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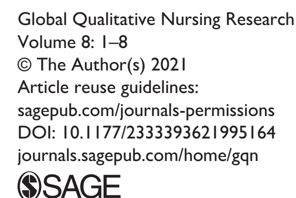
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Engaging with Uncertainty and Complexity: A Secondary Analysis of Primary Care Responses to Intimate Partner Violence

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Abstract

Complex problems generate uncertainty. The number and diversity of interactions between different health professionals, perspectives, and components of the problem makes predicting an outcome impossible. In effort to reduce the uncertainty of intimate partner violence interventions, health systems have developed standardized guidelines and protocols. This paper presents a secondary analysis of 17 New Zealand primary care professional narratives on intimate partner violence as a health issue. We conducted a complexity-informed content analysis of participant narratives to explore uncertainty in greater depth. This paper describes three ways primary care professionals interact with uncertainty: reducing uncertainty, realizing inherent uncertainty, and engaging with uncertainty. We found dynamic patterns of interaction between context and the experience of uncertainty shape possible response options. Primary care professionals that probed into uncertainty generated new understanding and opportunities to respond to intimate partner violence.

Keywords

intimate partner violence, complexity, uncertainty, primary care, complex interventions, New Zealand, complex adaptive systems, sensemaking, secondary content analysis

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Introduction

Complexity and uncertainty are dynamic. The number and diversity of elements constantly interacting in a complex system generates uncertainty of what might happen, while uncertainty about what might happen continuously adds to the complexity of the problem (McDaniel et al., 2013). Intimate partner violence (IPV) is a complex problem involving a seemingly limitless myriad of interacting elements that contribute to and sustain violence in people's lives (Family Violence Death Review Committee, 2016). Internationally, integrating sustainable health care responses to IPV has proven challenging and the best evidence-based model is still unknown (Garcia-Moreno et al., 2015). To date, health care systems have sought to reduce the uncertainty involved in responding to those impacted by violence by producing prescriptive guidelines and protocols (World Health Organisation, 2013). However, the complexity of the problem means outcomes of an intervention will always be different depending on the mix of elements at play (Begun & Kaissi, 2010). A small intervention may have a big effect, or a big intervention may have small or no effect. An intervention may also generate unintended or unexpected effects, which in the context of IPV, could increase harm (McDaniel et al., 2013). In this paper, we draw attention to the notion of uncertainty to open discussion on its implications for responding to those impacted by IPV.

Uncertainty arises when health professionals cannot accurately predict what might happen in the future. Health professionals are tasked with both acknowledging the uncertainty involved in providing care (such as providing a correct diagnosis) as well as reducing the uncertainty involved for the care-seeker (such as providing an appropriate treatment plan) (Begun & Kaissi, 2010). Common sources of uncertainty are the complexity of the problem, a lack of knowledge, and contingent reactions to the unknown by any involved (McDaniel & Driebe, 2010). Uncertainty is both partially

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reducible though increased information and yet remains due to the inherent unpredictability of the future. Differentiating between the two may also be difficult (McDaniel & Driebe, 2010; Seely, 2013). Scholars have sought to unify understandings of how uncertainty manifests in health care and its effects, however interplay between "types" of uncertainty makes consistent definitions difficult (Braithwaite et al., 2017; Han et al., 2011; Leykum et al., 2014; Pomare et al., 2019). Increasingly, scholars argue rather than striving to reduce uncertainty health systems need to recognize manifestations of uncertainty and develop ways to constructively engage with it (Braithwaite et al., 2017; Castelnovo & Sorrentino, 2018; Leykum et al., 2014; Seely, 2013). Begun and Kaissi (2004) argue the health care environment is often perceived as highly uncertain. These perceptions shape organizational ideology, structures, and strategies, such as the reliance on prescriptive methods to reduce complexity. Considering the implications for practice, an empirical assessment of an environment is needed before labeling it as uncertain. For example, a high degree of perceived uncertainty can contribute to health professional stress and poor decision making (Begun & Kaissi, 2004).

