Situating and Constructing Diversity in Semi-Structured Interviews

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Abstract
Although semi-structured interviews (SSIs) are used extensively in research, scant attention is given to their diversity, underlying assumptions, construction, and broad applications to qualitative and mixed-method research. In this three-part article, we discuss the following: (a) how the SSI is situated historically including its evolution and diversification, (b) the principles of constructing SSIs, and (c) how SSIs are utilized as a stand-alone research method, and as strategy within a mixed-method design.

Keywords
qualitative research methods, interview, mixed-method design, semi-structured interviews

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In this article, we will explore the evolution, proliferation, diversification, and utilization of the semi-structured interview (SSI) as both a data collection strategy and a research method. We suggest that, since the 1990s, the SSI has proliferated, diversified, and evolved from a research strategy to an independent research method, and to one that is increasingly used by a multiplicity of disciplines. It has a unique structure that affords it an affinity with qualitative, quantitative, and mixed-method research. Unfettered by foundational philosophical commitments, the SSI accommodates a multiplicity of philosophical assumptions that may reflect feminist, critical, phenomenological, and neo-positivist aims. The purpose of SSIs is to ascertain participants’ perspectives regarding an experience pertaining to the research topic. Beyond that common denominator, however, SSIs have diversified into different types, each uniquely oriented to assessing, confirming, validating, refuting, or elaborating upon existing knowledge and the discovery of new knowledge. Furthermore, the contemporary SSI may be empathetic and politically engaged. The diverse types of SSIs produce knowledge that may be politically active, taking the stance of the participants and committed to improving their lives.

As a data collection strategy, we examine its fit with various methods. When used as a stand-alone method, we identify four major purposes: descriptive/confirmative, descriptive/corrective, descriptive/interpretative, and descriptive/divergent. SSIs also play important roles in mixed-method research, research involving translation, and as a basis for instrument development.

What Is the SSI?
The SSI is designed to ascertain subjective responses from persons regarding a particular situation or phenomenon they have experienced. It employs a relatively detailed interview guide or schedule, and may be used when there is sufficient objective knowledge about an experience or phenomenon, but the subjective knowledge is lacking (Merton & Kendall, 1946; Morse & Field, 1995; Richards & Morse, 2007). Analysis of the objective knowledge constitutes the framework for the development of this guide and foci for the development of the interview question stems. These interview questions focus on the responses of each participant and constitute the structure of the SSI. Participants are free to respond to these open-ended questions as they wish, and the researcher may probe these responses. This framework and flexibility of the responses constitute the semi-structured aspect of this method. It makes it unique among interview methods for the degree of relevancy it provides the topic while remaining responsive to the participant (Bartholomew, Henderson, & Marcia, 2000).

Analytically, the SSI is characterized by comparing participants’ responses by item. Because all participants are asked the same questions in the same order, data collected are comparable, and may be numerically transformed and quantified.

The type of data derived from SSIs cannot be obtained using structured questionnaires, participant observation, or analysis of the literature, although SSIs may be combined...
with these other data collection strategies. Also, these data cannot be obtained through unstructured interviews, as unstructured interviews do not control the participant’s response; SSI participants’ responses are directed to specific areas of inquiry.

However, there is apparent confusion among researchers regarding what constitutes an SSI and its distinction from other types of interviews such as the guided interview. The guided interview reflects the structure of the research domain and lists the questions that will be asked of each participant. It does not focus the participants’ responses to any particular aspect of their experience and often begins with a grand tour question. Then, depending on a participant’s response, the researcher follows with a loosely organized list of questions. Responses are neither collected by item, nor does the analysis proceed item by item, but rather by theme or categorization. However, with the SSI, all questions are asked of all participants in the same order, and all data are analyzed systematically item-by-item.

The hybrid term in-depth semi-structured interviews also causes confusion and is unnecessary. While SSIs do provide the participants with the freedom to answer the open-ended questions using as much time as they wish, their responses are not often in-depth. Thus, in-depth, guided, and SSIs are disparate interview types that must not be conflated.

Situating SSIs

The Evolution of the SSI

The historical antecedent of the contemporary SSI was the “focused interview” conceived of, and procedurally advanced by Robert Merton and Patricia Kendall in 1946. The focused interview arose out of studies of the social and psychological effects of mass communications—radio, print, and film (Merton & Kendall, 1946). Its initial purpose was to provide some basis for interpreting statistically significant effects of mass communications.

Merton and Kendall (1946) outline the character of such applications by examining the role of the focused interview at four distinct points: (a) specifying the effective stimulus, (b) interpreting discrepancies between anticipated and actual effects, (c) interpreting discrepancies between prevailing effects and effects among subgroups (i.e., “deviant cases”), and (d) interpreting processes involved in experimentally induced effects. These original roles of the focused interview constitute the antecedents for the contemporary types of SSIs that we will describe later.

