emergent themes were data driven (although we acknowledge that the use of the NPM to develop sensitizing questions influenced the emergent themes). MacFarlane read the emergent themes and independently coded data to assess reliability. She endeavored to set aside her knowledge of the NPM, a process described as bracketing (Moustakas, 1994), to "see" the meaning of the data and their emergent themes. It was helpful for her to take short, relevant notes of overlap between the emergent themes and the NPM, so that she could proceed more freely with the data-driven analysis. The end result was the identification of 12 descriptive themes, shown in Table 2.

Once the thematic analysis was complete, we could see that there was strong resonance between the data, emergent themes, and the NPM constructs, and it made sense to extend the analytical process by mapping the emergent themes onto the NPM constructs. This was an iterative process, moving backward and forward between the emergent themes and NPM literature (e.g., Elwyn et al., 2008; Gask, Rogers, Campbell, & Sheaff, 2008; Mair et al., 2008; May, 2006; May, Finch, et al., 2007; May, Mair, Dowrick, & Finch, 2007). During this process, and again following the principles of the constant comparative method (Silverman, 2006), together we generated working definitions of the NPM constructs that reflected our specific study setting and tested these definitions during the mapping process. In this way, we grew in confidence that we were not forcing data into predetermined categories (see Layder, 1998), but that we were benefiting from the NPM as a conceptual framework that was enhancing our knowledge and understanding of the issues under investigation.

At the beginning, it was not particularly easy to generate these working definitions in our specific setting. We found it helpful to think of our data set as a panoramic picture of processes and activities (scenes) involved in implementation work, and the NPM as a camera with four different colored filters, each representing one of the four

Table 2. Descriptive Themes and Their Definitions

Descriptive Theme	Definition
Time and money	Time and money as influences on implementation work
Knowledge and awareness	Knowledge and awareness in participants' social networks required to access the pilot interpreting service
Communication	Descriptions of communication in the triadic interpreted consultation
Organizational management	Work that is done at the level of the general practice as an organization which supports or impedes the implementation of interpreted consultations
Reliability of pilot language interpreting service	Stakeholders' experiences of the reliability of the pilot language interpreting service
Roles and responsibilities	Roles and responsibilities of all stakeholders involved in the implementation work
Training for general practitioners	Details of training associated with the implementation work for general practitioners who had signed up for use of the pilot language interpreting service
Expectations of the Irish Health Service	Expectations of the Irish Health Service among service users with limited English proficiency (LEP)
General practitioners' own alternative strategies	Strategies other than the use of the pilot language interpreting service employed by general practitioners to support communication with service users with LEP
Informal strategies	Strategies other than the use of the pilot language interpreting service employed by service users with LEP to support communication with their general practitioners
Suggestions and ideas for improvement of uptake	Strategies for improving the uptake of the pilot language interpreting service
Policy	Details of policy influences on the implementation work

constructs. When we placed each of the four colored filters in turn over the camera lens, it highlighted specific scenes or activity within the overall panorama, allowing us to see not only the detail and distribution of these, but also the connections and the ebb and flow between scenes, right across the panoramic picture. Clearly, it was important (if we were to benefit from using the NPM) that we understood the purpose of each colored filter in terms of understanding the construct it aimed to elucidate.

A key point is that although the NPM offers a pre-described set of constructs about the processes of implementation work, the study-specific meaning of the NPM constructs is not predetermined, and can only be determined by the specifics of each study setting—the health professionals involved, the nature of their everyday work, the technology being introduced, the immediate clinical context, and the wider organizational context in which implementation is taking place. Therefore, we had to take our knowledge and understanding of data from our emergent themes, and of the intended conceptual meaning of the NPM constructs, and attempt to determine the ways in which they did (or did not) relate to each other within the panorama. This involved a process of deconstructing the constructs of the NPM and reconstructing them with reference to our specific setting (which is true of any analytic concept used in the analysis process).

