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# Breaching the Wall: Interviewing People From Other Cultures 

MELANIE J. BIRKS, MEd, RN<br>YSANNE CHAPMAN, PhD, RN, MSc, MRCNA<br>KAREN FRANCIS, PhD, RN, MEd<br>Monash University


#### Abstract

The interview as a data collection tool is an essential component of qualitative research. Many nurses are familiar with the process of interviewing through its use in the practice environment; however, in-depth interviewing for the purpose of research is a unique process. The ability to conduct an effective in-depth interview requires skill in the use of specific techniques, in particular when interviewing people from other cultures. A number of factors specific to the researcher, the participant, and the research context can affect the interview procedure. As global margins diminish, nurse researchers will increasingly find themselves working with people from ethnic groups that are different from the dominant culture. This article discusses strategies to improve the interview process in such circumstances. Techniques to enhance the process, along with avoidable potential pitfalls, will be illustrated using an example of conducting research with participants from the culturally diverse environment of Malaysian Borneo.


Keywords: Borneo; culture; interview skills; Malaysia; qualitative research

The effect of globalization witnesses many nurses living and working in multicultural environments. Our professional existence is no longer insular, as health care itself is a global issue. The implications of existing in this international environment are not confined to nursing practice. As our professional boundaries expand, so too does our research context. Issues pertaining to minority groups are often themselves the impetus for research of relevance to nursing practice. The opening of borders, both literally and through ever-advancing technology, further increases opportunities for researchers to interact with different ethnic groups. The conduct of research, therefore, is now more likely to involve the inclusion of participants from ethnic groups that differ from those of the dominant culture.

[^0]This article provides an introduction to the interview process as it applies to participants from a culture that is different from that of the interviewer. The discussion is drawn from the experience of conducting a research study in Malaysian Borneo. This location is a multicultural melting pot, being home to a variety of ethnic groups including Indian, Malay, and Chinese, along with more than 30 indigenous groups, such as Iban and Penan (Radhakrishnan, 2003). The focus of the study that gave rise to the interviews aimed to explore the effect that completion of a postregistration degree had on a group of registered nurses in this location.

It is acknowledged that it is not possible to discuss all of the cultural variations that the researcher is likely to encounter when conducting a study. Nevertheless, through an exploration of the lessons learned when conducting research in a culturally diverse environment, this article provides guidelines to support the development of cultural competence as it pertains to the interview process.

## QUALITATIVE INTERVIEWING

Qualitative approaches to research are effective in permitting an exploration of unique social environments and the individuals whose existence in a given time or place constructs such contexts (Roberts \& Taylor, 2002). The strategies employed to gather data when undertaking research using an interpretive paradigm will vary with the methodology that guides the study. For many research methodologies, however, the use of interview is an indispensable tool in the research process.

Phenomenology, grounded theory, and ethnography rely, in particular, on in-depth interviewing as a means of obtaining information from the perspective of the participants and informants themselves. In-depth interviewing permits collection of data from the viewpoint of those who experience the phenomena of interest, including the meaning that these individuals assign to the experience (Seidman, 1998).

As part of their daily work, nurses often engage in the process of interviewing, for example, when obtaining a health history from a patient or client or when assessing knowledge
prior to implementing a health promotion or education program. The use of interviewing for the purpose of research is, however, quite different from the purposes with which many nurses are most familiar (Tollefson, Francis, Usher, \& Owens, 2001). Coupled with this prior knowledge, frequent exposure to the process of interviewing as portrayed through the media often leaves the novice researcher with a false sense of confidence concerning the complexities inherent in in-depth interviewing for the purpose of qualitative research (Minichiello, Aroni, Timewell, \& Alexander, 1995).

A number of valuable texts have been written that provide a comprehensive guide for researchers to develop skills in effective in-depth interviewing (e.g., Minichiello et al., 1995; Rubin \& Rubin, 2005; Seidman, 1998). Many researchers have also reported their experiences in conducting interviews in specific circumstances or environments (Borbasi, Gassner, Dunn, Chapman, \& Read, 2002; Britten, 1995; Tollefson et al., 2001). Other authors have discussed observations gathered during the conduct of interviews with specific ethnic minority groups as part of their own research (Chapple, 1998; Watson, Hodson, \& Johnson, 2002). Still others examine the interview process in the context of specific methodologies (Sorrell \& Redmond, 1995; Wimpenny \& Gass, 2000). There is, however, little material in the recent literature relating to interviewing people from other cultures. This particular gap in interviewing knowledge was the impetus for this article.

