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The Embodiment of Discovery: An Adapted Framework for Qualitative Analysis of Lived Experiences

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Keywords

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We reflect on our process of working with an adapted framework as an effective strategy for analyzing and interpreting the results of our qualitative study on the lived experiences of insulin pump trainers. Interpretative Phenomenological Analysis (IPA) was applied as the overarching research methodology and was encapsulated into a framework adapted from Bonello and Meehan (2019) and from Chong (2019). We describe this framework as the "embodiment of discovery" to posit the researcher's tangible experience of discovering the meaning of data that also brought transparency to the researcher's process for data analysis and interpretation. We present challenges the doctoral student researcher experienced working with the framework through three phases and various steps performed during the analysis. We recommend the framework may assist novice researchers as a tool for wayfinding and scoping the structure of data analysis and interpretation. We conclude that novice researchers should not fear finding their "embodiment of discovery" in adapting creative or alternate methods for qualitative analysis.

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Introduction

Novice researchers face many challenges in performing qualitative data analysis for the first time. One challenge they may face is discerning choices for the "best-fit" or appropriate application of qualitative analysis methods for their study. Once a selection is made, they may feel compelled to follow exact analytical methods or processes as prescribed (van Manen, 2017b) and avoid "straying off-course" from the prescribed method. Belotto (2018) noted novice researchers look for a clear path to take and consult how-to manual-like details from published qualitative studies and texts, and they do so also to emulate best practices in conducting research. In learning to make informed decisions for data analysis, novice researchers discern the affordances, benefits, and limitations of prescribed methods. Their regard for following exact prescribed methods may also dissuade them from considering creative or alternative data analysis solutions.

In a doctoral study (Hernandez, 2019) that describes the essence of the experience of insulin pump trainers when training patients new to insulin pumps, Interpretative Phenomenological Analysis (IPA) was chosen as a strategy to investigate the phenomena and to derive personal meaning of what trainers describe as their lived experiences (Hernandez et

al., 2019; Hernandez & Dringus, 2020). The focus was to discover the lived experiences and shared impressions of insulin pump trainers during their training sessions with first-time users. Their experiences and impressions were recorded and analyzed to uncover the phenomena associated with usability challenges that new users of insulin pumps face when learning to use a device. Trainers were interviewed to discover the very nature of their experiences and to hear their voices describe their own pivotal moments when training is successfully complete and insulin pump therapy comes alive.

The first author, Helen, recognized early in her process as a novice researcher, that she needed to plan a course of action for data analysis. As she began to define emergent themes, she sensed what van Manen (2016, p. xvii) described as "the elusiveness of the phenomena of lived experiences." Initially the route for discovering themes that carved from the stories and perspectives told by insulin pump trainers seemed elusive to her. She contemplated the importance of adapting to "structure rather than multiplicity of evidence" (Bonello & Meehan, 2019, p. 492). From that stance, she recognized that the search for emergent themes and patterns was both a creative process and a mystery to her. She learned how to find meaning of the lived experiences of trainers by adapting and merging various analytic solutions that provided structure in focusing on themes. In taking an adaptive approach that we refer to as "the embodiment of discovery," thematic analysis and abstraction of data became less tedious, and she was able to recognize and re-represent the motivators that prompted participants to take certain steps in their training experiences. From this approach, Helen found assurances that data analysis was no longer a mystery or just a prescribed practice, but rather analysis was a creative and tangible process that would help her tune in to, understand, and relate the experiences of the participants.

Based on the explications by Smith, Flowers, and Larkin (2012) and Smith and Osborn (2015), Snyder and Dringus (2019) summarize the essence of IPA as a blend of "phenomenology (understanding of the experience), hermeneutics (interpretation of the experience), and idiography (attention to detail/particulars)" (p. 1). The IPA approach was used in our study of insulin pump trainers as a technique to perform a "detailed exploration" of the personal meaning (Smith & Osborn, 2015, p. 25) that trainers attach to their lived experiences. IPA is "committed to the examination of how people make sense of their…experiences" (Smith et al., 2012, p. 1). During the process of sense-making during interviews with insulin pump trainers, Helen found that strictly adhering to a procedural scheme can be a stumbling block and potentially prevent the free flow of creativity by the researcher:

> So, the problem is that some researchers are so consumed by the idea or promise of a *method* (such as a procedural scheme or program for doing *interpretive* [sic] *phenomenological analysis*) that will yield important qualitative understandings and insights that they don't allow themselves to recognize an insight when they stumble over it in a *non-methodical moment.* (van Manen, 2017b, p. 820)

Smith et al. (2012) have similar assertions that support van Manen's statement. They posit there is no single method for working with data, and that IPA is not intended as a stand-alone solution. Instead, they characterize the method as containing a set of common processes to allow sense-making of the experiences of others. In this regard, we assert that there is an "embodiment of discovery" that is derived from the researcher's experience of discovering the meaning of data that is manifested by the transparency of the researcher's tangible process for data analysis and interpretation. Through our experiences with working with qualitative data, we assert the researcher is on a quest for an embodiment of discovery

(Hernandez & Dringus, 2020); the quest signifies an all-encompassing, or at the least, an expansive approach to analysis and interpretation. Based on this insight, an analytical framework approach was adapted from Bonello and Meehan (2019, Table 1, p. 486) and from Chong (2019) to conduct the data analysis of the experiences of insulin pump trainers. The adapted framework was deemed suitable to structure the analysis and to guide a deeper level of interpretation after initial coding. IPA was encapsulated into this framework which helped with a description of common processes and allowed the interpretation of data from the particular perspective (Smith et al., 2012) of insulin pump trainers.

We present the adapted framework approach (i.e., the *Embodiment of Discovery*) that represents a strategy and creative process used to merge solutions. We describe how the framework approach provided the researchers with the building blocks for the study methodology and how it facilitated a meaningful in-depth analysis and interpretation of lived experiences. We reflect on challenges the doctoral researcher (Helen) experienced in her quest for molding various methods and ways she dealt with the "paradoxes that marked the route" (van Manen, 2016, p. xvii) during her journey of capturing the essences of the experiences of our participants. To establish context for applying the framework, we provide a brief overview of the focus of the study and background on data collection, data organization, and quality control. We demonstrate the process of working with the framework through three phases and various steps performed during the analysis. We briefly discuss the resulting super-ordinate themes and the interpretation of meaning derived from the data. We reflect on the framework as an effective strategy for analyzing and interpreting the results of our qualitative study on the experiences of insulin pump trainers.

IPA and Analytical Solutions

Qualitative research methodology is "contextually-bound" (Chong, 2019, p. 299). Interpretative Phenomenological Analysis (IPA) was chosen as a core qualitative research method because it "focuses on understanding, in detail, a person's lived experience" (Snyder & Dringus, 2019, p. 109). The examination of the trainers' experiences when training first-time users on insulin pump therapy served to capture what participants are "seeing, remembering and experiencing" (Hernandez, 2019; Smith et al., 2012, p. 13). Real-world studies are useful to determine the "effectiveness and safety of an intervention in clinical practice" (Blonde et al., 2019, p. 1). IPA was deemed a good fit to serve the goal to understand process and to derive meaning within a specific context (Smith et al., 2012).

IPA is a blend of phenomenology (understanding of the experience), hermeneutics (interpretation of the experience), and idiography (attention to detail/particulars; Snyder & Dringus, 2019). Smith et al. (2012) note that IPA as an analytic tool is not intended as the one-size-fits-all solution. For this study, IPA was applied and complemented with an analytical framework that was created and adapted from Chong (2019), and from Bonello and Meehan (2019) to serve as a roadmap or "how-to" in this study context. Chong (2019) recommends an analytical guiding frame (AGF) and an overall guiding frame (OGF) to facilitate "complicated analytic processes" (p. 297). The AGF contains "specific analytical strategies" (Chong, 2019, p. 301) to take raw data and perform the analysis. The OGF represents the problem, goals, research question(s) and the researcher's ontology to establish "critical and creative connections" (p. 302) when faced with unexpected findings that may deter from the research objective.

Bonello and Meehan (2019) present their study methodology as a roadmap to create "deeper levels of creative and reflexive analysis" (p. 483) while creating transparency during the analytical process. They cast their framework as a matrix where they show how each analytical process links to a strategic objective, while providing a practical task list for each

objective (p. 486). Their framework is organized in stages and it guides the researcher from initial coding to the final step of the analysis that precedes the reporting of the findings.

Both analytical approaches (Bonello & Meehan, 2019; Chong, 2019) have the characteristics that would produce an audit trail and enable tracking, while "grounded in the raw data" (Bonello & Meehan, 2019, p. 483). In the adapted analytical framework, Helen used the elements of Chong's (2019) OGF approach to stay on course for the analysis of the data based on the stated research objective, the research questions, and the chosen ontology of a safety-critical design in patient self-care situations (Schaeffer et al., 2015). Chong's outline of the AGF provides an illustration how to form explicit steps to perform the analysis. The framework matrix defined by Bonello and Meehan (2019) was used as a structure to create the adapted analytical framework. IPA methods were encapsulated into this framework to provide a roadmap that started by selecting appropriate coding methods to discover emergent themes, to perform the abstraction to develop patterns, and to triangulate the emergent themes with the patterns to establish super-ordinate themes.