Internationally, IPV is a gendered problem that overwhelmingly affects women and children (Garcia-Moreno et al., 2015). We also understand IPV to be a pattern of cumulative harm that encompasses multiple victims (adults and children), past, current, and future (Family Violence Death Review Committee, 2016). In the primary care setting, for example, a new parent may seek care for anxiety symptoms associated with their exposure to IPV as a child. With the wide scope of those that present to primary care settings we use the term "care-seeker" to reflect trauma experienced over time. In seeking to understand what affects sustainable primary care responses to IPV in New Zealand general practices (the primary study), we found uncertainty often manifested as doubt of what to do when a primary care professional encountered someone impacted by violence. This doubt occurred due to a lack of knowledge or information, yet uncertainty was also inherent, as knowing what to do did not eliminate the uncertainty of what might happen if, or when, that knowledge was acted on. We found primary care professionals who avoided uncertainty were less responsive to those impacted by violence, whereas those who engaged with uncertainty were more responsive and seemed to experience less doubt (Gear et al., 2019). These findings piqued our interest in conducting a secondary analysis of data to explore how uncertainty influences responsiveness to IPV.

Internationally, primary care is consistently identified within health strategies and policy as a priority setting where disproportionate numbers of people impacted by IPV present (World Health Organisation, 2013). In New Zealand, general practices are located outside of hospitals and are largely private businesses, autonomous from public governance. Under the stewardship of the Ministry of Health, District Health Boards fund Primary Health Organizations via service agreements to deliver care to their enrolled population. These services are predominantly provided through general practices, who also connect with community services such as midwifery (Ministry of Health, 2017; Tenbensel, 2016). Indigenous health care services, provided by Māori for Māori, are commonly referred to as "hauora." Hauora is a holistic Māori philosophy of health and wellbeing based on the interplay between and importance of alignment between whānau (family), whakapapa (familial ties), wairua (spirit), and hinengaro (body and mind). However, ongoing colonization and institutional racism means Māori primary health services are inadequately resourced, marginalizing Māori models of care and reinforcing existing significant health inequities (Came, 2014; Waitangi Tribunal, 2019).

The most recent New Zealand policy on reducing violence within families or whānau positions health care providers as a "primary responder," tasked with identification and referral, though excluding risk assessment and safety planning (Ministry of Justice, 2017; Ministry of Social Development, 2017). To date there has been limited support for primary care professionals to respond to those impacted by violence (Gear et al., 2018b, 2019). While hospital-based guidelines for responding to IPV and child abuse and neglect exist the Royal New Zealand College of General Practitioners have declined to endorse these, arguing they must be adapted for the primary care setting (Fanslow, 2002; Fanslow et al., 2016; Gear et al., 2018b). Rather than imposing top-down standards, the primary care sector favors development of local responses, for local contexts supported by local relationships (Gear et al., 2016). Nevertheless, a policy directive that sets IPV as a key determinant of ill-health is critical for sustaining local development (Garcia-Moreno et al., 2015; Gear et al., 2016, 2019).

In this paper we present a secondary analysis of primary care professional narratives on IPV as a health issue to explore the manifestations of uncertainty, its effect on primary care professional responsiveness to IPV and how we might better engage with uncertainty to improve responsiveness. Understanding the complexity and uncertainty involved in responding to those impacted by IPV within health services can inform the development and design of effective system supports for primary care professionals.

Methods

The primary study utilized post-structural complexity theory to explore what affects a sustainable response to IPV within New Zealand primary care general practice settings (Gear et al., 2019). Increasingly being used to understand health systems, complexity theory focuses on how interaction between system elements generate new system structure and behaviors (McDaniel & Driebe, 2001). We theorized the health care system as a complex adaptive system in which a sustainable and effective response to IPV emerges

from the initial interaction between care-seeker and health professional. Ideally over time, these interactions will self-organize to generate mutually positive outcomes for both health professional and care-seeker (Gear et al., 2017). Uncertainty arises by not knowing what or how interactions throughout the system(s) will impact the trajectory toward positive outcomes. For example, although a health professional may respond with compassion and empathy, care-seeker choices for change may be limited by interactions with other parts of the system such as obtaining secure housing or drug and alcohol rehabilitation. System interactions that entrap women, children and families in violent homes block the emergence of positive outcomes for both health professional and care-seeker (Gear et al., 2017).