## FACTORS INFLUENCING THE INTERVIEW PROCESS

Several factors have the potential to influence the effectiveness of an interview with a person from another culture. These can be classified as researcher-specific, participantspecific, and context-specific factors. As indicated in Figure 1, these factors combine to influence the effectiveness of the interview process. Further details of what makes up each factor grouping is the substantive premise of this article. Much of the discussion is relevant to the process of interviewing for the purpose of research, generally. Each issue is highlighted in this discussion in relation to its particular significance when the interviewee is from a different culture.

## Researcher-Specific Factors

Many of the factors that have the potential to influence the interview process are inherent within, or controlled by, the researcher themselves. These six factors are summarized in Figure 2 and outlined in detail in the following discussion.

## Interviewing Skills

As mentioned previously, it is not uncommon for beginning researchers to underestimate the complexities inherent in the interview process. It is therefore essential that before embarking on data collection, the researcher has knowledge of the principles of interviewing. Such knowledge can be


FIGURE 1. Factors Influencing the Interview Process.


FIGURE 2. Researcher-Specific Factors.
acquired through detailed reading of texts (such as those mentioned above) and other literature. In addition, it is strongly recommended that some practice be undertaken in conducting interviews before entering the research setting. Where possible, this preparation should be undertaken with persons who are from the cultural group to be interviewed. Conducting preliminary practice permits testing of the interview
questions, highlights weaknesses in interview skills, and identifies potential pitfalls in the interview strategy.

## Preparedness

The importance of preparation for the interview cannot be overstated. A well-developed research proposal will summon the right questions to be asked at interview. In addition, identifying the gap in the literature and posing a methodologically sound research question is essential in tailoring questions of precision. Asking accurate questions, though, is only half the equation. Posing the questions to the appropriate people so that answers will illuminate the research question is the next important step in the process of interviewing. Identification of the participant group is also an ethical issue and one that requires scrutiny and advice from an associated ethics committee.

## Knowledge of Culture and Environment

The researcher undertaking a study involving people from other cultures must possess at least a basic understanding of the relevant culture of the potential participants and their environment. In addition to personal experience, the literature, Internet, and cultural organizations can be valuable in providing such information. A fundamental understanding of these factors not only is important for the purpose of ensuring that the strategies employed during the interview itself are appropriate, but may also prove necessary to negotiate access to the research setting and participants. Researchers may also find that a solid understanding of the culture and environment is necessary to defend questions raised by a concerned ethics committee, in particular where they seek to access minority groups considered at risk. This was certainly the case in the research involving postregistration nurses in Malaysian Borneo, where the researcher's knowledge of the study environment and its people was found to be invaluable in allaying the concerns of the ethics committee with regard to the potential vulnerability of the participants.

## Ability to Establish Rapport

The initial phase of the interview is critical in determining how it will proceed and will ultimately influence its final outcome or success. Establishment of a solid rapport between the interviewer and participant is an essential element in any research setting. Both parties must be secure in the level of comfort and trust in the research relationship before the focus of the research is broached (McCaffrey, 2003). Seidman (1998) recommends the use of a three-stage interview process, such as is used in phenomenological studies, to enable rapport to be built over time. His own experience in overcoming barriers when interviewing African Americans has demonstrated this to be an effective approach for use with minority groups. In studying nurses in Malaysian Borneo, the use of repeat interviews was also identified as a strategy to enhance the level of comfort of the participants and
therefore the breadth and depth of the information provided by them.

## Communication Skills

It may seem redundant to state that competency in communication is a prerequisite for conducting in-depth interviews. Communication encompasses language, the way in which it is used, and the nonverbal expressions that accompany it. In this discussion, we are focusing on the process of interviewing persons from another culture in English, where English is unlikely to be their first language. Interviewing participants in their native language through the use of interpreters is a unique situation and the reader is referred to specialized literature for guidance in such circumstances (e.g., Munoz \& Luckmann, 2005; Victorian Transcultural Psychiatry Unit, 2005).