Focus of the Study

To assess usability of a device or software interface, evaluators apply a set of "recognized usability principles (the "heuristics")" during examination to judge compliance with these principles (Nielsen, 1992, p. 373). Heuristic evaluation of insulin pumps usability from a user perspective has been conducted and reported in multiple studies (Bergman, 2012; Campos et al., 2014; Miller et al., 2017; Waldenmaier et al., 2018). The research gap or problem identified consisted of a lack of insight into the experiences of insulin pump trainers during learning sessions with first-time users. The literature review revealed that there was a lack of research on understanding of the dynamics that trainers experience and observe with patients during first-time user interaction with this type of safety critical device in a health care environment.

The goal of the study was to discover the lived experiences and shared impressions of insulin pump trainers during their training sessions with first-time users. The overarching research question, the grand tour question, guided the discovery of understanding the experiences of the insulin pump trainers: "What is the essence of the experiences of insulin pump trainers while they teach first-time users how to use the device?"

The following sub-questions highlighted specific areas of interest how insulin pump trainers perceive their interaction with first-time users during the instructional process:

> When training first-time users on the management of the insulin pump, what type of problems do trainers observe that can have a potential impact on safe use?
>
> Which of these problems observed relate to the interface characteristics of the device?
>
> What type of usability errors are encountered when trainers teach first-time users how to program their insulin pump?
>
> What can trainers tell us about the learnability and ease of use of the insulin pump programming interface?

Six participants represented a purposeful and homogeneous sample (Smith et al., 2012) of medical professionals who were insulin pump certified (e.g., Medtronic; Tandem

Diabetes Care) or may have been trained through a national society such as the National Certification Board for Diabetes Educators. The participants were experienced trainers; they had trained anywhere between 50 and 1000 patients on a new insulin pump. Their professional designations included Registered Nurse, Registered Dietician, Certified Diabetes Educator, Clinical Manager, and Clinical Business Manager.

Data Collection, Organization, and Quality Control

Approval was granted from the Nova Southeastern University's Institutional Review Board (IRB). Informed consent was obtained from participants. Confidentiality was assured by observing the IRB-approved protocol for the doctoral study.

Data collection was derived through conducting semi-structured interviews with the participants. Interviews were conducted by telephone, recorded via audio, and transcribed. The interview sessions were designed with open-ended interview questions to elicit the trainers' perceptions about safety issues and about ease of use and learnability of the insulin pump device during the training of new users.

Data analysis commenced with organization of coding, memoing, and thematic analysis of the transcribed interview data. Following the steps of IPA methodology as recommended by Smith et al. (2012) and Smith and Osborn (2015); each individual narrative was organized and later analyzed by immersion into the data, making preliminary notes, and adding descriptive, linguistic, and conceptual comments.

Quality control was applied by thorough pretesting, by putting participants at ease and by using journaling to track progress and to help deflect ideas and assumptions (Ahern, 1999; Ortlipp, 2008). The transcribed interviews were analyzed following a process of thorough coding, analysis, organization, triangulation, and interpretation of the data described below. Data saturation was implied by conducting "sufficient in-depth engagement with each individual case" (Smith & Osborn, 2015, p. 29) and when no new findings were anticipated (Mason, 2010).

Helen kept a reflexive journal to include the "researcher's private, personal thoughts, ideas, and queries regarding her research observations and interviews" (Phillippi & Lauderdale, 2018, p. 381) and to alert her to "possible areas of potential role conflict" (Ahern, 1999, p. 409). Keeping a reflexive journal enables a researcher to promote internal validity of the results, to uphold transparency in the process, and to justify the decision-making process throughout the study (Ahern, 1999; Ortlipp, 2008). While a researcher is supposed to set aside personal biases during data collection, the researcher's personal thoughts and experiences are desirable during the analysis phase. At a point during the analysis while engaging in the quest for patterns, Helen's professional experience with insulin pump devices and their medical application was a valuable starting point that helped conceive new ideas and interpret "concealed meaning" (Morse & Richards, 2002, p. 148).

In conducting the study, standard desktop word processing, spreadsheet, and flowchart software (Microsoft Word; Excel; Visio) along with computer-assisted qualitative data analysis software (CAQDAS) were used as tools for data organization, analysis, abstraction, and presentation. The quintessence of qualitative interpretative strategy is the recursive process used by researchers to solidify results. Many researchers enjoy great success in harnessing the power of CAQDAS to organize, manage and analyze content of data sets. It can serve well to automate tasks aimed at finding commonalities among the data sets and provides a clear audit trail for tracking of the data (Bonello & Meehan, 2019). NVivo 12 was chosen as a platform to perform a deeper analysis of the data.

Analytical Process of the Framework for the Embodiment of Discovery

Overview

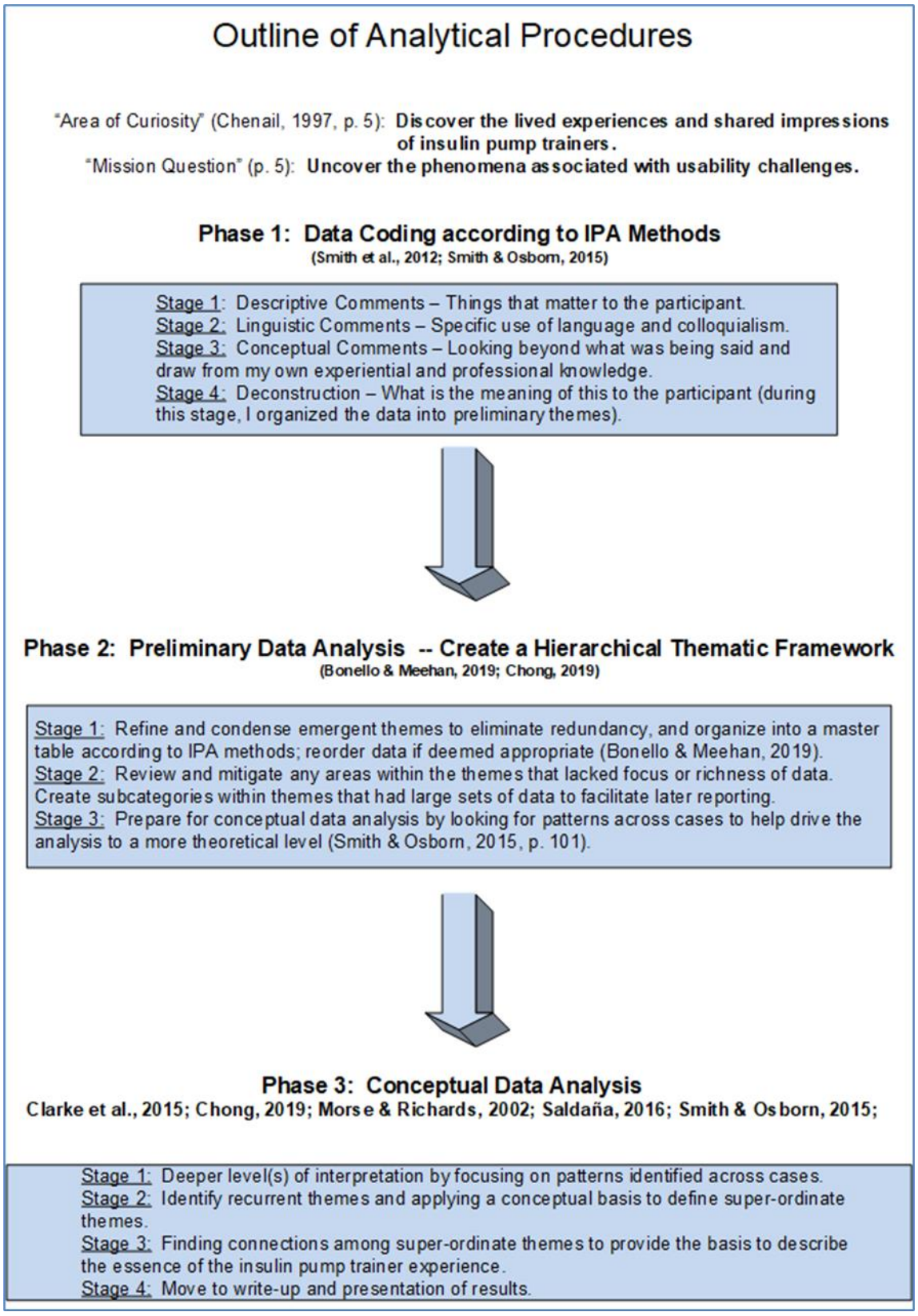
The adapted analytical framework (Figure 1 Outline of Analytical Procedures) guided the steps to be completed from the raw data to the final definition of five super-ordinate themes and the formulation of responses to the research questions. Using the ontology of a safety critical design and its role in patient self-care situations as discussed by Schaeffer et al. (2015) tables were created in Microsoft Word to organize the data into preliminary themes.