For this, we had to suspend our understanding and conceptualizations of the themes as they were formulated in the initial thematic analysis. Elements of any one of our original 12 themes could, for example, have resonated across one or more constructs of the NPM as important slants (Layder, 1998) or nuances became apparent as a result of using the NPM. For instance, data about “time and money” became nuanced under three distinct NPM constructs:

- Interpreted consultations were considered long because of the perceived challenging nature of communication in the triad—relevant to the construct interactional workability;
- Time pressures associated with fitting these lengthened consultations into the smooth running of routine surgery was much more of an organizational-level issue—relevant to the construct contextual integration; and
- Time constraints on general practitioners that prohibited the development of skills to work well with interpreters—relevant to the construct skill set workability.

We also realized that we were not always fully confident whether we were “getting” the intended conceptual meaning of the NPM constructs, and whether we were

applying that meaning correctly in our specific study setting. Despite MacFarlane's experience with the Model, it was still demanding to apply it to a fresh set of data (her earlier experiences were in the area of e-health, not implementation of interpreted consultations). It was sometimes difficult to know exactly what CI was about in this specific setting, and how it differed from SSW, and so on. This was a concern for us because, arguably, if we misunderstood the intended conceptual meaning of the constructs, our analysis would not be congruent with the NPM, and this would reduce the benefits of using it in the first place. On reflection, two strategies enabled us in our process of deconstructing and reconstructing the NPM constructs and confirming the congruence of our analysis with the NPM, and these are outlined in the following section.

Strategy 1: Who's Who and What's What?

All qualitative coding processes involve intensive reading of data and the use of interrogating questions to facilitate analysis (Charmaz, 2003; Gibbs, 2007). For us, researcher dialogue about coding and coding decisions was central to the generation of interrogating questions. On reflection, and in the process of writing this article together, we can see that we developed a series of tacit and more vocalized agreements for our dialogues about coding: every question had a place in the dialogue; no question was too naïve to ask; there was no guarantee of an answer. Answers were discovered together as we proceeded. Through this dialogue, we experienced the development of learning about the NPM. For example, O'Reilly-de Brún, drawing on her experience of the anthropological ethnographic and participant observation tradition (Geertz, 1973; Hammersley & Atkinson, 1995; Spradley, 1979; Van Maanen, 1988; Walcott, 1995), raised the question, "Where in time and space is this happening?" This required MacFarlane, given her familiarity with the Model, to try to concretize and articulate an answer; in the absence of an answer, our process was to continue exploring the question together.

The outcome was that we developed a series of key interrogating questions: what work is involved, who are the key actors in the work, where in space is the work happening, and when in time does the work occur in relation to the clinical encounter? To answer the interrogating questions, we had to specify, for each of the four constructs, each and every potential component of this particular complex intervention. In this way, answering the interrogating questions enhanced our understanding of the NPM filters and the constructs they elucidated. This process encouraged us to be very precise about our developing understanding of the NPM constructs in our specific setting, and our use of language to describe the

various components, actors, and settings inherent in this particular complex intervention.

This process also enabled us to draw important distinctions between constructs in terms of activities, actors, locations, and time; this was valuable, because there can be quite a lot of overlap between these issues in the implementation of complex interventions. Table 3 shows how we interrogated our data across the constructs, and from this determined working definitions that related to our specific setting. Answering these questions and drawing distinctions between the four constructs increased our knowledge and confidence about the constructs and the boundaries between them. This facilitated the deconstruction of the NPM and reconstruction for our specific setting, ultimately expediting data coding during the mapping phase.

Strategy 2: The Process and Flow of Implementation

The concept of normalization focuses on conditions of use and the everyday behavior of those involved in the implementation work. It is a flexible concept, emphasizing the creative work that clinicians and service users engage in to configure new practices into routine ones (May, 2006). The NPM was developed to sensitize users to the dynamic, social processes of implementation work, with an emphasis on the flow of implementation work.

Our second strategy was to develop a further set of interrogating questions for each construct and build up a sense of the dynamic ways in which the dimensions of each construct interrelated. This ensured that we remained faithful to the flow of implementation work as intended by the NPM (see Figure 1 for an example of questions asked about contextual integration). In this way, we developed our understanding of the meaning of each construct and its dimensions. We repeated the same kind of exercise to explore the relationships between the four constructs, revealing the nature of the relationship and interactions between dimensions and constructs. This was a very effective strategy for bringing the Model "alive" in some way, really capturing the dynamic and emergent nature of implementation processes.