The researcher should be careful not to make assumptions about the level of English proficiency when working with a participant whose first language may be something other than English. In the case of nurses working in Malaysian Borneo, for example, where English is widely spoken, the standard of English proficiency is quite high. It is important, however, to be aware of the variations in accent and expression that may prove confusing for the participant. Understanding of an Australian accent, for example, for those schooled in British English and who are familiar with American English through television programs, may require time for adjustment. Rephrasing of statements and use of examples may be necessary to ensure clarity of the information being sought.

Basic communication strategies such as the use of openended questions are the mainstay of in-depth interviewing, as they elicit greater depth and breadth of information (McCaffrey, 2003). It is equally important to ensure that singular questions are used. It is easy to fall into the trap of asking more than one question in any one sentence, resulting in confusion for the person being interviewed (Patton, 2002) and the possible loss of important information. As an example, while interviewing one of the participant nurses in Borneo, the interviewer asked, "How do you feel you have changed as a person following completion of the degree and how has this impacted on your relationships with colleagues?" It is fortunate that the participant was able to tease out the questions and responded to both. It could be argued, however, that the answer may have been abbreviated to address both questions in a single response.

Conversely, researchers must be careful not to modify their own communication technique to the other extreme. Overly simplifying statements, repeating questions, and laboring the point is a potential outcome where the researcher is keen to be understood, as was the case during some of the interviews conducted with the nurses in Borneo. This manner can appear patronizing to the participant and can be detrimental to the flow and direction of the interview.

## Control of Process

The path that an interview may take will vary, as no two interviews are the same. The ability to guide the interview is important to ensure the appropriate use of the valuable time that is spent with each research participant. Skills in managing the interview process are therefore essential and may only be developed with considerable experience. Often, these skills are employed when the individual who is being interviewed moves the discussion away from the focus of the interview. In researching the graduates in Borneo, the tendency to digress was common, frequently as a result of uncertainty about what was being asked. Attentive listening and provision of feedback to redirect the discussion can be valuable strategies to keep the interview on track (Patton, 2002).

The use of interview guides can be useful in such circumstances. Interview guides, or schedules, contain questions or topic areas that may assist the researcher in ensuring that all aspects are explored. Seidman (1998) cautions against overreliance on interview guides, however, as they may impose the perspective of the researcher onto the process. Qualitative, in-depth interviews must be flexible. The information that is sought is from the perspective of the participant and the use of a rigid framework may result in a directive approach that renders the story that the researcher expects or wants to hear, rather than a narrative account from the perspective of the person being interviewed. This tendency to favor a structure can be problematic, in particular, where the person being interviewed is culturally determined to please or has incorrect assumptions about what is required, as discussed below. For this reason, cautious use of a schedule of topic areas to guide the interview is recommended, in particular for the beginning researcher.

## Participant-Specific Factors

As the focal point of the interview, the research participant brings with him or her a number of personal and experiential facets that can potentially have a bearing on how the interview will proceed. These are summarized in Figure 3.

## Level of Anxiety

It is not unusual for a research participant to attend an interview with some anxiety about what will occur. More than once during the interviews with nurses in Borneo, a participant would express concern that they might not have the "right answers" to the questions asked. For this reason, it is important to commence the interview with topic areas that the participant feels comfortable discussing (Rubin \& Rubin, 2005). In the aforementioned study, asking questions about how the participants came to choose nursing as their career was effective in increasing participant confidence. Although such questions may not be directly related to the research topic, they may provide valuable background information. This informal questioning approach is also effective in helping to build rapport with the participant and allaying


FIGURE 3. Participant-Specific Factors.
participant anxiety (Minichiello, Sullivan, Greenwood, \& Axford, 2004).