Nine emergent themes were discovered by creating a hierarchical thematic framework representing verbalizations of the participants, which was consolidated in an Excel spreadsheet titled *Emergent Themes Master List* (see Table 1 presented later in the paper). This step was followed by the process of abstraction to establish conceptual links for each theme, resulting in development of the patterns. They were consolidated in an Excel spreadsheet titled *Patterns and their Definitions* (see Table 2 presented later in the paper). Helen used this spreadsheet to engage in a deeper level of interpretation to discover what was beneath the surface of these patterns, through which the five super-ordinate themes emerged. See Table 3 *Super-ordinate Theme Development* presented later in the paper.

To arrive at a deeper level of interpretation after initial coding, the adapted analytical framework is comprised of variations of step-by-step methods adapted from Bonello and Meehan (2019, Table 1, p. 486) and from Chong (2019). This bottom-up approach facilitated the identification of common threads that would lead to a thematic analysis of the data and the formulation of emergent themes (DeSantis & Ugarizza, 2000). The bottom-up approach also helped clarify the "systematic and visible stages to the analysis process" and allowed for the triangulation between the emergent themes and the conceptual underpinnings (Sechelski & Onwuegbuzie, 2019, p. 796). To stay on course, Helen used the recommendations by Chenail (1997) to "keep things plumb in research" (p. 2) by defining a mission question and an area of curiosity (see Figure 1) while reading and coding the transcribed interviews.

The three phases of the analytical guiding framework representing the steps performed during the analysis are presented in Figure 1 *Outline of Analytical Procedures.* The phases are: (1) Data Coding According to IPA Methods; (2) Preliminary Data Analysis, Create a Hierarchical Thematic Framework; and (3) Conceptual Data Analysis. Each phase will be re-presented in consecutive parts to demonstrate the steps that were followed for data analysis. Findings are presented in applicable phases to bring context to the outcome of the steps performed.

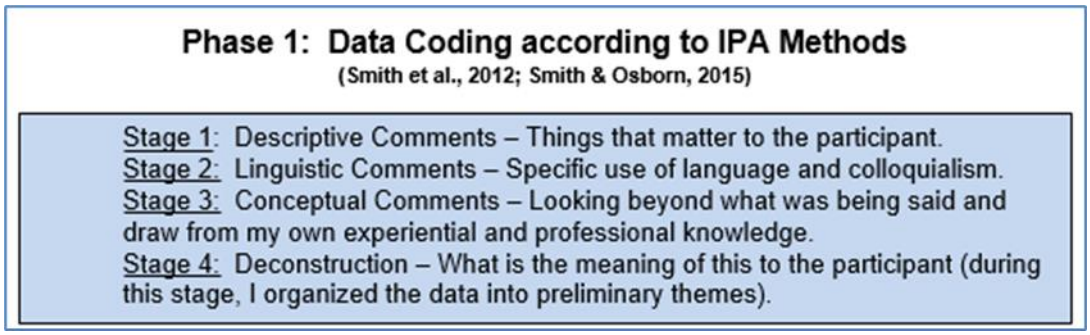
Figure 1
Outline of Analytical Procedures: Adapted Analytical Framework



Phase 1: Data Coding According to IPA Methods

Phase 1 of the adapted analytical framework consisted of an iterative approach of reading and rereading the transcribed interviews while applying codes to the documents. (The original audio recordings were reviewed also for quality control check points during certain phases and stages of analysis.) Based on the *Coding Manual for Qualitative Researchers* (Saldaña, 2016), the four stages depicted in Figure 2 represent four consecutive methods of coding that were adapted and used to analyze the interview data. Each transcribed document was marked up in Microsoft Word, using different color schemes (see Figure 3). During Phase 1, the analysis progressed from descriptive coding to deconstruction.

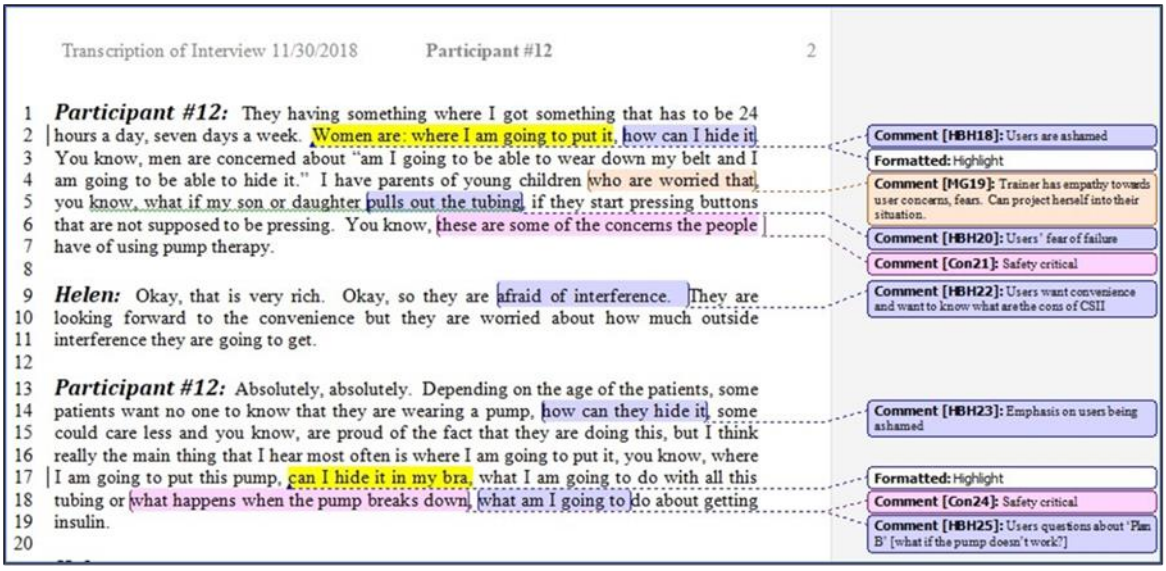
Figure 2
Phase 1 of the Analysis



Phase 1, Stage 1: Where to Start Coding

Memoing was conducted during Stage 1 (see Figure 3, items highlighted in purple) according to the recommendations by Smith et al. (2012) by focusing on things "which matter to the participant" (p. 84). The result was a descriptive and preliminary data set; during this stage, Helen was becoming familiar with the text. The focus was kept on trying to obtain information about "what is going on here" (Saldaña, 2016, p. 102).

Figure 3
Memoing and Coding in Word



Phase 1, Stage 2: Linguistic Comments

The capture of linguistic comments (Smith et al., 2012) during this stage aimed to record statements that stood out as a specific use of language (e.g., colloquialism), because language use could reveal a distinct perspective of meaning expressed by the participant. These comments were reported "in vivo" (Saldaña, 2016, p. 77); they originated from the participants' expressions and were used verbatim during the presentation of the results. See Figure 3 for an example of linguistic comments, highlighted in yellow.

Phase 1, Stage 3: Conceptual Comments

Stage 3 consisted of the task to label conceptual comments (Smith et al., 2012); this recommendation was followed to draw on the researchers' "own experiential and/or professional knowledge" (p. 89). See Figure 3 for an example, items highlighted in brown.

Phase 1, Stage 4: Deconstruction and The Creative Process

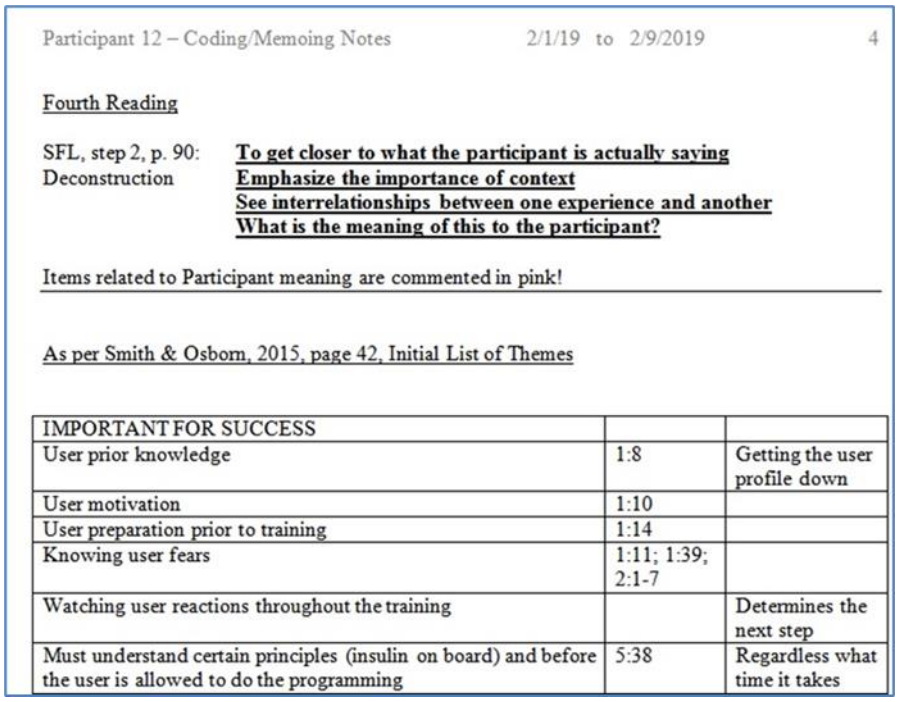
For the process of deconstruction during this stage, Helen consulted structured recommendations and comprehensive examples from the literature. To prepare for the creation of a hierarchical thematic framework as outlined in phase 2, Helen engaged in the creative process to enable her to extract relevant themes from the text that are also uniquely relevant to the context of the study. Understanding the mechanics of adapting a creative process, however, posed an initial challenge for Helen as a novice researcher during the writing of her thesis. To discover themes, Snyder and Dringus (2019) recommend identifying items that are "unique to each participant" as well as for themes that are "shared by all participants" (p. 112). Basic organizational skills are required, and Helen learned not to hesitate to "take more charge of the data" (p. 113) to narrow down the themes.

