

Exploring Diabetes Practices in the Context of Insulin Injections

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BACKGROUND

Diabetes is a rapidly growing health phenomenon, with a significant proportion of the world's population either diagnosed with this disease or at risk (WHO, 2016). In NL, 33% of the population lives with prediabetes or diabetes, which is expected to rise to 37% by 2029 (Diabetes Canada, 2020).

There is much research acknowledging diabetes as a physiological entity with management aimed at delaying or preventing the onset and severity of physiological complications such as cardiovascular disease, blindness, and kidney failure (Collins et al., 2009; Lippa & Klein, 2008; Lukewich et al., 2020; Nathan, 2014).

Increasingly, clinicians and researchers are recognizing the social constructions of illness; that is, living with a disease is embedded within an **everyday life** in addition to attention to physiologic elements of the disease (Arduser, 2017; Bury, 1991; Conrad & Barker, 2010; Stevens, 2020; Wellard, 1998). These social constructions profoundly impact and shape how diabetes is perceived and managed by individuals living with the disease, healthcare providers, and society in general. Physiology is important, but the intricacies of living a life with diabetes extend beyond the physiology of the condition and are essential.

The current recommendations for diabetes self-management support the inclusion of psychosocial aspects and not just biomedical dimensions of disease (American Diabetes Association, 2018; Diabetes Canada, 2018; Romeo & Abrahamson, 2015; Sabourin & Pursley, 2013; Young-Hyman et al., 2016). Despite these recommendations, tensions exist as there is a life that is lived in the many interrelated contextual factors that impact diabetes management but are often considered outside of it.

PRACTICES AND ACTORS

In her recent doctoral research, Crossman (2021) explored diabetes enactment by individuals who use insulin pumps. Key findings from this research are that diabetes management exists in networks with various human and non-human **actors**, all possessing agency at diverse points in time, creating numerous **practices**.

According to Nicolini (2017), **practices** are "...open and spatially, temporally dispersed sets of doings and sayings organized by common understandings, teleology (ends and tasks), and rules" (p. 21). Additionally, **practices** may be conceptualized as regimes of mediated object-oriented performance of organized doings and sayings, which have a history, social constituency, and normative dimension (Nicolini, 2012; 2017). **Practices** only exist to the extent that they are reproduced and are made possible because of material and discursive resources.

Foregrounding the practices, or focusing on the relations between actors rather than the existence of the actors, in exploring diabetes is not simply about what is 'done' or the actions but is also about the collective social and material influences impacting those practices. **Foregrounding practices** attends to both what is said and done and examines the rationale/background and meaning of those practices with their embeddedness in networks or groups of practices and actors.

An **actor** is both a human and non-human entity that possesses the ability to perform action (Mol, 2010). The ability to act does not reside in the actor alone but is located in the relationships between **actors** (Mol, 2010). When actors work together, **practice networks** are established that represent "...collections of actors that form, align, and entangle with each other for the purposes of accomplishing actions or tasks" (Booth et al., 2016, p. 111).

Viewing diabetes through a **network lens** of interrelated practices and actors is a novel approach to consider self-management. A network lens not only focuses on the existence of complex factors (i.e., the who, what, where, when, and why) that comprise diabetes management but how they interact with each other. This knowledge is imperative to nurses in their provision of diabetes self-management support.

Crossman's (2021) doctoral work represents a beginning exploration into diabetes management with insulin pumps through a network lens. However, the use of insulin pumps is limited by both financial barriers, such as the ability to afford the pump and/or a lack of insurance coverage, and also by educational barriers related to the complexity of using an insulin pump. Therefore, further exploration of other treatment modalities, such as insulin injections, is warranted.

RESEARCH GOAL AND OBJECTIVES

Research Question: How is diabetes enacted in the context of insulin injections?

Research Goal: To explore diabetes practices in those who use insulin injections and compare the findings from this study to Crossman's (2021) research about insulin pumps to expand the knowledge base of diabetes practices.

Research Objectives:

1. To explore the various actors (human and non-human) in everyday diabetes management in the context of insulin injections.
2. To explore typical day-to-day activities in the context of using insulin injections.
3. To explore influences on decision-making and problem-solving in everyday diabetes management in the context of insulin injections.
4. To compare diabetes practices in the context of insulin injections to those in the context of insulin pumps.



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METHODS

Focused Ethnography

Key Attributes:

- 1) The researchers form part of the sub-culture under study (both researchers live with diabetes).
- 2) The research deals with a specific problem in a specific sub-cultural group (there is limited knowledge on the everyday, moment-to-moment decision-making, problem-solving, and sense-making (collectively, **enactment**) by individuals who use insulin injections).
- 3) The privileging of one method of data collection (experiential interviews).
- 4) The intensity of the data collection period (one year).

(Barton, 2008; Cruz & Higginbottom, 2013; Knoblauch, 2005; Pink & Morgan, 2013; Wall, 2015)

Data Generation:

1) Interviews: semi-structured interviews; audio recorded and transcribed verbatim. Two interviews are sought with each participant. Serial interviews will allow the development of greater trust and rapport with participants and, thus, more candid discussions about diabetes practices (Read, 2018).

2) Documents and Artifact Review: Formal and informal *documents* will be included as deemed important by the participants in managing their diabetes. **Formal documents** could include guidelines such as those by Diabetes Canada for diabetes management or documents related to carbohydrate counting, for example. **Informal documents** could include participants' diaries, logbooks, or other sources of information utilized by participants, such as internet websites or blogs, advice from friends, or images, to name a few. **Artifacts** may include food scales, blood glucose meters, insulin, insulin vials, needles, syringes, insulin pens, continuous glucose monitoring (CGM) systems, food items, etc. The artifacts to include will be co-determined with the participants during interviews, and the subsequent data will be recorded as field notes.

Analysis:

The team will complete a thematic analysis of the data guided by the techniques outlined by Braun and Clarke (2006) and Richards and Morse (2007). Throughout, team members will consider the similarities and differences between identified themes and the findings of Crossman's (2021) doctoral work.

Measures to enhance rigour will be implemented throughout the research process incrementally to ensure that the outcome is credible and trustworthy. The team will use verification strategies as outlined by Morse et al. (2002) to demonstrate rigour. These include methodological coherence, appropriateness of the sample, concurrent data collection and analysis, and theoretical thinking and analysis.



<https://www.gettyimages.com/photos/insulin-syringe?query=insulin&license=rf&allowreuse=availableforbusiness&family-creative&place=diabetes%20&sort=best&page=2>

PRELIMINARY FINDINGS

Preliminary findings based on concurrent data collection and analysis. These findings represent preliminary analysis thus far, and further data collection and analysis are warranted to achieve the research goal and objectives. These findings will, however, assist in ongoing lines of inquiry with subsequent participants to provide a rich, thick account of diabetes practices in the context of insulin injections.

- 1) 'Nothing to It' – participants engage in an infinite number of practices and are often unaware of how much they 'do'
- 2) 'Good' diabetes management remains embedded within biomedicine, despite the necessity of including psychosocial aspects in diabetes management.
- 3) Participants are 'aware' of recommendations and guidelines but revise these to fit within their individual contexts, which is often seen as deviant, generating blame and shame.

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