## English Proficiency

When interviewing people from a different cultural background, in particular when English is their second language, a common cause of anxiety is their concerns about their ability to express what they mean appropriately and be understood. In particular, knowing that what they say is being recorded can be an added source of anxiety that can further stifle the conversation as participants are concerned about making a mistake in expression and having this blunder indelibly recorded. The strategies for making the participant feel at ease as discussed above come into play here, including reassuring them about their ability to be understood and the confidentiality of their responses. Although in most instances the research participants will happily consent to being recorded, the researcher should consider whether the advantages provided by recording the interview outweigh the potential for loss of depth that may accompany this process. Again, the multiple stage interview approach as recommended by Seidman (1998) can be a useful strategy in such circumstances.

Lack of familiarity with the language being used, coupled with any anxiety he or she may be experiencing, can result in minimal responses from the participant to questions posed during the interview. Stunted interview responses can be frustrating for the interviewer and can further increase the discomfort of the participant. In such circumstances, Minichiello et al. (1995) recommend the use of probing questions to draw out responses. The researcher must have considerable skill in the use of verbal and nonverbal strategies to enable the
interviewee to feel comfortable exploring the topic area in question (Holloway \& Wheeler, 2002). Active listening, facilitation, and appropriate use of body language such as eye contact may be critical in establishing an atmosphere conducive to unreserved communication.

## Desire to Please

Values held by research participants from different cultural backgrounds may determine how they respond to the interview situation. In Asia, for example, values common to people from that continent include respect for authority and conformity (Munoz \& Luckmann, 2005). This trait was borne out during the interviews in Malaysian Borneo, where many of the participants demonstrated a strong desire to please the interviewer. In some instances, participants were clearly telling the interviewer what they thought she wanted to hear. On one occasion, the informant almost repeated verbatim what the interviewer was saying. The desire to please the interviewer is not uncommon in in-depth interviewing. Once again, strategies aimed at developing the relationship between both parties can assist in overcoming this potential barrier to the disclosure of information (Holloway \& Wheeler, 2002). It may be the case that participants do not have a clear understanding of their role in the research or what is expected of them. Ensuring that participants are fully informed about the aims and focus of the research study, where appropriate, and the use of appropriate questioning techniques can alleviate this problem.

## Context-Specific Factors

As can be seen from the above discussion, the researcher and participant exert a number of influences on the interview process. Several potentially influential factors also exist within the context in which the interview is conducted. These may range from tangible elements such as the physical environment to intangible issues such as cultural variances. These factors are identified in Figure 4.

## Location

Consideration must be given to the location where the interview will be conducted. A quiet, comfortable location that is convenient for the participant and free from interruptions is ideal. Often, interviewing people from a different culture entails travel to where they are located, without prior opportunity to assess the suitability of the venue to be used. As far as possible, care should be taken to ensure that an appropriate room in a neutral location is secured to ensure the success of the interview.

## Time

Interviews should be arranged at a time most suitable for the participant, to avoid them being distracted by the need to be elsewhere. It is important to inform the participant well in advance of the time commitment required for the interview. The researcher should ensure that the time frame that


FIGURE 4. Context-Specific Factors.
is allocated for each participant includes a buffer period to address preliminary matters such as ensuring an understanding of their involvement in the study. Obtaining a valid and informed consent, for example, may involve quite a different process when conducting research with a non-Western cultural group (Barrett \& Parker, 2003). It is important to note that time can have a different priority in different cultures, resulting in scheduling being beyond the control of the interviewer. Participants may run late, interviews may run over, and offers of hospitality may not be rejected for fear of offending.

Interviewing can be demanding both physically and emotionally (Minichiello et al., 2004). Interviews should therefore be scheduled and paced to reduce the amount of fatigue for both the interviewer and the interviewee. Rubin and Rubin (2005) emphasize the importance of adequate spacing of interviews. As working with people from a different ethnic group can raise accessibility issues and entail travel, instituting an ideal interview schedule might not always be possible and it may be necessary to cluster interviews for practical purposes. Interview plans may also be aggravated by the desire to please within some groups as discussed above. Recruitment strategies for the study involving nurses from Borneo proved so successful that several eager participants attended on one occasion without notice, which resulted in a number of interviews being conducted in a single day. Successive interviewing affects the ability to reflect on the content of each interview or to prepare adequately for subsequent interviews (Rubin \& Rubin, 2005). Furthermore, it has implications for the legitimacy of the research process, in particular for methodologies that require detailed data analysis to be conducted
between interviews (Strauss \& Corbin, 1998). The researcher must, however, be flexible, realistic, and practical while remaining true to the methodological approach that guides the study.