Helen followed advice from DeSantis and Ugarizza (2000) to focus on "smaller units of behavior, observations or verbal expressions" (p. 359). This process would help to locate "intellectual and affective content that depended on intrinsic form" and to label these in a "more general and abstract" form (p. 361). DeSantis and Ugarizza's advice for researchers—when looking for themes—is to observe comments or statements that stand out and then identify common threads. As a result, the transcribed documents were marked up with conceptual comments that Helen based on the ontology by Schaeffer et al. (2015), because they reflected her experience of working at a diabetes clinic. See Figure 3 for an example, conceptual comments were marked up in pink.

The task of "deconstruction" during Stage 4 was to "get closer to what the participant is actually saying," and the emphasis was put on the "importance of context" to capture interrelationships between experiences (Smith et al., 2012, p. 90). According to Saldaña (2016) described in the book section *Examples of Analytical Memos* (pp. 45-53), information about passages was collected, to be used for later reflection during the conceptual data analysis. For each of the six participants, these notes were assembled in a Microsoft Word document labelled *Participant Coding File* (see Figure 4), where they were organized into preliminary themes.

Each preliminary theme became an Excel worksheet in a new document titled *Initial Themes Table* workbook and could easily be cross-referenced to the original transcription and to a given participant (see Figure 5). To enable the flow of information for later documentation during the presentation and discussion of the results, some worksheets in the Initial Themes Table workbook containing rich data sets were further subdivided into sections.

Figure 4
Example of Annotations in a Participant Coding File



Participant 12 – Coding/Memoing Notes 2/1/19 to 2/9/2019 4

Fourth Reading

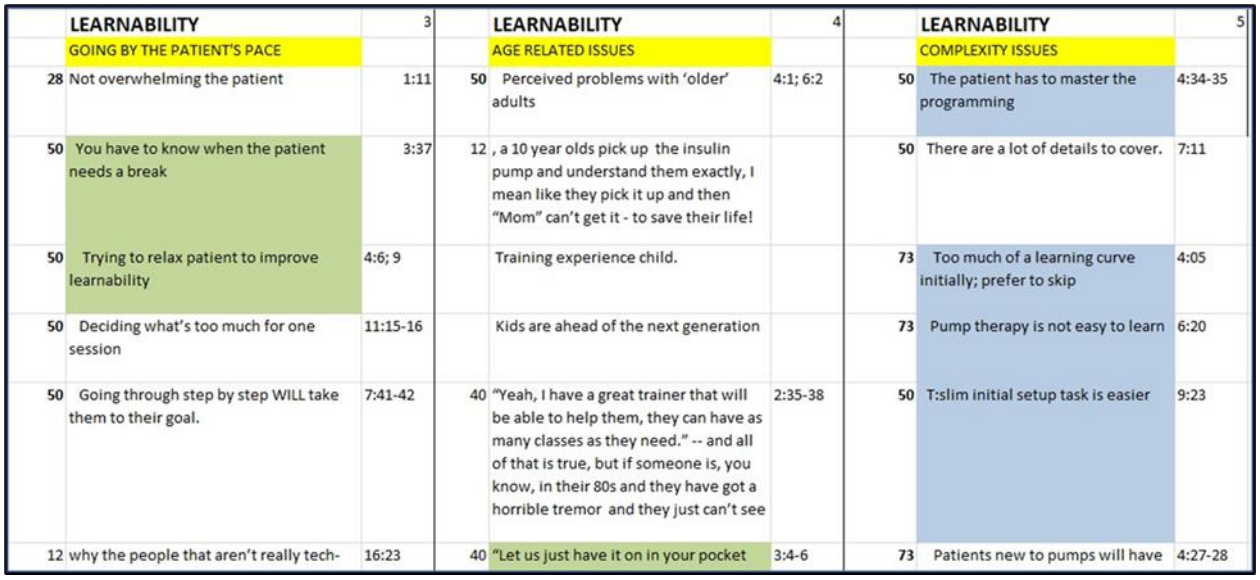
SFL, step 2, p. 90: Deconstruction
To get closer to what the participant is actually saying
Emphasize the importance of context
See interrelationships between one experience and another
What is the meaning of this to the participant?

Items related to Participant meaning are commented in pink!

As per Smith & Osborn, 2015, page 42, Initial List of Themes

IMPORTANT FOR SUCCESS		
User prior knowledge	1:8	Getting the user profile down
User motivation	1:10	
User preparation prior to training	1:14	
Knowing user fears	1:11; 1:39; 2:1-7	
Watching user reactions throughout the training		Determines the next step
Must understand certain principles (insulin on board) and before the user is allowed to do the programming	5:38	Regardless what time it takes

Figure 5
Excel Spreadsheet Titled Initial Themes Table Workbook



	LEARNABILITY	3		LEARNABILITY	4		LEARNABILITY	5
	GOING BY THE PATIENT'S PACE			AGE RELATED ISSUES			COMPLEXITY ISSUES	
28	Not overwhelming the patient	1:11	50	Perceived problems with 'older' adults	4:1; 6:2	50	The patient has to master the programming	4:34-35
50	You have to know when the patient needs a break	3:37	12	, a 10 year olds pick up the insulin pump and understand them exactly, I mean like they pick it up and then "Mom" can't get it - to save their life!		50	There are a lot of details to cover.	7:11
50	Trying to relax patient to improve learnability	4:6; 9		Training experience child.		73	Too much of a learning curve initially; prefer to skip	4:05
50	Deciding what's too much for one session	11:15-16		Kids are ahead of the next generation		73	Pump therapy is not easy to learn	6:20
50	Going through step by step WILL take them to their goal.	7:41-42	40	"Yeah, I have a great trainer that will be able to help them, they can have as many classes as they need." -- and all of that is true, but if someone is, you know, in their 80s and they have got a horrible tremor and they just can't see	2:35-38	50	T:slim initial setup task is easier	9:23
12	why the people that aren't really tech-	16:23	40	"Let us just have it on in your pocket	3:4-6	73	Patients new to pumps will have	4:27-28

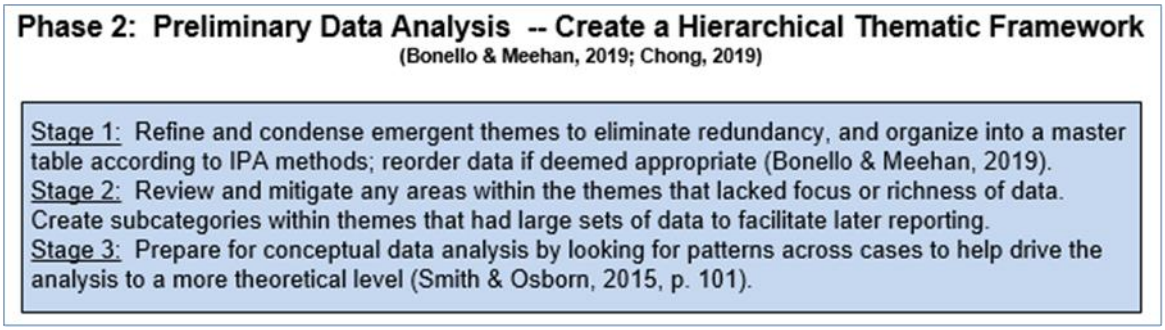
Note. Section of *Emergent Theme* tab titled *Learnability*. Here, participant IDs are represented in the left column, followed by quoted comments by participants, or by researchers' comments, the right column points to page and line numbers in the transcribed interview document.