The Empathetic Turn of the Interview

The “empathetic” turn of the interview refers to a shift in the interviewer’s perspective from a neutral, objective stance to one of political involvement. Fontana and Frey (2008) write,

Empathetic interviewing takes an ethical stance in favor of the individual or group being studied. The interviewer becomes an advocate and partner in the study, hoping to be able to use the results to advocate social policies and ameliorate the conditions of the interviewee. (p. 696)

Thus, the empathetic turn became a key catalyst in the diversification of SSIs.

Philosophical Foundation of the SSI

Traditionally, a mature method was defined in part by its adherence to a philosophical foundation, as, for instance, cultural theory that underpins ethnography (Richards & Morse, 2007). This requirement now appears to be changing and researchers have greater flexibility and may draw upon various underlying philosophical perspectives for their work. For instance, Charmaz (2009) suggested that grounded theory strategies may be used with other theoretical starting points and states that “few subscribe to symbolic interactionist theoretical orthodoxy” (p. 134). Similarly, Kvale (1996) observed that a “phenomenological approach in a general non-philosophical sense” is prevalent in qualitative research (p. 52). This non-adherence of qualitative research methods to a unitary and explicit philosophical foundation, however, does not mean that research practice is uninfluenced or not influenced by a variety of philosophical perspectives—or that it is underdeveloped (Avis, 2003).

SSIs, as do all qualitative research methods, involve practices that develop, are molded, and mature with use. The emergence of various typologies of SSIs are, in part, distinguished by their unique philosophical influences derived from quantitative and qualitative paradigms—neo-positivism, dialectics, and phenomenology in particular. SSIs involve principles in practice (Seale, Gobo, Gubrium, & Silverman, 2004). Such principles are not de-contextualized or abstracted from the research itself but appear as assumptions, and are reflected in the methodological strategies used. As research practice expands so, too, do the philosophical principles it draws from to guide it. Philosophical issues are similarly informed by research practice. In this way, both method and philosophy advance and mature. Therefore, SSIs as present day practice are informed by assumptions but do not adhere to a unitary, explicit philosophical foundation.

Affinity of SSIs to the Quantitative Paradigm

The focused interview was originally conjoined with experimental science, constituting the interpretive component to the statistical analysis. Contemporarily, the SSI maintains this affinity to the quantitative paradigm. It has the structure, sample size, and suitability for quantification that appeals to quantitative researchers and it is the most frequent qualitative method included in mixed-method research (Bryman, 2006; Povee & Roberts, 2015). Similarly, the SSI method is
more compatible with research ethic reviews that privilege qualitative research and the unpredictable emergent designs of in-depth interviews. Thus, the SSI has been able to accommodate the current political conditions that threaten other types of qualitative research.

A Typology of SSIs

A diversification of SSIs has paralleled its proliferation. Examination of studies that used the SSI as a method revealed different types of SSIs, differentiated according to purpose, epistemological privilege of established knowledge implicit in the interview guide or the knowledge of the participant(s), the role of the participants, and the outcome of the research. These characteristics enabled the construction of a typology (see Table 1).

Descriptive/confirmative

Historically, the focused interview aimed to augment experimental findings with subjective responses; the analytic component of the findings was augmented by this interpretive component. The descriptive/confirmative contemporary type of SSI most closely approximates this original interview role, with the purpose to obtain subjective responses to the objective knowledge, to test the hypothetical assumptions or theoretical frame. Although participants’ perspectives and experiences are important, they are most relevant for confirming the frame, so that this type of interview epistemologically privileges the known rather than the knower.

Thus, the outcome of the descriptive/confirmative type of SSI is to confirm the objective knowledge of the interviewer’s frame. In the examples below, instruments or theories derived from prior scientific study are confirmed by the subjective experiences of interview participants. These theories or instruments, now confirmed, may themselves be used as modes of clinical or social assessment or program evaluation. From a “pure” qualitative paradigm, this approach is risky, violating the qualitative edict not placing the researcher’s agenda onto the participant—which is a cardinal threat to validity. This research should therefore be evaluated carefully.

Descriptive/confirmative SSIs have been more recently used to assess the following: the usefulness of a research impact framework to capture the impact of health services and policy research (Kuruvilla, Mays, & Walt, 2007), the relevance of “uncertainty reduction” theory to the experience of homeless teen mothers (Scappaticci & Blay, 2009), the suitability of the disease-specific health-related quality of life instrument for use with patients after myocardial infarction (Roebuck, Furze, & Thompson, 2001), and finally, the potential for the Osteoporotic pain program to increase patient’s insight, skills, and motivation to self-help and possibly reduce pain (Jensen & Harder, 2004).

Descriptive/corrective

Historically, a primary aim of the focused interview was to interpret discrepancies between anticipated and actual effects (Merton & Kendall, 1946). Similarly, the purpose of the contemporary descriptive/corrective SSI is to evaluate the dominant discursive representation of an experience by comparing it with participants’ actual experiences. This type of interview uniquely juxtaposes what is known about an experience (i.e., established knowledge in the literature), or known only from the privileged perspectives of others (e.g., those persons who represent others, such as researchers reporting on the vulnerable, invisible groups), with the perspectives of those whose views are typically absent or under-represented and who have actual material knowledge of this experience. The word “disjuncture” (Smith, 1990) refers to the discrepancies between the conceptualization and textual mediation of an experience with the actual material experience of participants.