The Added Value of Using the NPM

The orienting concepts offered by the NPM were applicable to the vast majority of our data. After the mapping phase, we noted that all data pertaining to implementation work had been coded on to one of the four NPM constructs. The only data that did not map onto the NPM were in Theme 8, about "expectations of the Irish health services."

Table 3. Interrogating Questions Used to Determine Working Definitions of the NPM

Questions	Contextual Integration	Skill Set Workability	Relational Integration	Interactional Workability
What work is involved?	The general practice as the organization into which interpreted consultations are introduced Formal or informal policies that influence capacity and will of the organization to: Respond to service user with limited English proficiency (LEP) at reception desk/in consulting room; Make contact with the interpreting company providing the pilot service; Identify a mutually suitable, workable appointment time	The mechanisms by which knowledge and skills about the implementation of interpreted consultations are distributed across the workforce Training as a key mechanism for implementation work to develop skills to: Identify the need for interpretation; Make decisions about the appropriate mode of interpretation (on-site or telephonic); Train for effective participation in an interpreted consultation	The relationships between general practitioner; administrative staff, service users, and company interpreters Quality of relationships is: Revealed through actors' assessments of confidence and trust in each other's knowledge and expertise to achieve the work; which is Influenced by a range of criteria used by actors to assess each others' knowledge and expertise	The work of the immediate clinical encounter as an interpreted consultation Focus is on: The "feel" of being in an interpreted consultation (e.g., communication flows, clarity about roles and responsibilities); The ability to get the work done (e.g., history taking, diagnosis, treatment and management, referral, plus development of rapport between general practitioner and service user; Preferences for modes of interpretation (on-site or telephonic)
Who are the key actors in the work?	Service user with LEP General practitioners General practitioner administrative staff Administrative staff from interpreting company	General practitioners General practitioner administrative staff Interpreters The Irish College of General Practitioners	Service user with LEP General practitioners General practitioner administrative staff Interpreters	Service user with LEP General practitioners Interpreters
Where in space is the work happening?	Reception area Consulting rooms	Reception area Consulting rooms	Reception area Consulting rooms	Consulting rooms
When in time does the work occur in relation to the clinical encounter?	Before During After	Before During	Before During After	During