Phase 2: Creating a Hierarchical Thematic Framework

The following objectives were pending to be addressed during Phase 2. First, Helen created a master table to refine and condense emergent themes (Bonello & Meehan, 2019). Then, a conceptual analysis was performed to look for patterns and drive the analysis to "a

more theoretical level" (Smith et al., 2012, p. 101). However, these tasks were not performed in strict logical order and required adjustment by introducing an additional step labelled Stage 2 (see Figure 6) which was inserted when it was discovered that not enough data was captured about usability problems.

Figure 6
Phase 2 of the Analytical Process



Phase 2, Stage 1: Emergent Themes

During this stage, the preliminary list of 17 emergent themes was organized and condensed to avoid redundancy. According to Smith and Osborn (2015), clustering of themes is recommended to reduce the number of emergent themes and make them more manageable. To stay on course with the study methodology, Helen created an analysis checklist (see Figure 7) based on the steps outlined in the adapted analytical framework (Figure 1). Using the checklist helped her stay focused through the complex process of trying to make "critically reflexive connections" (Chong, 2019).

Figure 7
Analysis Checklist: To Help Stay on Course

Next Steps = ANALYSIS CHECKLIST	
--Condensing these themes	reduce the number of themes that I have now
'(Smith & Osborn, 2015, p. 47, box 3.8)	to an acceptable size
(Smith, Flowers & Larkin, 2012, p. 101, Box 5.6)	
Merge additonal notes from Coded Transcriptions	These are items I tagged in FIRST and THIRD Reading
and place into Newly Developed Main Themes	as long as they are not redundant.
Put Linguistic comments into a separate category for now, for us	These are items I tagged in SECOND Reading for each transcript.
Missing some critical themes or very little material	Rereading the transcriptions to address the deficiencies
(UI Design, User Problems, User Feedback)	Need to do 73 and 28, then I'm done!
--Would like to ID more about the interaction between	Working on this as of 3/13/19
trainer and trainee	Need to do 73 and 28, then I'm done!
Finding Patterns across cases to help drive the analysis to a more theoretical level!	

Phase 2, Stage 2: Review of Themes

Helen soon discovered gaps in the data analysis, when she realized that several themes were underrepresented (e.g., less than five participant direct quotes attributed to a

given theme). To fill the gaps about usability challenges, Helen conducted another concentrated reading of each transcribed interview. The aim was to identify explicit comments that reflected participant statements regarding usability, user errors, user interface design, user feedback, and user problems. For this occasion, the process of "structural coding" (Saldaña, 2016, p. 98) was conducted that would later help to align findings with the stated research questions.

Structural coding involves coding a larger segment of data to facilitate an in-depth analysis of a topic (Saldaña, 2016). As an example, the following situation is presented. Returning to research sub-question 3, where it was stated: "What type of usability errors are encountered when trainers teach first-time users how to program their insulin pump?" Several segments of text in the transcribed interview for Participant #47 were explored based on this question:

> On the [Company A] pump, everything you are doing, it makes you confirm it and then you have to save it. There are multiple steps. But you just have to be careful and not be in a hurry to be hitting *Confirm* and moving through it...but I do see where people come in and they feel like their pump is not working right and we look at it, and their A.M. and P.M. are off.

The structural code applied in the text of the interview transcription for this participant was labelled *Usability Errors* and appended with the comment: "Trainer needs to make sure the user double checks the input before hitting the Confirm button on the device."

During the process of addressing the gaps in the data analysis, an additional theme emerged and was labelled *Interaction*. The purpose of this theme was to align the data coding and analysis process with the stated goal of the study, to obtain knowledge from insulin pump trainers who are situated at the convergence of the interaction between the user and their efforts to perform tasks that take place in a real-life setting.

As a result of the structural coding activity, a satisfactory amount of additional data was added into the *Initial Themes Table* workbook (see Figure 5); some of the comments and data pieces discovered in this process had a good fit for several themes. In addition, themes that contained large data sets were divided into sub-categories to make them more manageable and to enable a multi-faceted description for the presentation of results.

Using the literature to obtain a factual definition of themes, Helen succeeded in classifying and organizing the entire data set by grouping participant statements according to "key themes, concepts and emergent categories" (Bonello & Meehan, 2019, p. 484). The result was the *Emergent Themes Master List* (Table 1), composed of a combination of the original themes and a new theme labelled *Interaction*.

Table 1
Emergent Themes Master List

Final	Emergent Themes	Participant Referencing					
		#12	#28	#40	#47	#50	#73
1	Interaction	✓		✓	✓	✓	
2	Learnability	✓	✓	✓	✓	✓	✓
3	Reactions	✓	✓	✓	✓	✓	✓
4	Sense of Responsibility	✓	✓	✓	✓	✓	✓
5	Safety Critical	✓	✓	✓	✓	✓	✓
6	Success Criteria	✓	✓	✓	✓	✓	✓

7	Training Strategy	✓	✓	✓	✓	✓	✓
8	Usability	✓	✓	✓	✓	✓	
9	User Issues	✓	✓	✓	✓	✓	✓
	Prevalence of Themes in %	89	89	100	100	100	78

Phase 2, Stage 3: Abstraction: Going Deeper

The third stage of Phase 2 consisted of looking for patterns by performing abstraction of the data (Bonello & Meehan, 2019). Smith and Osborn (2015) cite abstraction as the "basic form of identifying patterns between emergent themes" (p. 96). For guidance how to extract patterns from the data, Bonello and Meehan (2019) discuss how to access the creative process in their section titled *Mapping and Interpretation*. The researcher is advised to work "deeply and sensitively" (p. 492) with the data, because patterns are generally located at a much deeper level than a participant's spoken words. They posit that abstraction can be achieved by observing a process of "extrapolating deeper meaning" from the data and record analytical memos (Table 1, p. 486). "Data interrogation" (p. 494) was employed to map and link patterns to the literary sources providing definition of patterns.

Peck and Mummery (2018) suggest that researchers focus on the "inherently expressive qualities" (p. 392) of language, when participants share the experience from their perspective. They note that abstraction is accomplished when we "understand ourselves and others," after defining the "structures that condition the inner qualities of the human experience" (p. 392).

The development of patterns is the result of a researcher's activity to create mental images by being very attentive to what emerged from the data (Morse & Richards, 2002). The task is to identify the psychological structures of the human experience and to draw it out by language to eliminate the separation between world and experience (Peck & Mummery, 2018).

To provide such meaningful and affective content, Helen's professional healthcare expertise was deemed appropriate to guide the creative process and look for patterns that included these criteria. According to Ahern (1999), a researcher's subjective awareness of the context can help identify issues, because it enables them to "be alert to themes in common with the broader human experience" (p. 408). From the overall narrative of the participants statements, an unpreparedness of patients appeared as a major thread. The participants often expressed their sentiments blatantly, using colorful words to describe their reactions that can be summed up as such: "I so hate it when they [the patients] are not prepared!"

Maintaining Focus. Logic would follow for this "unpreparedness" to have an impact on the training process in some form; however, Helen soon recognized that this concept was too obvious, still superficial. Instead, to define the embodiment of her discovery, Helen needed to look beyond the superficial to recognize the structure and direct her attention "inward towards the perception of these concepts" (Smith et al., 2012, p. 13). Helen made the decision, therefore, not to engage in analyzing the reasons for the patients' unpreparedness. Bonello and Meehan (2019) recommend, quoting the philosophical underpinnings from their own sources, to search for "structure rather than multiplicity of evidence" (p. 492).

Helen surmised the realization was that a focus on the patients' unpreparedness would not be reflecting the participants' experiences, because it is not customary during the insulin pump training process to hold patients accountable by asking: "Now, now, why didn't you prepare!?" In addition, no evidence was found about that aspect (e.g., trainer is holding patients accountable for their unpreparedness) in the transcribed interviews. Focus was placed

on the textual level of the data linked to a conceptual level to provide an understanding of the text (Bonello & Meehan, 2019). Helen found the practical issue at hand was that—during the training sessions—the patient needs to be brought up to speed on the diabetes management part *and* be brought up to speed on the technical know-how "no matter what," or else insulin pump therapy is bound to fail.

Bonello and Meehan's (2019, p. 494) figure provides an example of the perceptions of participants and the importance of creating several possible realities to "safeguard against drawing generalizations" (p. 494). This required a return to the observations conveyed by the participants about the unpreparedness of the patients they train. A re-review ensued of the rich data obtained during the interviews, when the participants verbalized the patients' unpreparedness and commented how they coped with it. The reactions of the participants were examined, followed by an analysis of the motivators that prompted the participants to take a certain course during the training process.

Helen followed Bonello and Meehan's (2019) example and reorganized participant comments into abstract terms. Once the concealed meanings were revealed as patterns and defined by their psychological underpinnings, they were assigned to sections of participant or researcher comments and linked to a specific data piece. Several striking patterns were defined initially, such as *Learning Curve* and *Unrealistic Expectations*, and others were added when ideas were invoked by rereading the data.