The elucidation of disjuncture is not the intended outcome of this type of research but is, rather, the means to correction. The outcome of this interview research is to confirm, refute, or elaborate upon the assumptions of the frame. The intention is that the participants’ actual experiences of the phenomenon will act as a corrective to the assumptions in the dominant discourse and effect political action for change.

Evidencing a social constructivist approach, this type of interview epistemologically privileges both the knower and the known. Descriptive/corrective SSIs exemplify empathetic interviewing and hence are particularly useful to research with feminist and critical aims such as institutional ethnography, participatory action research and social movement research (Blee & Taylor, 2002). The researcher and the participant collaborate to produce knowledge with which to effect political change.

Descriptive/corrective SSIs have juxtaposed the perspectives of mothers addicted to crack cocaine regarding mothering, with popular assumptions of such mothers (Kearney,
Murphy, & Rosenbaum, 1994); general physician’s explanatory models for irritable bowel syndrome (IBS) with the explanatory models used by patients afflicted with the condition (Casiday, Hungin, Cornford, deWit, & Blell, 2009a, 2009b); and media and scientific representations of the female orgasm with women’s subjective thoughts and feelings regarding it (Lavie-Ajayi & Joffe, 2009). Disjunctures were revealed and pointed to dominant assumptions or practices in need of revision or correction: Mothers addicted to crack uphold as strong commitments to mothering as mothers who are not addicted; physicians do not know the full impact of IBS on sufferers’ lives; women graft the importance of relational and emotive aspects of orgasm onto the scientifically driven representations of it.

Corrective action indicated by these disjunctures included greater sharing between physicians’ and patients such that medical interventions are informed by patient perspectives; the need for woman-centered policies and programs, including safe drug-free housing, health care, child care, education, and job assistance; and the laying bare of cultural and social norms associated with having orgasms such that the set of anxieties they produce might be reduced and this, in turn, may diminish women’s experience of having problems with orgasms (Casiday et al., 2009a, 2009b; Kearney et al., 1994; Lavie-Ajayi & Joffe, 2009).

Descriptive/interpretive. Historically, the aim of the focused interview was to elucidate the subjective response to the stimulus. The descriptive/interpretive contemporary type of SSI is exemplified by research with the aim of discovering the experiential world of the respondent within topical dimensions. SSIs are a viable option for researchers with parsimonious yet phenomenological aims. This type of interview epistemologically privileges the participant as knower. From the outset, the frame is acknowledged to be limited and subjective knowledge is critical to its expansion. Sometimes the limited knowledge of the frame is confirmed and expanded by participants’ perspectives; sometimes the frame is refuted by participants’ perspectives and gives rise to new categories, themes, and hypothesis with which to understand the experience.

Descriptive/interpretive interviews have been used to investigate the long-term impact of sudden infant death (Dyregrov & Dyregrov, 1999), next-of-kin’s perceptions of end-of-life care (Williams, Woody, Bailey, & Burgio, 2008), maternal infanticides in Fiji (Adinkrah, 2000), and influences on parents’ fever management—beliefs, experiences, and information sources (Walsh, Edwards, & Fraser, 2007).

Discoveries that emerged from these interviews included the discovery that parents who have experienced the sudden death of an infant still view the death of their child as affecting their daily life in important ways 12 to 15 years after it happened (Dyregrov & Dyregrov, 1999). Second, a critical discovery that emerged from the study investigating maternal infanticides in Fiji (Adinkrah, 2000) was that, contrary to the legal definition of infanticide that presupposes postpartum depression in infanticidal behavior, unwanted pregnancies were the major precipitant for maternal neonaticides. Most “offenders” were young, poor, unmarried Fijian women with minimal formal education. This discovery leads to the hypothesis that if unwanted pregnancies were curtailed, the incidence of infanticide would decrease.

Descriptive/divergent. Historically, another application of the focused interview was to “interpret discrepancies between prevailing effects and effects among subgroups—deviant cases” (Merton & Kendall, 1946, p. 542). Contemporarily, the descriptive/divergent type of SSI applies the same interview guide to disparate groups of participants to discern differences and similarities in perspectives and experiences among them with respect to the dominant discourse that underpins the interview guide. The purpose of this type of interview is to contrast perspectives of different groups of knowers. This type of interview epistemologically privileges the knowers and seeks to discern their contrasting perspectives and experiences.

Descriptive/divergent SSIs have been used to investigate such topics as women’s attitudes toward technology (resistant versus flexible) and their childbirth experiences (Kornelson, 2005), women’s attitudes toward postmenopausal long-term hormone therapy (five different types of users were identified who differed from each other in terms of their reasons for using hormones, their expectations of this type of therapy, and their personal habits and circumstances; Kolip, Hoefling-Engels, & Schmacke, 2009), elite women wrestlers’ muscles (senior wrestlers accepted the “athletic body” and masculinity with its social costs; junior wrestlers were “holding back” giving priority to the “private body”; Sisjord & Kristiansen, 2009), and lesbian versus gay activists’ attitudes toward transgender inclusion (Stone, 2009).