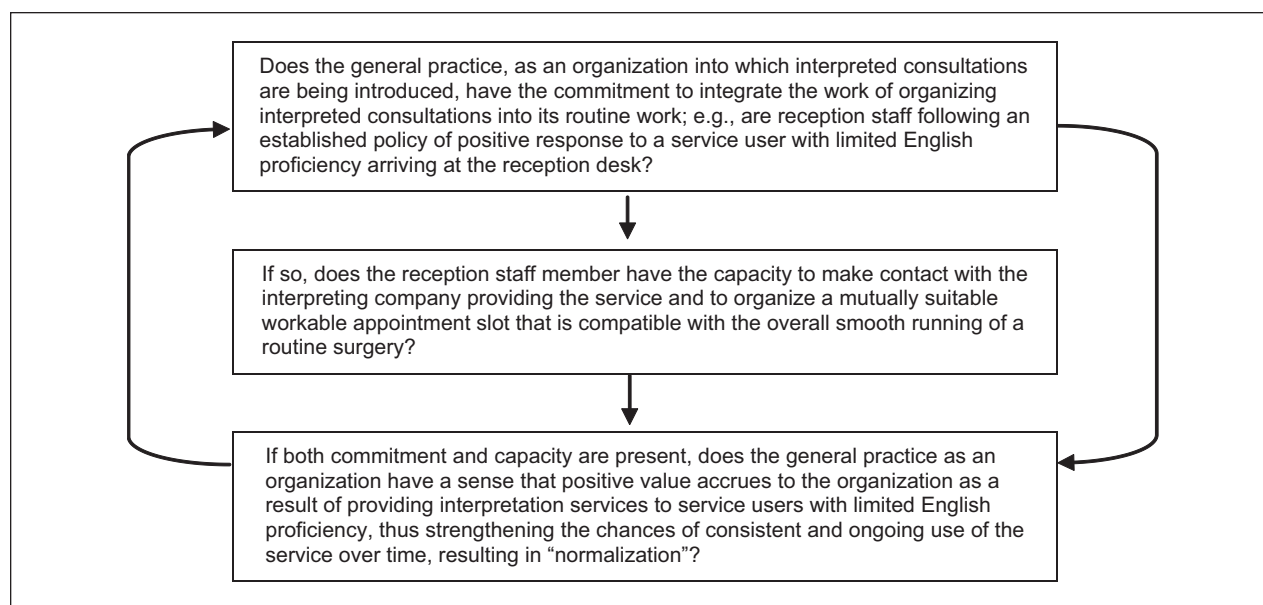


Figure 1. The "flow" of implementation work: Contextual integration

The added value of the NPM analysis was that our understanding of individual themes became more insightful and advanced, and our interpretation of themes was enhanced. For example, there was rich description in the thematic analysis about the influences of the theme “time and money” on the use of the interpreting service, enabling us to identify a list of barriers or levers to uptake that were directly related to this theme: (a) the organization of interpreted consultations was time consuming; (b) the interpreted consultations themselves were longer than standard ones; and (c) practitioners were concerned about the negative financial implications of time delays and longer consultations. In relation to this theme, the NPM encouraged us to ask, is time pressure, in and of itself, the problem—or is it shaped by the willingness of a general practice as an organization to allocate resources to incorporate longer interpreted consultations into its everyday practice (contextual integration)? Also, we saw a connection between accounts of interpreted consultations perceived as long in terms of time, and the accounts of them as longer-feeling consultations. Some general practitioners felt out of control in the triadic interaction, and were uncertain about appropriate role behaviors; for them, the consultations dragged even if the actual length of the consultation was not very different from a consultation without an interpreter.

The point is that the NPM offered us an organizing principle to “think with our data” in a very specific way; i.e., to think about the layered meanings of individual themes in relation to prescribed macro- and micro-level issues, and the mediating relations between these, and thus to be more alert to the complex processes of implementation and conditions for normalization. In a sense, it provided an element of the researcher analyst role in that it offered an outline of analytic and theoretical categories to advance the descriptive analysis (Gibbs, 2007).

Furthermore, as our working definitions for each construct developed along with our understanding of the relationships within and between constructs, we wanted to synthesize our emerging findings and begin to draw conclusions from our analysis. Based on our acquired knowledge and understanding of the NPM generally, and the data specific to our setting, we developed a conceptual map of “ideal” conditions for normalization, and plotted against this the emerging details of what was actually happening (“real” conditions for normalization; see Table 4 for an analysis based on selected components of contextual integration). This proved very effective, allowing us to see, for instance, that the details of real contextual integration were quite negative, because general practitioners were unaware of relevant national policies (e.g., HSE, 2008), and few general practices had local (informal) policies that bespoke a commitment to a positive response to service users with limited English proficiency. Furthermore, general practitioners reported that

they were already stretched to capacity in terms of providing basic services, limiting the time they had available for the work of integrating interpreted consultations into their routine work.

We repeated this exercise for each of the four constructs, building our understanding of what each filter highlighted in our specific setting and the overall panoramic picture that our data set represented. From this, we could make an assessment of the likelihood of normalization per construct, and draw a conclusion about the overall likelihood of normalization of interpreted consultations in routine general practice. This elucidates a key point: our use of the NPM constituted thick description (Geertz, 1973), and also conceptual density (Strauss & Corbin, 1998). This is an important and desired outcome for researchers using social theory in qualitative health research (Layder, 1998). Furthermore, the conclusions derived from our analysis have potential predictive utility because they could be used to generate hypotheses for future qualitative or quantitative work (see May, 2006).