Patterns and Their Definitions. This part of the analysis was performed using NVivo 12. The comments had been categorized—using the *Initial Themes Table* workbook—into terms to show how participants cope with unexpected situations during training. The patterns primarily represent the coping mechanisms of the participants. In NVivo, they were labelled as nodes.

To present the significance of the patterns, a literature review was performed to locate appropriate definitions within the fields of information technology acceptance theory, Human-Computer Interaction (HCI), human factors engineering, medical device technology, psychology, philosophy, and ethics in healthcare. Literature references were collected and entered in the description field under *Node Properties,* to be used to provide definitions of the terms. The result is presented in table form, showing the pattern and its definition within the appropriate scientific or philosophical discipline (see Table 2).

Table 2
Patterns and Their Definitions

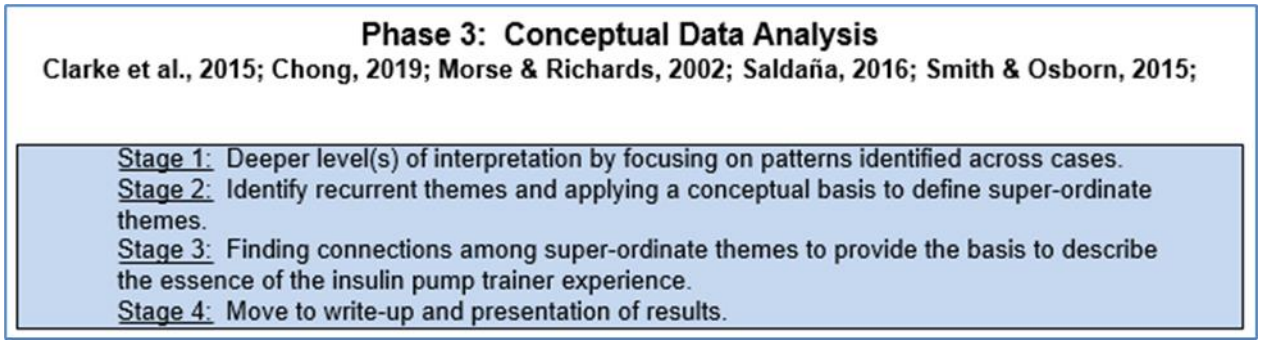
Pattern	Definition
Behavior Modification	During operant conditioning to reinforce target behavior, stimuli are applied to control the desired behavior (Delprato & Midgley, 1992).
Compassion	Compassion is the "sensitivity to suffering in self and others with a commitment to try to alleviate and prevent it" (Fotaki, 2015, p. 199). Compassion is number 1 on the list of ethical requirements for a health practitioner, according to the American Medical Association (Dougherty & Purtilo, 1995).
Complexity	The condition of an "innovation perceived as relatively difficult to understand and use" (Venkatesh et al., 2003, p. 430).
Expectations	Patients have unrealistic expectations about the effectiveness of their treatment, which is common in health care and complicates the process of treatment (Woolf, 2012).
Honesty	Honesty in health care delivery is the underlying foundation of caring

	(Borhani et al., 2010). To be direct and straightforward has been found to be more effective in health care than the practice of "sugar-coating" (Quirk et al., 2008).
Learning Curve	The effort a user needs to expend to learn a system (Davis, 1989). We learn faster when a task is "focused, familiar and consistent" (Johnson, 2014, p. 159). A "continuous series of improved user performance" (Nielsen, 1993, p. 29)
Learning Outcome	The user masters the system to achieve "efficiency of use" (Nielsen, 1993, p. 30) and acquires a "high level of productivity" (p. 26).
Reassurance	"Indicating that there is no cause for anxiety" (Teasdale, 1989, p. 444). It is a "purposeful attempt to restore confidence" (p. 447).
Satisfaction	Goal commitment and expectancy in the individual leads to positive performance (Locke & Latham, 1990). Individuals who are goal-committed exhibit "ability, adaptability, creativity and capacity to perform in the situational context they are in" (p. 241). Goal success leads to satisfaction.
Trust-building	Interaction between health care providers and patients that is perceived by the patients as "honest, collaborative, and supportive" reinforces trust (Becker & Roblin, 2008, p. 801). Health care providers must exhibit behaviors that build this trust to be effective in-patient care.
UI Problem	Problems associated with the interface of a device (Sauro & Lewis, 2012).
Voice for Improvement	Trainers' suggestions for improvements should be heard, because they can lead to "better patient outcomes and better system performance" (Batalden & Davidoff, 2007, p. 2). Change making should be encouraged in "all parts of the system" and that includes the training environment (p. 2).

Phase 3: Conceptual Data Analysis

The objectives identified in the final Phase 3 (Figure 8) were to engage in yet deeper levels of interpretation by focusing on patterns identified across cases, to identify and consolidate themes by examining their conceptual basis and to define super-ordinate themes, to find connections among super-ordinate themes to capture the essence of the insulin pump trainers' experience, and to organize notes for presentation of results and discussion of the findings. NVivo 12 CAQDAS was used for Stage 1, 2 and 3 of Phase 3.

Figure 8
Phase 3: Conceptual Data Analysis



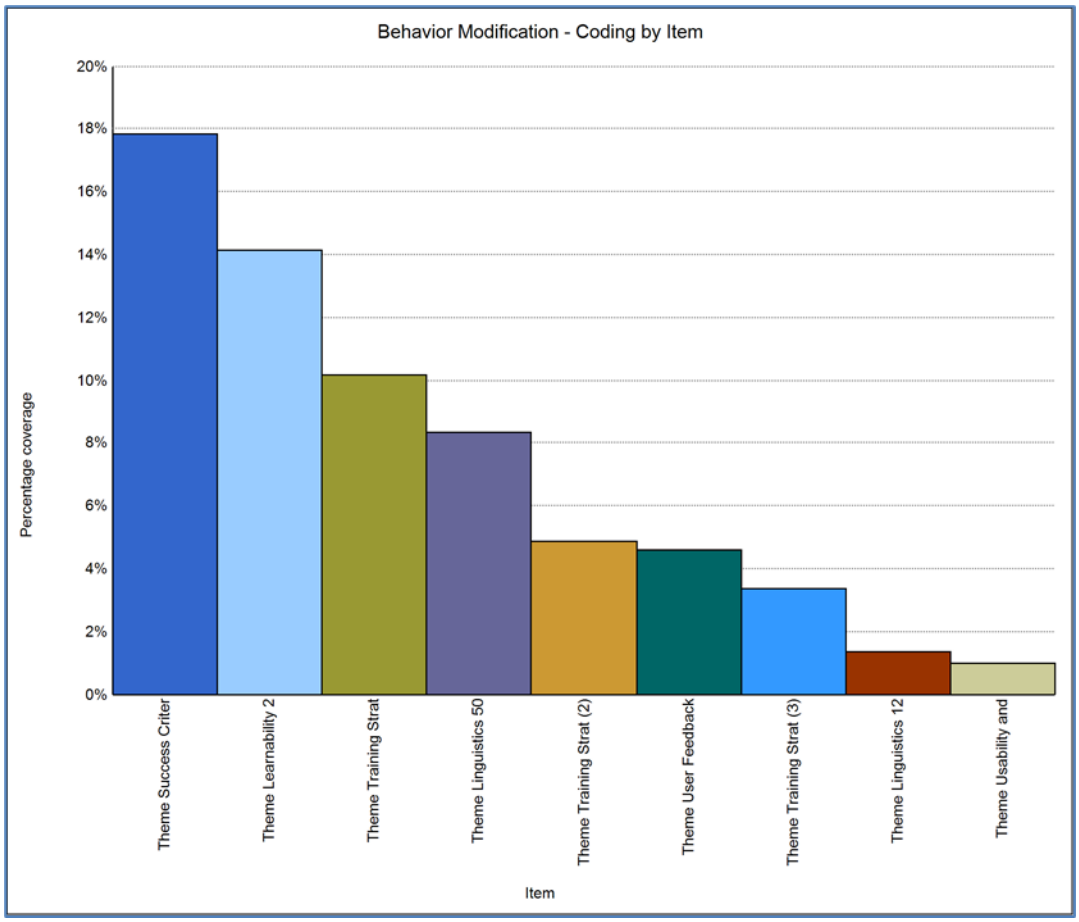
Phase 3, Stage 1: CAQDAS as a Tool for Abstraction

To complete the task of focusing on patterns across cases and to establish links between the emergent themes and the patterns, the *Visualize/Chart Node Coding* feature in NVivo (see Figure 9 for an example) was applied to inspect each pattern. Observations were made how the software projected multiple links to some or all the emergent themes previously defined in the master list of emergent themes (see Table 1).

For example, the abstract term "Reassurance" was applied to data that contained statements describing how the trainer was able to overcome fear and apprehension exhibited by a patient. This abstract pattern was shown in several emergent themes: Interaction; learnability; reactions; training strategy. The pattern "Reassurance" was defined as "indicating that there is no cause for anxiety" (Teasdale, 1989, p. 444); it is a "purposeful attempt to restore confidence" (p. 447). This process was repeated until a final list of 12 patterns was established (see Table 2) that could easily be traced back to any of the emergent themes by looking for statements and data pieces highlighted in distinct colors.