The elucidation of divergent perspectives, attitudes, and experiences regarding phenomena enables deeper insight into various ways that people negotiate the personal and social contexts that shape human choices and experiences.

**Constructing the SSI**

**Preparing the Interview Schedule**

SSIs are semi-standardized, and characterized by the design and utilization of this schedule. They are conducted using an interview questionnaire or schedule comprised of predetermined or scheduled primary questions or question stems, followed by subquestions or “probes.” It is important that these questions are open-ended and formulated to elicit unstructured responses and generate discussion. These questions are typically asked of each interviewee in the same way and in a systematic order, but the questions are *semi-structured* in that the interviewers are allowed freedom to diverge slightly from the script. There is some variability granted to the researcher.
within the limits of the intended replicability of the schedule to rephrase questions to elicit the pertinent information or to provide clarification (Irvine, Drew, & Sainsbury, 2013). More important than the exact phrasing of the question is conveying equivalence of meaning to all participants (Denzin, 1989). Furthermore, the interviewers are expected to probe within each participant’s responses (Berg, 1989). These probes are intended to elaborate beyond the participant’s initial response. For example, probes such as “In what way . . . ?” or “Tell me . . . ?” or “Such as . . . ?” These dual qualities of replicability and flexibility yield pertinent as well as rich data.

Probes may be scheduled (scripted) appearing after the question stems on the questionnaire (to be asked after the initial participant response), or unscheduled arising from the dialogue. Unscheduled prompts are improvisational, and some researchers find that respondents more fully express their perspectives in response to the unscheduled prompts (Berg, 1989).

Creating the SSI. To prepare the interview schedule, the researcher must (a) identify the domain of the topic under investigation including its boundaries, (b) identify the categories of the topic, and (c) identify the question stems. Once the questionnaire is drafted, it is critiqued and tested. A previously mentioned descriptive/interpretive SSI study will be used to illustrate this process. The particular study, conducted by Dyregrov and Dyregrov (1999), sought to ascertain parents’ perspectives and experiences of the sudden death of their infants after the passage of a significant amount of time.

Identifying the domain of the topic. SSIs are used when the researcher knows enough about the topic to be able to identify the domain and the main components of the topics but is unable to anticipate all the possible answers (Morse & Field, 1995). The more extensive the investigator’s knowledge, the more precisely can the aspects to be covered in the interview be outlined in advance and the more significant questions may be posed (Kvale, 1996; Merton & Kendall, 1946).

Interviewers know in advance of constructing the interview which topics they wish to include and even some of the questions they wish to ask. This knowledge of the phenomenon may be variously acquired. Researchers may have initially observed or experienced the phenomenon. Spradley (1979) and Patton (1980) suggest that researchers prepare a preliminary outline listing all the broad categories they feel may be relevant to their study. Conducting a literature review is an essential component in ascertaining what is known about the phenomenon, using the literature in an “informed, skeptical, or comparative manner” (Morse, 2003, p. 891; Morse 2006) to maintain an inductive approach to questionnaire development. Knowledge about the phenomenon may also be derived from the researcher’s “conceptual baggage”—information acquired from clinical practice or prior fieldwork (Kirby & McKenna, 1989, p. 21). Thus, familiarity with the phenomenon is not exclusively derived from the literature but also from the researcher’s intuition, experience, and observation. Furthermore, the domain of the research topic is delimited by boundaries so that a specific aspect to be investigated is tightly circumscribed.

Example: “Long-Term Impact of Sudden Infant Death” (Dyregrov & Dyregrov, 1999): In this study, the domains of inquiry were, first, parents’ experiences and perspectives regarding the death of a child over time and, second, gender differences in parental response to death over time. The following boundaries delimited the topic, that is, indicated what would remain outside of the research domain: (a) Time—parents’ acute response to the recent death of infants; (b) Nature of death—infant death due to accident or intent.

Identifying the categories. Once the domain and its boundaries have been delineated, the researcher can focus within the domain to ascertain its categories. The domain is subdivided into categories established by their particular shared characteristics.

Example: In the above mentioned study, the domain of parental response to infant death over time was subdivided into categories: (a) the experience of the cot death, (b) parental communication about the lost child over the years, and (c) the subjective meaning regarding the effects the loss of their child had over the 12 to 15 years. These categories were amassed from a literature review that included studies pertaining to the acute crisis reactions following the loss of an infant child, to family responses over time to an older child who dies of cancer, and the different patterns of paternal versus maternal grief response (Dyregrov & Dyregrov, 1999).

Identifying the items. Items are then constructed from each of these conceptual categories. An item is defined as an individual article or unit that is part of a collection or set. These items form the main structure or question stems formulated for the interview schedule.