Discussion

The field of qualitative health research is dominated by highly inductive conceptual frameworks (Bryant & Charmaz, 2007; Miles & Huberman, 1994), and much of our own previous research experience reflects this. A recent experience of negotiating and developing the use of a theory-driven conceptual framework, using the NPM (May, 2006), prompted us to write this reflexive account of our experience with attention to challenges and benefits along the way. We acknowledge that the NPM was not the only theory-driven conceptual framework we could have used. In the course of our initial thematic analysis, we did consider other possible orienting concepts, for instance Foucault’s notions of power in the medical clinic (Foucault, 1973). Certainly, this would have provided a more in-depth analysis of some specific features of the implementation processes, such as power differentials between stakeholders or power dynamics within interpreted consultations. However, on balance, the NPM was more closely related to our research question because it offered a collection of orienting concepts that, together, provided scope for a whole system analysis of implementation work in health care settings. Also, we know that the NPM analysis does not preclude further and complementary analysis using alternative theories in the future.

Below, to conclude our reflexive account, we discuss a series of important questions about the use of the NPM in our study, and finally return to the broader question of using tight research designs (Miles & Huberman, 1994) in qualitative health research. First, we have described that the process and work of using the NPM was complex, so we ask, what analytic strategies worked for us

Table 4. Ideal vs. Real Conditions for Normalization of Interpreted Consultations in General Practice

Ideal Conditions	Real Conditions
National and local policies exist and match each other.	General practitioners are unaware of relevant national policies, and there are few examples of local policies that bespeak a commitment to service users with limited English proficiency.
The organization has the capacity to implement interpreted consultations and has appropriate and sufficient resources to do so.	General practices are stretched to capacity to provide basic services, and believe that they have very limited capacity for the implementation work.
Staff have knowledge about what is required to implement interpreted consultations into their routine work.	Staff have no training to guide implementation work.
Staff have adequate time to implement interpreted consultations into their routine work.	Staff have limited time for implementing interpreted consultations into their work.
The organization allocates resources to support the work.	General practices do not allocate resources to support the work; in fact, time pressures associated with implementation of interpreted consultations are perceived to cause financial losses.

Note. Assessment is based on selected components of contextual integration (CI): CI is very low, has significant and negative impact on implementation processes, and will inhibit normalization.

during this complex process, and why? Throughout this article, we have emphasized the benefit of using standard and systematic approaches to qualitative analysis; for example, iterative constant comparative methods and the use of interrogating questions for theory-driven coding. These analytic strategies are equally relevant to all qualitative research designs because they are the tools for enhancing insight, interpretation, and rigor in qualitative research. Our description of the way we used these strategies to operationalize theory might be of benefit to other qualitative researchers seeking to use the NPM and other theory-driven conceptual frameworks.

Second, was there an added value in using the NPM? Given that the process of using the NPM during the analysis phase was challenging, and that we did not always feel entirely confident and comfortable, it is interesting to reflect on our motivation to keep going during this demanding phase. After all, we had completed an initial thematic analysis and could, at any time, have written the research report for our funders from that work. We argue that through our dialogues about coding and coding decisions, we sensed that we could further advance our understanding of the implementation of interpreted consultations in general practice settings and more thoroughly satisfy our researcher curiosity. Through the mapping process we started to see that there was added value to using the NPM. It was elucidating detail, complexity, and meaning beyond the initial thematic analysis. We could step back from the data, examine them in their entirety against the framework of the NPM, and consider relationships within and between constructs. Through the analysis process, we shifted from seeing the NPM as a provisional set of

orienting concepts to a more definite set because, as the research progressed, there was no evidence that the NPM constructs were receding in importance: they were growing in importance and relevance (Layder, 1998). We had stronger insights and felt able to draw conceptually driven, authoritative conclusions about our data that were relevant to policy and practice.

Finally, thinking about our two-stage approach to analysis, would we do thematic analysis and the NPM mapping again, or would we conduct an NPM analysis only? For us, on this occasion, the decision to conduct a two-stage analysis was made because we had concerns about applying the NPM as a predetermined conceptual framework to the full study for methodological reasons (e.g., concerns about forcing data into predefined categories) and practical reasons (i.e., time constraints). As we have described, the flexibility to apply the NPM to the research stage by stage (see May et al., 2010) was beneficial; it gave us space to consider the nature and timing of our use of the NPM. Following Saldana (2009, pp. 50-51), what transpired was that we could see our criteria for conducting theory-driven coding (mapping the thematic analysis onto the NPM) were very strong: the NPM was related to our research question, the data were lending themselves strongly to the NPM constructs, and thinking through our data via the NPM lens was leading toward an enhanced analytic pathway. We argue that, on this occasion, the layering of analytical approaches was a positive feature for our work for the methodological and pragmatic reasons outlined above.