Figure 9

Example for Output Obtained Through Chart Node Coding Visualization Tool



Phase 3, Stage 2 and 3: Discovery of Super-Ordinate Themes and Their Connections

The objective during Phase 3 stated to conceptualize and finalize the super-ordinate themes during Stage 2 of the final analysis phase. Helen deemed it was appropriate to simultaneously carry out the activities stated for Stage 3, which were to emphasize the

connections among the super-ordinate themes and focus on the attempt to find the essence of the participants' experience.

Once the links between patterns and emergent themes had been discovered using the *Chart Node Coding* visualization tool in NVivo, they were recorded and organized in Excel table format and grouped into five super-ordinate themes (see Table 3). During this activity, Helen focused on what she learned from the process of insulin pump training of new users, as observed through the eyes of the trainers. When synthesizing the patterns, they were assigned to a higher order theme for each cluster of patterns (Bonello & Meehan, 2019). The result was an abstraction of five clusters to represent striking aspects of the trainers' experiences. A systematic review of the super-ordinate themes to provide labels provided a better fit with the conceptual basis of the patterns located. By selecting these labels, Helen attempted to facilitate a structural description of the insulin pump trainers' experiences and placed attention on ideas that were "strikingly apparent" in the text (Saldaña, 2016, p. 184).

Smith et al. (2012) describe in detail the thought process associated with the development of super-ordinate themes. Discovery of the links between patterns and emergent themes facilitated the task of grouping themes together and "develop a sense of what can be called a 'super-ordinate' theme" (p. 96). It was important to consider "polarization" which consisted of the activity of identifying "oppositional relationships between emergent themes" (p. 97). Such a relationship was discovered when recognizing that participants expressed dismay over unpreparedness, but it appeared to have little impact on their dedication to the task of teaching patients ow to self-administer insulin pump therapy. The listing of the final five super-ordinate themes in Table 3 is the result of the effort to cluster the emergent themes and present their connections.

Table 3
Super-Ordinate Theme Development – Themes 1 to 5

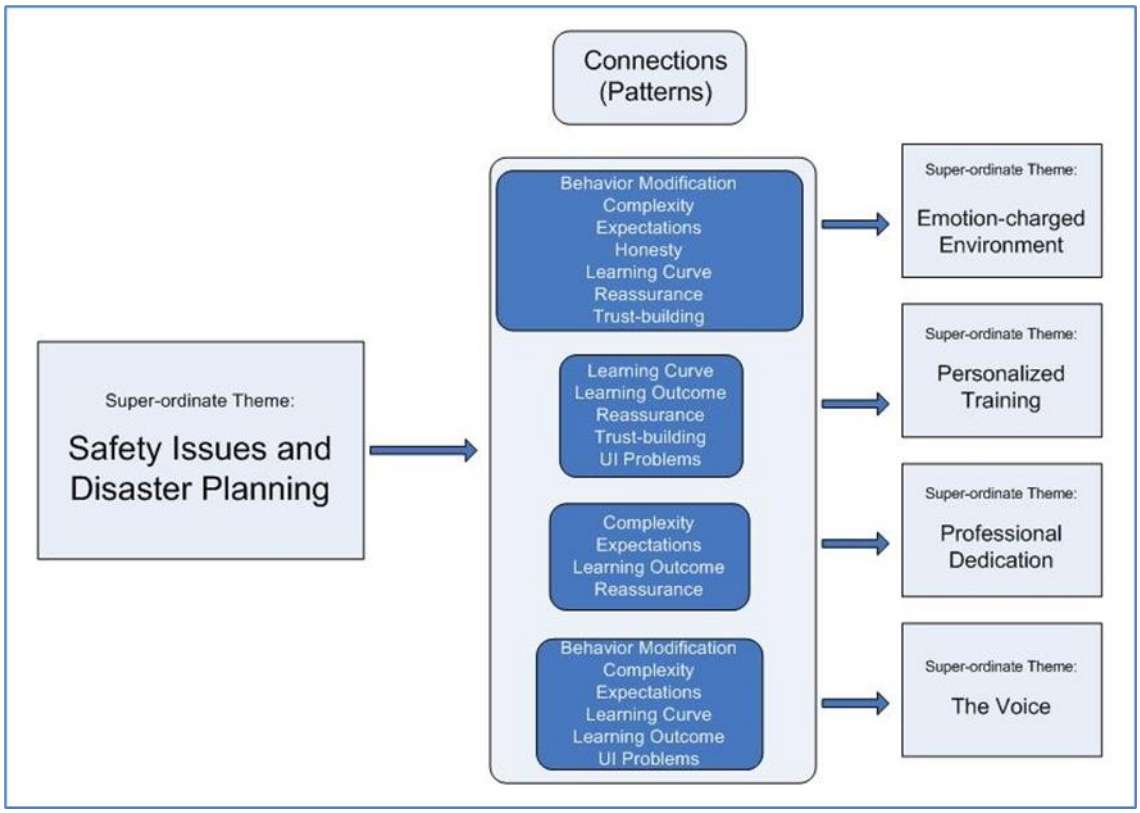
	Super-Ordinate Theme	Pattern	Emergent Theme
1	Emotion-Charged Environment The users suffer from a life-threatening, scary disease. The trainer has to put them at ease to build an environment where users can feel comfortable to be conducive to learning. In addition, patients have unrealistic expectations. Trainers emphasize that optimized insulin pump therapy may not be easier than injecting but is certainly better than!	Behavior Modification Compassion Complexity Expectations Honesty Learning Curve Reassurance Trust-Building	Interaction Learnability Reactions Safety Critical Sense of Responsibility Success Criteria Training Strategy Usability & UI Design User Feedback
2	Personalized Training There is no set pace to teach patients how to use the pump; it depends on their ability, which is something the trainer has to spot in advance. The pace and style of training depends on how prepared the users are and how much background they have about the self-management of diabetes.	Learning Curve Learning Outcome Reassurance Trust-building UI Problems	Interaction Learnability Reactions Safety Critical Sense of Responsibility Success Criteria Training Strategy Usability & UI Design User Feedback

3	Safety Issues and Disaster Planning Being able to troubleshoot is the key to safety in pump therapy; this is emphasized during training when users are taught problem-solving skills. The trainer's commitment to facilitate the learning process is bound by the reality that there is no room for failure.	Behavior Modification Complexity Expectations Honesty Learning Curve Learning Outcome Reassurance Trust-building UI Problems	Interaction Learnability Reactions Safety Critical Sense of Responsibility Success Criteria Training Strategy Usability & UI Design User Feedback
4	Professional Dedication Training a patient how to use an insulin pump is only one part of the overall task to start a diabetes patient on pump therapy. Trainers are motivated by their compassion for their patients and the positive feedback they receive from successful pump patients.	Compassion Complexity Expectations Learning Outcome Reassurance Satisfaction	Interaction Learnability Reactions Safety Critical Sense of Responsibility Success Criteria Training Strategy Usability & UI Design User Feedback
5	The Voice Trainers want to participate in health care quality improvement. They suggest improvements, or: Elimination of features that they do not consider practical for the course of treatment. The trainers object to new technology being pushed on patients that does not work as promised.	Behavior Modification Complexity Expectations Learning Curve Learning Outcome UI Problems Voice for Improvement	Learnability Reactions Safety Critical Sense of Responsibility Success Criteria Training Strategy Usability & UI Design

Phase 3, Stage 4: Moving to Write-up and Presentation of Results

The last stage of the conceptual analysis phase involved creating a framework for the interpretation of the super-ordinate themes and establishing a strategy to present the connections between them (Smith & Osborn, 2015). While engaging in the activity to define patterns that connect each super-ordinate theme to the emergent themes, the patterns that were shared among super-ordinate themes had become apparent during the process. The completion of the super-ordinate theme development enabled Helen to examine each phenomenon as it manifested itself and "emerges into the light," and to make sense of its connection to its "deeper latent form" (Smith et al., 2012, p. 24). The results were written and described in detail, using participant quotes to support the assumptions. For each super-ordinate theme, the connections were presented and illustrated with figures generated in Microsoft Visio (see Figure 10 for an example).

Figure 10
Theme Safety Issues and Disaster Planning and Its Connections to Other Themes



Following the suggestions by van Manen (2017a), and Peck and Mummery (2018), presentation of the five super-ordinate themes was accomplished by observing that they were "not the outcome, but tools for reflective writing" (van Manen, 2017a, p. 777) and that they were a "thematic representation, prioritizing common experience" (Peck & Mummery, 2018, p. 404). The conceptual underpinnings illustrate what purpose they serve by attempting to "sense the significance of the originary meaning of an experiential phenomenon" (van Manen, 2017a, p. 775).