Example: The following items were derived from the category pertaining to parental communication about the lost child over the years.

The parents were asked about how they had talked about and memorialized the child over the years (i.e., pictures, the grave, and celebration of birthdays), and if anyone in the family needed or wanted to talk about the dead child more than others and how did the rest of the family meet these demands? (Dyregrov & Dyregrov, 1999, p. 641)

When the domain, categories, and question stems are determined, a chart can be constructed that depicts the domain, its categories, and the question stems, as well as the literature from which they were derived. This chart or
refers to the process of making explicit what is implicit in
category (Berg, 1989). Finally, the principle of
double-barreled but should address only one aspect of a cat-
ditions as the interview proceeds. Questions should not be
non-threatening questions to more complex and sensitive
Logical order means the interview should move from mild,
likelihood of a full answer. Questions should be presented in
...?“ ask “Can you tell me how you decided to . . . ?” Neutral

clearly communicated. Many researchers choose zero order
stems because they are derived from specific categories of the
principles to guide the construction of question stems: speci-

tacit assumption. These principles
by this process such that amendments may be made in advance
and the interviewers’ capacity to collect data are illuminated
interview performance. How participants respond to ques-
tions, whether the questions elicit the intended information,
and the interviewers’ capacity to collect data are illuminated
by this process such that amendments may be made in advance
of actual interviews.

Table 2. Construction of Interview Schedule for Domain of Parental Responses to Sudden Death of Their Infant Over Time.

<table>
<thead>
<tr>
<th>Category</th>
<th>Item No.</th>
<th>Scheduled Question Stem and Probe</th>
<th>Reference for Category Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental experience of cot death</td>
<td>1</td>
<td>Can you share with me what the</td>
<td>Parental depression following the death of a child. (Martinson, Davies, &amp; McClowry, 1991)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>experience of losing your baby was like</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>for you? Probe: How did the people</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>around you react?</td>
<td></td>
</tr>
<tr>
<td>Parental communication regarding infant death</td>
<td>2</td>
<td>What was it like to talk to your partner about the death of your baby? Probe: How did it feel to talk?</td>
<td>Parental grief reactions and marital intimacy following infant death. (Lang, &amp; Gottlieb, 1993)</td>
</tr>
<tr>
<td>Subjective meaning regarding the effects the loss of their child had over 12 to 15 years</td>
<td>3</td>
<td>Did anything remain the same after the death of your child? Probe: Did anything change?</td>
<td>Changes over time: A study of family bereavement following childhood cancer. (Martinson, et. al., 1994)</td>
</tr>
</tbody>
</table>

“aide memoire” can be used as a resource interviewers may consult before or during the interview (depending upon whether the interviews are face-to-face or over the telephone) to remind them of the relevance of the question to the topic and its specific intent (Irvine, Drew, & Sainsbury, 2013). This enables improvisational prompts that maintain congruency with the information intended by the question itself and can optimize the ascertainment of the information sought. This may be particularly useful to a novice researcher or to an experienced researcher in the early interviews of a new project. The chart used in the research example is shown in Table 2.

Writing the question stems. Lazarsfeld (1954) offers three principles to guide the construction of question stems: specification, division, and tacit assumption. These principles have been renamed and elaborated upon but these original principles still constitute the basis of question design (Berg, 1989; Rubin & Rubin, 1995).

Specification refers to the focus of each question. This principle is easily achieved in the construction of question stems because they are derived from specific categories of the domain. The principle of division ensures that the questions stems are appropriately worded and sequenced. Questions need to be formulated to ensure they are adequately and clearly communicated. Many researchers choose zero order level of communication—that is, the wording of the questions and ideas conveyed are leveled to the least sophisticated of all potential respondents. Furthermore, affectively worded questions should be neutralized. Instead of asking “Why did you . . . ?” ask “Can you tell me how you decided to . . . ?” Neutral questions, even when the content is sensitive, improve the likelihood of a full answer. Questions should be presented in a logical, possibly chronological, order (Leech, 2002). Logical order means the interview should move from mild, non-threatening questions to more complex and sensitive questions as the interview proceeds. Questions should not be double-barreled but should address only one aspect of a category (Berg, 1989). Finally, the principle of tacit assumption refers to the process of making explicit what is implicit in participants’ responses. This principle is accomplished via scheduled and unscheduled probes.

Questions collect data in implicit and explicit ways. Explicit data collection is the responses obtained. Implicit data collection is how questions motivate these responses by giving an impression of the interviewer—for example, questions convey the extent of the interviewer’s understanding of the topic area. This instills trust in the participant that he or she will be understood and may inspire fuller responses. The participant must always be kept in mind, therefore, when constructing the questions.

Piloting the interview schedule. Once the content and form of the questionnaire appear satisfactory, it should be subjected to critique or internal testing (Mann, 1985) to ensure its cogency. The following questions may guide this assessment (Chadwick, Bahr, & Albrecht, 1984):

1. Has the researcher included all of the questions necessary?
2. Do the questions elicit the types of response that were anticipated?
3. Is the language of the research instrument meaningful to the respondents?
4. Are there other problems with the questions, such as double meaning or multiple issues embedded in a single question?
5. Are the questions in logical order?
6. Finally, does the interview guide, as developed, help to motivate respondents to participate in the study?