Seventeen interviews were conducted with New Zealand primary care professionals on IPV as a health issue in the primary study. Ethics approval for the study was granted by the Auckland University of Technology Ethics Committee (Ref 17/31). Participants were recruited from across four urban North Island general practices; two which focused on general health service provision and two on Māori (New Zealand indigenous) health service provision. Participants included three men and 14 women whose roles included general practice management ($n=4$), Primary Health Organization management ($n=2$), General Practitioners ($n=4$), practice nurses ($n=4$), nurse practitioner ($n=1$), receptionist ($n=1$) and social work ($n=1$). Interview duration ranged from 30 to 60 minutes. A pragmatic complexity-informed discourse analysis explored how patterns of interaction between primary care professionals and their context self-organized into a dominant discourse that influenced participant practice (Gear et al., 2018a). The "Triple R Pathway" narratives that emerged from analysis encapsulated the interactions between participant understanding of intimate partner violence, their conceptualized response and consequently, their responsiveness to someone impacted by IPV (Gear et al., 2019).

Secondary Data Analysis

The primary study found uncertainty influences IPV responsiveness. Applying the complexity-lens articulated above, the first author conducted a sensemaking content analysis of the 17 participant Triple R Pathway narratives to explore primary care professional experiences of uncertainty in greater depth (Patton, 2002). All 17 narratives were deductively coded to identify instances of participant interaction with the common sources of uncertainty: the *complexity of the problem*, a *lack of knowledge*, and *contingent reactions* (McDaniel & Driebe, 2010). Each narrative extract was then further coded to identify what contributed to the source of uncertainty, that is, what system interactions occurred that contributed to the uncertainty, shifting the trajectory toward, or away from, positive outcomes? For example, structural barriers such as insecure housing contributed to the *complexity of the problem*, participant doubt occurred due to a *lack of knowledge* on how to respond to IPV and participant responses to IPV shaped *contingent reactions*. Instances in which participants used strategies to mitigate uncertainty were also captured, such as facilitating avenues to help or safety. During the coding process an understanding of the patterns of dynamic interaction between participant context and the experience of uncertainty developed. That is, how individual participant characteristics and the context of care-seeker engagement influenced comprehension of the uncertainty experienced. For example, a primary care professional comfortable in asking about IPV experiences the uncertainty involved differently to a professional who did not know how to respond. These dynamic patterns of interaction signaled three broad ways primary care professionals interacted with uncertainty: reducing uncertainty, realizing inherent uncertainty involved, and engaging with uncertainty. The validity of these findings were confirmed as the ways participants interacted with uncertainty readily reflected the three common sources of uncertainty that guided deduction, explaining how uncertainty is generated in this context.

In presenting the ways participants interacted with uncertainty, we examine how uncertainty is generated, the effect on responsiveness and how we might better engage with uncertainty to improve primary care professional responsiveness to those impacted by violence.

Findings

Participant narratives suggest three ways of interacting with uncertainty: reducing uncertainty, realizing inherent uncertainty, and engaging with uncertainty. These ways of interacting were not static or exclusive from one another, rather as primary care professionals interacted with care-seekers they responded to uncertainty using ways that best matched their knowledge, experience and context of interaction. We describe the three ways below, illustrated with participant quotes, to draw attention to how uncertainty impacts responsiveness to IPV.

Reducing Uncertainty

"Reducing uncertainty" illustrates how uncertainty may be reduced through increased system support and provider strategies that remove barriers to action. Participants described how a lack of system support generated doubt in their ability to be responsive to someone impacted by IPV. Participant reasons for doubt included not having been trained to address issues of IPV and not knowing what, where or how to access information and support for persons impacted by IPV. One nurse noted that IPV was simply not spoken about within the general practice, generating a perception it was not a prevalent issue within their patient population. A general practitioner said:

> I think it's about having the systems in place that you can refer to so you're not feeling left to deal with it on yourself, and feeling completely isolated [. . .] sometimes you feel like you've got no support from anyone else, and you just don't have the time to spend with people [. . .] you sometimes just feel so unsupported around issues, when you know it's so important to deal with it and the risks.