The findings reported for each super-ordinate theme were supported by participant statements (see Table 4) and by describing the philosophical underpinnings for the connections among theme (see Figure 11). Following is an example of a portion of the section when presenting the findings on the super-ordinate theme *Emotion-charged Environment*:

Table 4
Participant Quotes for Theme Emotion-Charged Environment

Quote	Participant
Can I hide it in my bra?	#12
I do not want you to panic!	#28
...that scary piece of equipment...	#40
How much more button pushing is it?	#47
Take a deep breath!	#50
...so they do not freak out in those times!	#73

Figure 11
Philosophical Underpinning for the Pattern Labelled Reassurance

> Reassurance is [also] a pattern that connects several super-ordinate themes and characterizes a strategy used by trainers to deal with users' fears. Reassurance is a "purposeful attempt to restore confidence" (Teasdale, 1989, p. 447) through "indicating that there is no cause for anxiety" (p. 444), and it can be achieved by making a "deliberate intervention" (p. 445).

Discussion

For demonstration purposes, the following brief discussion of the five super-ordinate themes encapsulates a systematic review and interpretation of the lived experiences of the participants, addressing the *Grand Tour* question: "What is the essence of the experiences of insulin pump trainers while they teach first-time users how to use the device?" In sum, the results of the study revealed that the trainers' lived experiences were indeed shared among the six participants to a large degree.

Five super-ordinate themes were defined in a "master table of themes" (see Table 3) to organize emergent themes gleaned from the data of all participants (Smith et al., 2012, p. 101). In this table, Helen felt satisfied that she had captured the most essential themes that she wanted to convey from the participants' interviews, and that she had sufficiently defined, labelled, and ordered the themes.

Super-ordinate theme 1 focuses on the "Emotion-charged Environment" that characterizes the interaction between trainer and user (patient). During the training sessions and beyond, both the trainer and the user find themselves on a rollercoaster of varying emotions. Theme 1 is anchored on a participant quote that describes a user's initial impression of the insulin pump as a "scary piece of equipment" (Participant #40).

Super-ordinate theme 2 anchors on a participant statement who describes a successful training session as "where the magic happens" (Participant #40). This theme that is labelled "Personalized Training" summarizes the impressions of trainers about their users, along with the observations made by Helen from the participants' statements. This label becomes meaningful in the context of insulin pump training, when participants describe in detail what strategies they apply to overcome obstacles during the training process.

Super-ordinate theme 3 is labelled "Safety Issues and Disaster Planning" and focuses on the impression gained by Helen that a so-called Plan B is vital when—not if—the insulin pump fails. The notion of expectable failure is abundantly described in the literature surrounding safety issues of infusion pumps (Campos et al., 2014; Heinemann et al., 2015; Schaeffer et al., 2015). It is anchored in a statement by Participant #50 that an insulin pump "is not a toy."

Helen gained the distinct impression that trainers go above and beyond the duties outlined in their training contracts with insulin pump manufacturers. She felt that the rich data obtained reflecting the patterns "Compassion," "Reassurance," and "Trust-building" deserved a distinct super-ordinate theme 4 labelled "Professional Dedication." All participants recanted the extra steps they take and the additional tasks they perform which go far beyond the scope of conducting a pump training as outlined in the pump manufacturer's recommended curriculum. The statement made by Participant #28 that she called a patient "a whole week every hour on the hour" represents the extraordinary effort made by all participants to ensure that their patient is comfortable with the device operation on their own.

Super-ordinate theme 5 labelled "The Voice" is an accumulation of participant feedback that centers around research sub-question 4: "What can trainers tell us about the learnability and ease of use of the insulin pump programming interface?" Theme 5 became the catch-all for participant feedback to identify challenges with insulin pump devices in diabetes care. Trainers are situated at the convergence of the interaction between the users and their efforts to perform tasks on an insulin pump, and this interaction takes place in a real-life setting. Therefore, trainers have a unique "context awareness" (Batalden & Davidoff, 2007, p. 3). Helen considered their feedback valuable to stakeholders to ensure insulin pump therapy success. Super-ordinate theme 5 is anchored in the statement by Participant #50: "We want you to live a normal healthy life and live it safely!"

The Adapted Analytical Framework

The findings presented in the doctoral study served to "reflect phenomenologically on the living meaning" of the trainer's lived experience (van Manen, 2017b, p. 813). According to Smith et al. (2012), and Smith and Osborn (2015), IPA methodology is an appropriate tool to elucidate the participants' experience in a meaningful way. The process of analysis was conducted while a continuous review of literature on phenomenological methods was performed, prompting the researchers to refine steps while the analysis was ongoing. This activity helped to support creative thinking and establish the links between steps during the analysis. The researchers believe that the findings provide insightful and adequate information about the training of patients new to insulin pumps in a real-life environment.

The adapted analytical framework facilitated the construction and presentation of five interconnected super-ordinate themes which allowed the first researcher (Helen) to articulate the embodiment of discovery. The framework is a representation of Helen's journey to finding meaning and capturing the essences of the participants experiences. The framework is unique as Helen experienced the process as a continuous work in progress, as the examination of the data took twists and turns and needed to be refined to drive the analysis forward in-line with IPA methods.

The limitations of the framework are as follows. The framework was adapted from various resources including a case study analysis (Bonello & Meehan, 2019), Chong's (2019) paper on adapted frameworks, and tailored to fit phenomenological analysis with specific use of IPA methods. The adaptations were based on subjective choices that seemed to fit the particulars of the study. To facilitate the creation of themes, the researcher relied on the ontology by Schaeffer et al. (2015) to categorize the data during Stage 4 in Phase 1. When looking for patterns during Stage 3 in Phase 2, Helen used her professional experience with insulin pump patients, which suspended the practice of bracketing while working with data. According to Ahern (1999), however, subjective awareness of the researcher can contribute to the sense-making of data. Additionally, for a framework to have extension to other studies, the merging of solutions requires interrater reliability steps to be taken as well, which were only partially taken in this study. The choice of merged solutions may alter or differ based on contextual issues of the study. The embodiment of discovery for one study will likely shift or be altered to apply solutions to the particular nature of the study.

For organizing and working with the data, and extracting emergent themes and patterns, the activity can be best described as a shuffle between different software tools to examine the data from multiple perspectives. The choice of tool depended on the researchers' comfort level and experience with these tools but was also impacted by the limitations of the software features. We posit that we successfully harnessed the capabilities of these software tools and methods to achieve the mission and construct a methodology that would ultimately deliver plausible results.

This shuffle required the researchers to examine multiple meanings of phenomena and project into the interpretation of results that, although two persons may be using the same language to present an experience, their experience may differ among each other, and from that of the researchers (Peck & Mummery, 2018). However, it is acceptable and even essential to use language as a vehicle to understand the experience. The common experience arises out of contextualization, although language tends to have a "speculative nature" (p. 405). In that the pathways are illuminated that lead to the construction of the phenomena that evolved from this understanding, researcher bias—an attempt to "impose the researcher's understanding upon the text" (p. 405)—can be addressed and either eliminated, reduced, or justified.

Implications for Novice Researchers

As stated in the beginning of this paper, novice researchers face many challenges in performing qualitative data analysis for the first time. The first author, being a doctoral student conducting her first qualitative study, grappled with many choices to make a "best-fit" or appropriate application of qualitative analysis methods. However, she noted that by staying on-course with an exact prescribed method for data analysis and interpretation of results would be insufficient to hone the lived experiences of insulin pump trainers. She wanted to maintain her central focus on lived experiences, but she also believed her pathway to understanding insulin pump trainer's experiences would require creative or alternative data analysis approaches that also enabled her to discover an embodiment of approaches, which took her journey of data analysis and interpretation beyond following prescribed methods.

In the context of qualitative research, future research is recommended to explore qualitative methods for sense-making of experiences in a phenomenological context by weighing procedural schemes against strategies to foster free flow of creativity. More work is desirable to illuminate strategies of selecting adaptable analytical methods that guide researchers through the process of reflecting on and interpreting qualitative data without constricting their creativity.

Human-Computer Interaction (HCI) researchers face challenges of balancing focus on user experience design and the "very particular" (Bertelsen et al., 2019, p. 35) of the context of the user experience itself. Bertelsen et al. claim that "one size does not fit all…, not only to the design and use of technology devices or physical artifacts, but also to methods we use to study HCI" (p. 35) phenomena. HCI researchers need to take "particular approaches" to "particular problems," and "they should not abstract the findings to a general level that they lose track of how the findings are useful in a particular" (p. 36) user experience situation. The same idea holds true for novice researchers performing qualitative analysis. As novice researchers learn about "best-fit" analysis methods, they should keep in mind that best-fit may not always mean following a standard or single method for analysis. Novice researchers should not fear finding their "embodiment of discovery" in adapting creative or alternate methods for analysis and interpretation. We hope that the adapted framework may assist novice researchers as a tool for wayfinding and scoping the structure of data analysis and interpretation.

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