Testing. Testing allows the interview schedule to be rehearsed in mock conditions that closely approximate the actual to amend it before main data collection. Pre-testing also allows the prospective interviewers to rehearse their interview performance. How participants respond to questions, whether the questions elicit the intended information, and the interviewers’ capacity to collect data are illuminated by this process such that amendments may be made in advance of actual interviews.
Using SSIs

As a Stand Alone Method

The interview schedule can be administered via written questionnaire, electronically (via chat rooms, virtual spaces, electronic mail), face-to-face, over the telephone, and as a component of a quantitative questionnaire (Fontana & Prokos, 2007). The following section identifies the relative advantages and disadvantages of each of these modes of administration.

Face-to-face. The face-to-face administration of the SSI has both advantages and disadvantages (Shuy, 2001). Among the advantages are the following: (a) The presence of the interviewer gives structure to the interview situation. Communication is optimized because both verbal and non-verbal communication is possible. More complex interview schedules are possible as the interviewer may clarify questions if the participant appears confused and unscheduled prompts that elicit clearer and more elaborate responses from participants may be improvised. In addition, visual aids may be presented to respondents to ascertain their perspectives. (b) The physical presence of the interviewer may allow him or her to discern any discomfort or unease on the part of the respondent and offer a break or emotional support, hence face-to-face may be a more ethical way to conduct the research.

Disadvantages may include the following: (a) Participants feel inhibited when asked to respond to sensitive questions face-to-face—more socially desirable answers and conventional answers may be given than when a self-administered questionnaire is utilized. (b) Unwanted interviewer affect is maximized in this type of interview. For example, the physical presence such as the appearance of the interviewer is known to affect respondents and their answers. The face-to-face interview maximizes the influence of the interviewer such that the responses from participants are very similar. (c) Conducting this type of interview is costly in terms of time and money. Fewer face-to-face interviews can be completed in a given time period than via other modalities, for example, Internet or telephone (de Leeuw, 2008).

Telephone interviews. The advantages of telephone administered SSIs include (a) enhanced accessibility to hard-to-reach populations such as those who are elderly, infirm, live in geographically remote locations, and for those who must participate surreptitiously, for example, women experiencing abuse; (b) exclusive auditory communication, that is, absence of visual cues means that any barriers are removed, for example, preconceived ideas about the interviewer caused by their appearance that may impede participants from fully expressing their perspectives; (c) telephone interviews may encompass a large geographic area including countries and continents; (d) they are less costly in terms of time and labor and are therefore more efficient. Furthermore, more interviews may be conducted in a given time period than might not be feasible with face-to-face interviews. Disadvantages include the following: (a) Recruitment may be compromised if prospective participants must pay long distance telephone charges to enroll or find out more information about a study, and (b) recruitment may be compromised if only participants who have access to a telephone or telephone coverage may participate (Liamputtong, 2007).

Using the Internet. The Internet is a medium for self-administered semi-structured questionnaires as well as conducting the interviews themselves (Fontana & Frey, 2005). The advantages of electronic modes of administration include the following: (a) Privacy—Some sensitive topic research suggests that people prefer the anonymity of the computer, than disclosing face-to-face (DiLillo, DeGue, Kras, Loreto-Colgan, & Nash, 2006). Although electronic mail makes identity difficult to protect, participants (including the interviewer) in interviews in virtual worlds such as Second Life may assume an avatar identity. (b) Recruitment—The Internet allows for fast collection of large numbers of questionnaires at low cost, and exploding the potential for global recruitment. The disadvantages may include the following: (a) Distress—Although participants may disclose more information in a self-administered questionnaire, some report feeling more distressed than when answering questions face-to-face with an interviewer (Halek, Murdoch, & Fortier, 2005). As the participant is not immediately accessible, the researcher cannot immediately respond therapeutically. (b) Recruitment—Not all prospective participants have access to the Internet. However, electronic administration provides an opportunity to those participants precluded from more typical modes of participation because of disability, age, or geographic isolation. (c) Data collection—Many people may “lurk” or not give the questionnaire adequate time; Internet questionnaires must be short, with less than 10 to 15 minutes to complete (de Leeuw, 2008). (d) Design of questionnaire—The design and implementation of Internet semi-structured questionnaires require highly skilled personnel who combine technical knowledge as well as knowledge on usability and visual design. This increases the cost of this mode of administration (de Leeuw, 2008).

As components of a quantitative questionnaire. SSIs may also be administered as a component of a quantitative questionnaire. This mixed design may combine the advantages of two administration strategies. The quantitative questionnaire serves as an objective instrument, the findings of which may be triangulated with the perspectives of the respondent in response to the open-ended questions of the interview. The timing of the administration of the questionnaire with respect to the interview may be critical—closed-ended questions posed first may inhibit more complete responses to those posed during the interview.