The doubt generated by a lack of system support led to barriers for action. Participants described feeling uncomfortable to ask about IPV as they feared how much time would be involved, that they may not respond well or that their response may make the situation worse for the care-seeker and their family or whānau (family group). One general practitioner also feared consequences for himself: 'It's something I have to consider [. . .] because if you upset people [. . .], they kind of see you as a scapegoat as well'. Participants working in settings with a lot of familial ties were concerned that asking about IPV would have a negative impact on their relationships with patients and other members of the family. Not knowing how to respond generated significant uncertainty about the future. As a nurse practitioner said about receiving an IPV disclosure, "You'd be like 'OK, what do I do with this information'?"

Strategies participants used to reduce uncertainty included asking more questions, being aware of the dynamics of violence, looking for inconsistencies, repetitive injuries, or a hint the care-seeker may make. Some participants tried to reduce uncertainty for others by alerting them to signs and symptoms of violence, advocating for advanced training and developing procedures to guide clinical practice. Despite experiencing uncertainty, participants knew of ways they could improve their responsiveness to IPV. This included making IPV enquiry "a habit," delegating follow-up to other members of the practice team or social services associated with the practice (if available), implementing processes to simplify IPV enquiry and advocating for government leadership on addressing IPV as a health issue in primary care.

Realizing Inherent Uncertainty

"Realizing inherent uncertainty" illustrates participant perception of the unknowables in responding to IPV, that are considered beyond the influence of the health professional. Participants recognized how socio-economic circumstances limited care-seeker choices or made it difficult to maintain regular engagement. A practice nurse said:

> It's not just *The Violence* [original emphasis] [. . .] [it] is only one other thing that they deal with, apart from hungry children, or a roof over their head. You know if it's a good day in that area, it's a crap day in another area, so it's not in isolation'.

One Primary Health Organization manager described how care-seekers feared engaging with the health system more than the violence, preventing them from seeking help. The manager said a lot of people "are really scared, that they will lose their children, and they see the immediate loss of their children to the system as worse than the potential loss of life." Another Primary Health Organization manager said:

> So if they speak out where do they go to, [. . .] what are the practical resources that they can have to protect them for the moment, when you've got a housing issue you know? Do you move out? I mean how do you learn to navigate that space if you want to stay in the relationship but stop the intimate partner violence [. . .] How do you navigate it in a way that's going to ensure that you still have a relationship with the father of your children? How do you do that if you demonise that person [. . .] fracturing the relationship that may in fact escalate the situation and certainly fractures the relationship between the children and the parents.

Primary care professionals could choose to perceive the uncertainty as inherent, with consequent absolving of responsibility. For example, some participants argued the responsibility to disclose IPV lay with the care-seeker. As one practice manager said: "I think with a lot of the family violence, they will hide it, and it depends on that relationship between the GP (general practitioner) and the patient whether that patient's going to be responsive to even mention it." Uncertainty could also be deflected. For example, a Primary Health Organization manager questioned whether it was the responsibility of health professionals to be aware of IPV, or if a public campaign to support families asking for help would be more effective. A general practitioner argued he needed more support such as access to counselors and knowledge of referral agencies before asking about IPV. While the uncertainty in these examples can be reduced through system support, in these instances the participants chose to perceive uncertainty as inherent, as beyond their influence. They deflected their uncertainty about what could be done by emphasizing the need for others to do more. Seemingly static powerful system structures and processes could also generate uncertainty, such as communication barriers between general practice, secondary care and social services or differences in models of care that generate tensions in practice.

Engaging with Uncertainty

"Engaging with uncertainty" illustrates ways participants engaged with uncertainty in order to initiate change in the lives of family or whānau. This involved reducing what uncertainty they could as well as recognizing and realizing the inherent uncertainty involved in being responsive to those impacted by violence. As quoted in the primary study a nurse practitioner said,

> "Always in general practice you live with that level of discomfort, that level of uncertainty. Because sometimes you're

> never really sure that that's the right diagnosis but you trust your training, your instincts and the patient's history to go down a particular course."

Participants that engaged with uncertainty took advantage of or generated opportunities to be responsive despite being unsure of what might happen. For example, one practice manager hosted regular wānanga (discussion meeting) that supported people to ask for help for a variety of issues, a strategy that helped to "capture the core problem which will relate back to home." A practice nurse described every visit to a general practitioner as an opportunity to access support and help, particularly if the violence was ongoing. Another practice nurse made sure she took the time to talk with people, providing opportunities for disclosure. A social worker described simply keeping Māori wāhine (women) engaged in their service. She said it's about

> "getting them to a point where they want to engage, you know, it's getting them there and being there the whole time. [. . .] Sometimes it's best to stay engaged with them just to keep them safe, as opposed to pulling out the big guns [such as reporting a concern] and they get lost, they go underground, and you can't find them [with their kids].