In conclusion, we have experienced the challenges and benefits of working with a tight research design. Thinking

about the decision to embark on such work, there are many factors to take into account, and these are summed up with great veracity in this quote from Miles and Huberman (1994, p. 17):

How prestructured should a qualitative research design be? Enough to reach the ground, as Abraham Lincoln said when asked about the proper length of a man's legs. It depends on the time available, how much already is known about the phenomena under study, the instruments already available and the analysis that will be made.

Thinking about the processes involved, we strongly endorse Layder's (1998) view that orienting concepts need to be critically interrogated throughout the research process, so that their use is resonant with the iterative processes inherent in qualitative research. This will enhance the interpretation of data constituting thick description (Geertz, 1973), and add conceptual density (Strauss & Corbin, 1998) to the analysis, as well as the development of conclusions and recommendations arising from the work in hand. In this way, concerns about forcing data into predetermined categories (Layder) can be allayed, and the work of conceptual entrepreneurs (Bryant & Charmaz, 2007) can be tested and developed with—ideally—intellectual gain for qualitative health research.

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Notes

1. The term *complex intervention* refers to modified or new technologies, techniques, or organizational forms introduced by health care providers or policy makers as a means of improving the efficiency and clinical and cost effectiveness of health care and health service delivery.
2. At this time in the Republic of Ireland, there is no independent system for monitoring or evaluating interpreters' performance and ability.
3. One-to-one interviews facilitated the participation of general practitioners because appointments for interviews could be incorporated into their busy work schedules (e.g., interviews took place during lunch times and before, during, or after surgeries). Although it would have been difficult to convene focus groups of general practitioners, we found that focus groups were a feasible and efficient way of engaging with representatives of the interpreting community and the ethnic minority community.

References

- Alvesson, M., & Skoldberg, K. (2000). *Reflexive methodology: New vistas for qualitative research*. London: Sage.
- Bryant, A., & Charmaz, K. (2007). *The Sage handbook of grounded theory*. Los Angeles: SAGE.
- Campbell, M., Fitzpatrick, R., Haines, A., Kinmonth, A. L., Sandercock, P., Spiegelhalter, D., & Tyrer, P. (2000). Framework for design and evaluation of complex interventions to improve health. *British Medical Journal*, *321*, 694-696. doi:10.1136/bmj.321.7262.694
- Central Statistics Office. (2008). *Non-Irish nationals living in Ireland*. Dublin: Stationery Office. Retrieved from <http://www.cso.ie/census/documents/NON%20IRISH%20NATIONALS%20LIVING%20IN%20IRELAND.pdf>
- Charmaz, K. (2003). Grounded theory. In J. A. Smith (Ed.), *Qualitative psychology: A practical guide to research methods* (pp. 81-110). London: Sage.
- Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. London: Sage.
- Colón-Emeric, C. S., Plowman, D., Donald, B., Corazzini, K., Utley-Smith, Q., Ammarell, N., & Anderson, R. (2010). Regulation and mindful resident care in nursing homes. *Qualitative Health Research*, *20*, 1283-1294. doi:10.1177/1049732310369337
- Crowley, P. (2003). *General practice care in a multicultural society*. Dublin: Irish College of General Practitioners. Retrieved from http://www.icgp.ie/go/courses/archived_projects
- Dale, H. E., Polivka, B. J., Chaudry, R. V., & Simmonds, G. C. (2010). What young African American women want in a health care provider. *Qualitative Health Research*, *20*, 1484-1490. doi:10.1177/1049732310374043
- Elwyn, G., Legare, F., Edwards, A., van der Weijden, T., & May, C. (2008). Arduous implementation: Does the Normalisation Process Model explain why it is so difficult to embed decision support technologies for patients in