The data from SSIs have also been used in the creation of quantitative instruments. For example, the content analysis
of data derived from qualitative studies yields categories that are useful to the construction of a questionnaire. For example, Morse and Doan (1987) conducted a qualitative study to ascertain adolescent girls’ perspectives regarding menarche. Researchers used the data derived from that study in the construction of the Likert-type scale items for an adolescent menstrual attitude questionnaire (Morse, Kieren, & Bottorff, 1993).

**Sampling**

**Sample size for data adequacy.** Sampling for SSI research must be guided by the following principle to ensure the data collected are adequate. A minimum of 30 participants is recommended for initial recruitment to ensure adequate data collection. Adequacy of data in this type of research is defined in both qualitative (i.e., the depth of data collected) and quantitative terms (i.e., the number of datum collected).\(^1\) SSI data may be thin. Although participants know they are free to respond to questions as they wish, they are also aware that they are to respond to scheduled questions. Hence, participants may respond to categorical questions in kind. The complexity or simplicity of responses is also related to the topic of investigation, the mode of administration of the interview schedule (face-to-face may facilitate more elaborate responses than online or self-completed questionnaires), the participants (whether they are willing, reflective, articulate), the ability of the interviewer to draw people out, and how motivating the questions are for participants’ responses.

The second aspect of adequacy, however, is the sufficiency of the data for quantitative analysis. Because SSI data are collected with an interview schedule in which each participant is asked the same questions, data analysis proceeds by item. Such analysis is amenable to non-parametric statistical analysis (Morse, 1992). A sample size of 30 is the minimum number recommended for such statistical analysis to be meaningful. Finally, in addition to qualitative and quantitative analysis, data derived from SSIs may be used in a mixed-method design in which the qualitative data are transformed into numerical data.

**Sampling for appropriate data.** The second principle to guide SSI sampling ensures the collection of appropriate data; that is, data that are representative of the phenomenon under investigation. Sampling for SSI research is purposive; therefore, participants for SSIs are selected because of their particular experiences, perspectives, or expertise, and not because they are demographically representative of the larger population (Blee & Taylor, 2002; Rubin & Rubin, 1995). Purposive sampling is essential to SSI research to optimize valid findings that may be extended to other arenas. This is contrary to the literature that cites conscious bias as a constant danger with purposive sampling and advises that findings from studies that employ it be regarded with caution (LoBiondo-Wood & Haber, 2005). There are various strategies to purposively sample: convenient (eligibility criteria are posted and the first volunteers who meet it comprise the sample), snowball (people with inside knowledge of eligible participants connect them with the research project), homogeneous (people who are very similar), and variable (participants who represent the full scope of the domain).

**Example:** In the study that investigated the long-term impact of sudden infant death (Dyregrov & Dyregrov, 1999), the purposive sample was comprised of participants who had lost a child to SIDS (sudden infant death syndrome) between 1981 and 1984. The participants were people who were married couples at the time of the death of their child and who had previously been interviewed approximately 1 year after their loss. The couples were heterosexual to meet the dimension of gender important to the analysis of grief response.

**Data Analysis**

As noted, the objective of SSI research is to elicit and ascertain participants’ perspectives to confirm, correct, or discover new knowledge pertaining to the focus of inquiry. Therefore, the analysis of SSI data is designed to provide a comprehensive and accurate descriptive summary of participants’ perspectives. Unlike other research methods such as grounded theory or phenomenology, neither are SSI data usually abstracted into theory, nor are they mined to discern the essence of participants’ experience. Analysis remains close to the data.

Data analysis proceeds by (a) preparing the data for analysis, (b) conducting content analysis, and (c) if desired and the sample size is adequate, transforming the textual data into numerical data.

**Preparation of the data for analysis.** Preparing the interview data for content analysis involves the transcription of audio files to text, and importing transcripts into Computer Assisted Qualitative Data Analysis (CAQDA) software (Lewins & Silver, 2007).

**Transcription.** When having an audiotape transcribed, it is crucial that the tape be transcribed exactly (word-for-word) from the tape and not paraphrased. Identifying information that may compromise the privacy of the participants and/or those to whom they refer during the interview can be removed at this time to maintain confidentiality. If the researcher requires, symbols may be utilized to indicate the tone of the voice (e.g., tears, laughter, expletives), with pauses or gaps indicated by dashes or ellipses and emotion indicated by square brackets, for example, [fearfully]. All pages of the transcript are numbered and the participant number is placed before each item number (Morse & Field, 1995). Once the
transcript is returned from the typist, the content is checked against the audiotape to ensure accuracy of the data. If qualitative data software is to be used, a program that is capable of categorizing data by item, and then sorting/categorizing according to the research codes, should be selected.

**Conducting content analysis.** The purpose of content analysis is to sort and summarize the informational content of the data, by item and by common characteristics within the data.