Engaging with uncertainty involved an attitude of "doing the best you can" and recognizing change was not instant. A practice nurse described her engagement with people over time. She said, "So just small steps at a time. I'll just keep saying hello to them if I see them, just get them comfortable, familiar you know? Might be a whole year, might take longer. It depends on the situation really."

Discussion

Uncertainty is inherent in complex problems due to the number and diversity of reflexively interacting elements. As the complexity increases, so does uncertainty about what might happen (Begun & Kaissi, 2010). Despite recognizing the complexity of responding to IPV within health care, response models often reflect linear patterns of cause and effect which obscure contextual factors influencing outcomes (Braithwaite et al., 2018). Scholars advocate for a comprehensive health system approach to IPV that includes institutional support, effective screening protocols, health professional training, and immediate access to referral options (Garcia-Moreno et al., 2015; O'Campo et al., 2011; World Health Organisation, 2013). While system infrastructure is necessary for an effective response, the approach does not account for the complexity and uncertainty involved in responding to IPV.

The primary study found primary care professionals who engaged with uncertainty were more responsive to those impacted by violence (Gear et al., 2019). This paper draws attention to the dynamic patterns of interaction between participant context and the experience of uncertainty. That is, how shifts in the context of engagement influence the experience of uncertainty and the subsequent impact on IPV responsiveness. For example, increased system support for primary care professionals reduces uncertainty of what to do increasing the likelihood of an effective response. Similarly, what is learned from engaging with those impacted by IPV may reduce future uncertainty, such as realizing the active ways women keep themselves and their children safe (Wilson, 2019) or that responding often does not take as much time as one might imagine (Koziol-McLain et al., 2007).

Described as "agile actors" by Room (2016), participants responsive to IPV explored uncertain and complex environments from the comfort of stable knowledge and practices. They used what they already knew, what they were certain of, to probe into what they were uncertain about to develop new understanding. In practice, a probe might involve asking "what are the things you do to keep yourself safe?" or "how can we help you best?" By probing into uncertainty, participants shifted the context of engagement by generating new understanding and new opportunities to respond (Gear et al., 2019). Specifically for nurses, the frequency of contact, flexibility and longer consultation times provide greater opportunity to probe into uncertainty, shift the context of engagement and develop new mutual understanding with care-seekers.

Our findings show system support is critical in reducing uncertainty, such as knowing what referral agencies are available, or being trained in asking about IPV safely. However, the system only provides limited support. It ignores how interaction between the care-seeker and health professional shapes possible response options. For example, a care-seeker who is offered referral to a specialist agency may refuse for fear of retaliation from their abuser, limiting the options the health professional has to deliver care. Those that engaged with uncertainty recognized change was emergent from the interaction between many different elements and that they were just one element of the complexity involved. This aligns with the findings of a recent qualitative meta-synthesis exploring health practitioner readiness to address domestic violence and abuse. Health professionals who acknowledged their limitations in changing victim circumstances were able to work as an ally of patients rather than trying to "fix" the problem, or "rescue" the victim (Hegarty et al., 2020). Recognizing the multiple elements at play calls attention to multiple and diverse opportunities to provide an effective response as the environment decisions are made within continues to change. As Goicolea et al. (2015) state; "adequate detection of women suffering from IPV is a complex process that requires more than asking questions and following the steps of a protocol" (p. 9). However, our findings show that when opportunities to intervene do present themselves, system support is critical in enabling health professionals to initiate change.