- routine clinical practice? *Implementation Science*, 3, 57. doi:10.1186/1748-5908-3-57
- Foucault, M. (1973). *The birth of the clinic: An archaeology of medical perception*. London: Tavistock.
- Gask, L., Rogers, A., Campbell, S., & Sheaff, R. (2008). Beyond the limits of clinical governance: The case of mental health in primary care. *BMC Health Services Research*, 8, 63. doi:10.1186/1472-6963-8-63
- Geertz, C. (1973). *The interpretation of cultures: Selected essays*. New York: Basic Books.
- Gergen, K. J., & Gergen, M. M. (1991). Toward reflexive methodologies. In F. Steier (Ed.), *Research and reflexivity* (pp. 76-95). London: Sage.
- Gibbs, G. (2007). *Analyzing qualitative data*. London: Sage.
- Glaser, B., & Strauss, A. (1967). *The discovery of grounded theory*. Chicago: Aldine.
- Greenhalgh, T., Voisey, C., & Robb, N. (2007). Interpreted consultations as 'business as usual'? An analysis of organizational routines in general practices. *Sociology of Health and Illness*, 29(6), 931-954. doi:10.1111/j.1467-9566.2007.01047.x
- Griffiths, F., Borkan, J., Byrne, D., Crabtree, B. F., Dowrick, C., Gunn, J., & Sturt, J. (2010). Developing evidence for how to tailor medical interventions for the individual patient. *Qualitative Health Research*, 20, 1629-1641. doi:10.1177/1049732310377453
- Guba, E. G., & Lincoln, Y. S. (1989). *Fourth generation evaluation*. Newbury Park, CA: Sage.
- Hammersley, M., & Atkinson, P. (1995). *Ethnography: Principles in practice*. London: Routledge.
- Health Service Executive. (2008). *National intercultural health strategy 2007-2012*. Author.
- Hutchinson, S., Marsiglio, W., & Cohan, M. (2002). Interviewing young men about sex and procreation: Methodological issues. *Qualitative Health Research*, 12, 42-60. doi:10.1177/1049732302012001004
- Jensen, R. E., & Bute, J. L. (2010). Fertility-related perceptions and behaviors among low-income women: Injunctive norms, sanctions, and the assumption of choice. *Qualitative Health Research*, 20, 1573-1584. doi:10.1177/1049732310375619
- Kane, E., & O'Reilly-de Brún, M. (2001). *Doing your own research*. New York: Marion Boyars.
- Krueger, R. A., & Casey, M. A. (2000). *Focus groups: A practical guide for applied research* (3rd ed.). Thousand Oaks, CA: Sage.
- Kvale, S. (1996). *Qualitative inquiry*. Thousand Oaks, CA: Sage.
- Layder, D. (1998). *Sociological practice: Linking theory and social research*. London: Sage.
- MacFarlane, A., Murphy, A. W., & Clerkin, P. (2006). Telemedicine services in the Republic of Ireland: An evolving policy context. *Health Policy*, 76(3), 245-258. doi:10.1016/j.healthpol.2005.06.006
- MacFarlane, A., Singleton, C., & Green, E. (2009). Language barriers in health and social care consultations in the community: A comparative study of responses in Ireland and England. *Health Policy*, 92(2), 203-210. doi:10.1016/j.healthpol.2009.03.014
- Mair, F. S., Hiscock, J., & Beaton, S. C. (2008). Understanding factors that inhibit or promote the utilization of tele-care in chronic lung disease. *Chronic Illness*, 4(2), 110-117. doi:10.1177/1742395308092482
- May, C. (2006). A rational model for assessing and evaluating complex interventions in health care. *BMC Health Services Research*, 6, 86. doi:10.1186/1472-6963-6-86
- May, C., & Finch, T. (2009). Implementation, embedding, and integration: An outline of normalization process theory. *Sociology*, 43, 535-554. doi:10.1177/0038038509103208
- May, C., Finch, T., Mair, F., Ballini, L., Dowrick, C., Eccles, M., & Heaven, B. (2007). Understanding the implementation of complex interventions in health care: The normalization process model. *BMC Health Services Research*, 7, 148. doi:10.1186/1472-6963-7-148
- May, C., Mair, F. S., Dowrick, C., & Finch, T. (2007). Process evaluation of complex interventions in primary care: Understanding trials using the Normalization Process Model. *BMC Family Practice*, 8, 42. doi:10.1186/1471-2296-8-42
- May, C. R., Mair, F., Finch, T., MacFarlane, A., Dowrick, C., Treweek, S., & Montori, V. (2009). Building an interdisciplinary theory of implementation, embedding and integration: The development of normalisation process theory. *Implementation Science*, 4, 29. doi:10.1186/1748-5908-4-29
- May, C., Murray, E., Finch, T., Mair, F., Treweek, S., Ballini, L., & Rapley, T. (2010). *Normalization process theory on-line users' manual and toolkit*. Retrieved from <http://www.normalizationprocess.org>
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Thousand Oaks, CA: Sage.
- Morrow, K. M., Rosen, R. R., Salomon, L., Woodsong, C., Severy, L., Fava, J. L., . . . Barroso, C. (2011). Using integrated mixed methods to develop behavioral measures of factors associated with microbicide acceptability. *Qualitative Health Research*, 21, 987-999. doi:10.1177/1049732311404245
- Moustakas, C. (1994). *Phenomenological research methods*. Thousand Oaks, CA: Sage.
- O'Reilly-de Brún, M., & de Brún, T. (2010). The use of participatory learning & action (PLA) research in intercultural health: Some examples and some questions. *Translocations: Migration and Social Change*, 6, 1. Retrieved from http://www.translocations.ie/volume6_issue1.html
- O'Reilly-de Brún, M., Delaney, S., Gilligan, A. L., & Bailey, N. (2002). *Hear our voices . . . meet our needs—Women and health*. Dublin: National Women's Council of Ireland.
- Patton, M. (1990). *Qualitative evaluation and research methods*. London: Sage.
- Pelto, P. J., & Pelto, G. H. (1970). *Anthropological research*. Cambridge, MA: Cambridge University Press.
- Ponic, P., & Frisby, W. (2010). Unpacking assumptions about inclusion in community-based health promotion: Perspectives