**Qualitative content analysis.** The first task is to derive codes from the data. The researcher works by item, first reading all participants’ responses to the same question. The researcher then uses standard coding procedure, highlighting important words or phrases, and making notes in the margin that emphasize important features in each response. Once the researcher grasps the commonalities appearing in each response, the sorting process begins. Initially, keeping the categories broad, data are sorted according to similar characteristics and, once these categories become “cluttered” and lengthy, they are subdivided into smaller categories. Ideally, more that one researcher should code data, and inter-rater agreement calculated to determine reliability (Campbell, Quincey, Osserman, & Pedersen, 2013). A definition is developed and assigned to each category and a synthesizing statement about each category and subcategory is written.

**Data transformation.** Quantification or counting is not incongruous with, but integral to, qualitative research (Morgan, 1993; Morse, 2012; Sandelowski, 2000). Because every participant has been asked the same question in the same order, SSIs are amenable to counting by participant (Morse & Niehaus, 2009). The different types of responses to each categorical question stem may be tabulated and the responses expressed as percentages, frequencies, or non-parametric statistics, with the n (the sample size), as the total number of participants. Quantification, or displaying information numerically, allows patterns to emerge from the data with greater clarity (Sandelowski, 2000). Descriptive statistics such as calculating frequencies, relative frequencies, and means may be employed to discern, describe, and summarize such patterns—analytically and ideographically—if they exist, in the qualitative data. Non-parametric statistics may reveal relationship between items.

**Mixed-method design**

SSIs are the most common qualitative research method to be used in mixed-method designs—those that integrate qualitative and quantitative research (Bryman, 2006; Morse, 2012; Povee & Roberts, 2015). Indeed, every SSI study, therefore, may itself constitute a qualitatively driven, mixed-method design through the internal transformation of its data set from qualitatively analyzed textual data into numerical data for quantitative analysis (Morse & Niehaus, 2009).

**Example:** The study by Dyregrov and Dyregrov (1999) could have been a QUAL-QUAN mixed-method design. The interviews were conducted to ascertain participants’ perspectives and experiences regarding the death of their infants over time. Once the content of these responses have been qualitatively analyzed (i.e., coded and sorted for the purpose of describing and summarizing the responses), they could have been transformed from textual data to numerical data for the purpose of supplementary quasi-statistical analysis by non-parametric statistics.

**Transforming textual data to numerical data.** If researchers want to supplement the core qualitative analysis of the interview data with a quantitative component they must transform the textual interview data into numerical data. This transformation of data occurs after the qualitative content analysis is completed—that is, the supplemental component is conducted as a sequel.

First, however, a codebook must be created. This is accomplished by revisiting the categories that have emerged from the coding of data for each question. These categories as well as the inclusion and exclusion criteria and an example (from the data) of a code that belongs to it are entered as headers in the codebook. These categories are then tested against all the data that belong to each item. The categories must be discrete and comprehensive—all the data must fit into one of the categories. Different coders complete the process of tabulating data within the categories. Inter-rater reliability refers to the degree of confluence that exists among independent raters. Once the codebook is satisfactory, tabulation occurs—This results in frequency of categorical responses per participant. It is the establishment of frequencies that transforms the data from text to numbers. From these frequencies, other descriptive statistics such as relative frequencies may be calculated. With these numbers, non-parametric statistics such as chi-square may be used. The chi-square independence test is useful in determining whether there is an association or statistical dependence between two characteristics of a population.

**Example:** While investigating parental responses to the death of their infants over time (Dyregrov & Dyregrov, 1999), a pattern was discerned—marital communication about the death of their infant appeared to be correlated with less intense grieving; conversely, couples who did not communicate about their infant’s death experienced more intense grief. Tabulating the frequencies of categories pertaining to communication as well as those associated with grief reactions would make the data amenable to chi-square statistical analysis to discern whether or not a statistically significant relationship exists between these experiences.

Once the results of the quantitative supplementary component have been calculated, they serve to augment the results of the core component.
Results

Results of SSI research constitute descriptive summaries that are valuable primarily as end-products and, secondarily, as entry points for future study. The end-product is knowledge—either confirmation or correction of that which already exists or discovery of new knowledge. Results of SSI research may seem simple, that is, “mere” concrete description rather than abstract and theoretical. But this is deceptive—such research results are key pivots to the advancement of knowledge. This advancement of knowledge is far-reaching, influencing multiple disciplines and typologies of knowledge. SSI research can stand alone.

Conclusion

In this article, we have discussed how the SSI has developed from a research strategy to a prevalent and diversified research method. We traced the historical development of the SSI from its inception as a focused interview through its advancement via significant social, cultural, and historical moments. Such moments included the empathetic turn in interviewing, the contemporary privileging of quantitative research, and concomitantly the norming of research ethics review. Contemporary research methods adopt various philosophical assumptions rather than maintaining a tight theory-method commitment to a solitary philosophical foundation. SSI research is epistemologically versatile and compatible with quantitative, qualitative, and mixed-method approaches. We advance a typology of SSI that may be used as a strategy in an overall research design, a sequential or simultaneous supplement to the core in solitary philosophical foundation. 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