We argue for a pragmatic approach to system support which enables reflexive practice. For health professionals to

navigate uncertainty effectively, organizational infrastructure must match the level of uncertainty involved (Leykum et al., 2014). Primary care professionals should be supported by a repertoire of resources they may draw on to be responsive within a wide variety of contexts. Not all situations will involve a high degree of uncertainty (Begun & Kaissi, 2004; Leykum et al., 2014). In situations of low uncertainty, resources may include an electronic documentation form or referral agency list. In situations of high uncertainty, the system should support opportunities to learn from and reflect on experiences (Leykum et al., 2014). Sensemaking involves people coming together to make sense of what is going on (Weick, 1995). It involves growing relationships between people to increase knowledge and understanding and ultimately organizational capability (McDaniel & Driebe, 2001). Collaboration with internal team members and external specialist agencies has been shown to enhance readiness to address IPV (Hegarty et al., 2020). Our findings showed engaging with uncertainty involved an attitude of "doing the best you can," giving the impression of being limited by the system. In contrast, sensemaking acknowledges the inherent uncertainty involved shifting the perception of responsiveness to being a collective response of "the best we can do" (McDaniel & Driebe, 2001, p. 25).

How we perceive uncertainty shapes how we respond to it (Begun & Kaissi, 2004). Our findings illustrated areas where uncertainty was perceived to be inherent, that is where the complexity of interaction between elements makes what might happen unknowable. Yet, there were also instances where participants chose to ignore or deflect uncertainty such as ignoring signs and symptoms of IPV for fear of not knowing how to respond. The poor recognition of IPV as a key determinant of ill-health within New Zealand health policy and practice generates a challenging environment for primary care professionals to be responsive within. This significant structural barrier reinforces a lack of institutional support critical for reducing the uncertainty experienced. That primary care professionals may choose not to respond without system support is understandable.

Those that engaged with uncertainty created environments to explore it over time, such as within following consultations. Much of the inherent uncertainty articulated by participants involved how structural inequities may contribute to care-seeker entrapment, such as housing, parenting or living arrangements (Family Violence Death Review Committee, 2016). Systems and services also generate structural barriers to accessing help. In New Zealand, Wilson (2019) found indigenous Māori wāhine (women) hold a very real fear of engaging with the health and social systems due to past experiences of being treated poorly, such as being questioned on their capability and competence as mothers. Fear of losing tamariki (children) to state care should wāhine ask for help from services or agencies is increasingly substantiated in New Zealand (Dhunna et al., 2018; Office of the Children's Commissioner, 2020; Wilson, 2019). The uncertainty of what might happen should a care-seeker engage with the health system is inherent in the interaction with a primary care professional and impacts the trajectory toward positive outcomes. Health professionals could be better supported to engage with uncertainty through improving "structural competency," the understanding of how societal structures influence care-seeker choices and consequently options for care (Levine et al., 2020; Metzl & Hansen, 2014). Developing "structural humility" recognizes societal structures are constantly changing and health professionals are limited in impacting care-seeker lives (Metzl & Hansen, 2014). While what might happen may be unknowable, recognizing the existence of this inherent uncertainty is a first step to engaging with it.

Limitations and Future Research

The primary study signaled uncertainty as a key influence on primary care responsiveness to IPV. We conducted a secondary analysis to further explore the notion of uncertainty and open discussion on implications for policy and practice. As such, the data analyzed was not collected with the aim of investigating uncertainty. Use of deductive coding based on common sources of uncertainty distilled participant interaction to three broad ways. An inductive approach may provide a richer account of sources of uncertainty for primary care professionals specifically. As New Zealand primary care professionals are currently under resourced to respond to those impacted by IPV, it would be interesting to explore what issues of uncertainty impact health professionals who have system infrastructure in place. Future research will be critical in understanding the implications of health system and health professional responses to uncertainty for issues of health inequity, particularly for indigenous peoples.

Conclusions

Uncertainty within health care is paradoxical. Despite recognizing the inherent uncertainty involved, we constantly seek to minimize it through reduction and control (Begun & Kaissi, 2010; Seely, 2013). Rather than struggling against this inevitability, it is time health systems "step off the merry go round of reducing complexity" and seek to constructively engage (Castelnovo & Sorrentino, 2018, p. 1028). This paper draws attention to how the dynamic interactions between context and the experience of uncertainty shape possible options for primary care professionals in responding to IPV. We found primary care professionals that probed into uncertainty generated new understanding and new opportunities to be responsive to someone impacted by intimate partner violence. To be responsive, health professionals should be supported to reduce as much uncertainty as possible, realize the inherent uncertainty involved and engage by probing into uncertainty to gain new understanding and open new ways of being responsive.

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