- of women living in poverty. *Qualitative Health Research*, 20, 1519-1531. doi:10.1177/1049732310374303
- Saldana, J. (2009). *The coding manual for qualitative researchers*. London: Sage.
- Sawyer, A. M., Deatrick, J. A., Kuna, S. T., & Weaver, T. E. (2010). Differences in perceptions of the diagnosis and treatment of obstructive sleep apnea and continuous positive airway pressure therapy among adherers and nonadherers. *Qualitative Health Research*, 20, 873-892. doi:10.1177/1049732310365502
- Shamos, S., Hartwig, K. A., & Zindela, N. (2009). Men's and women's experiences with HIV and stigma in Swaziland. *Qualitative Health Research*, 19, 1678-1689. doi:10.1177/1049732309353910
- Silverman, D. (2006). *Interpreting qualitative data: Methods for analysing talk, text and interaction*. London: Sage.
- Spradley, J. P. (1979). *The ethnographic interview*. New York: Holt, Rinehart & Winston.
- Strauss, A., & Corbin, J. (1998). Grounded theory methodology: An overview. In N. K. Denzin, & Y. S. Lincoln (Eds.), *Strategies of qualitative inquiry* (pp. 158-183). Thousand Oaks, CA: Sage.
- Thorne, S. (2011). Toward methodological emancipation in applied health research. *Qualitative Health Research*, 21, 443-453. doi:10.1177/1049732310392595
- Van Maanen, J. (1988). *Tales of the field: On writing ethnography*. Chicago: University of Chicago Press.
- Walcott, H. F. (1995). *The art of fieldwork*. Walnut Creek, CA: AltaMira Press.
- Wuest, J., & Hodgins, M. J. (2011). Reflections on methodological approaches and conceptual contributions in a program of caregiving research: Development and testing of Wuest's Theory of Family Caregiving. *Qualitative Health Research*, 21, 151-161. doi:10.1177/1049732310385010

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