## Cultural Mores

Consideration must be given to customs relevant to the cultural group. Being familiar with cultural mores will create an awareness of barriers or boundaries that it may be prudent to observe in the process of data collection. These may range from avoidance or rephrasing of inappropriate questions to observation of cultural etiquette (Patton, 2002) and subtleties of verbal and nonverbal communication. Silence, for example, is often employed as a technique to encourage participants to provide or enhance a response in an interview situation (Seidman, 1998). In some cultural groups, the use of silence may be uncomfortable (Berg, 2004) and it should be used judiciously as it may result in feelings of embarrassment or self-consciousness in the participant. Equally, caution should also be exercised when participants offer only minimal responses as there is temptation to fill the void by talking excessively. This reaction is the case for the novice researcher, in particular, who may have yet to develop techniques in in-depth interviewing.

## Ethical Issues

Conducting research in different cultural contexts can raise problems when attempting to secure approval from institutional ethics committees. Ethics committees operate as gatekeepers, protecting the rights of participants in research studies (Minichiello et al., 2004). Often, lack of familiarity with cultural norms can lead ethics committees to err on the side of caution when assessing an application for approval to conduct a study. Interpretations of what may be ethically appropriate in Western society may be incongruent with the cultural mores of other ethnic groups (Barrett \& Parker, 2003). As an example, in Malaysia, relationships as the basis of communication and the importance of maintaining face are key elements of the culture (Gorrill, 2005). In such an environment, potential participants value a personal, individual invitation to be involved in a study. As ethics committees are obliged to protect the privacy of potential participants and guard against possible coercion, such a direct approach may be prohibited.

Additional problems will also often arise when approval is sought from ethics committees from both the home institution and those in another country. To instill confidence in the authorities assessing the ethical integrity of the application, the researcher must demonstrate a thorough understanding of the culture into which he or she is entering, along with competency in the research process. There is also an obligation to provide as much information as possible to those assessing applications for approval to conduct research, to ensure that an understanding of the unique facets of the particular cultural environment is facilitated.

## CONCLUSION

Qualitative research methods provide a means by which the social world can be understood from the perspective of those who inhabit it. The meaning given to experiences of participants in the natural setting is emphasized in this approach to research (McCaffrey, 2003). Given that such social contexts vary considerably from culture to culture, the ability to effectively explore the world of the participant through in-depth interviews is a necessary prerequisite to any study conducted within a qualitative paradigm.

The need for the researcher to develop skills in in-depth interviewing cannot be overstated (Britten, 1995), and those new to the process are encouraged to ensure that they are proficient in the techniques required before entering the field. It should be noted that the process of developing skills, improving techniques, and gaining experience as an interviewer is ongoing. Much can be learned from critical revision of interview tapes and transcripts, through identification of strengths, weaknesses, and areas for improvement (McCaffrey, 2003; Rubin \& Rubin, 2005).

Development of expertise through experience is important, in particular, when working with participants from other cultures where unique conditions exist that may potentially influence the interview process. Researchers need to be cognizant of three main factor classifications that underlie all interviewing: researcher specific, participant specific, and context specific. With prior knowledge of what is contained in each classification, researchers can identify their own areas of knowledge deficit and engage in educational activities that inform their comprehension of interviewing.

## REFERENCES

Barrett, R. J., \& Parker, D. B. (2003). Rites of consent: Negotiating research participation in diverse cultures. Monash Bioethics Review, 22(2), 9-26.
Berg, B. L. (2004). Qualitative research methods for the social sciences (5th ed.). Boston: Pearson.
Borbasi, S., Gassner, L., Dunn, S., Chapman, Y., \& Read, K. (2002). Perceptions of the researcher: In-depth interviewing in the home. Contemporary Nurse, 14(1), 24-37.
Britten, N. (1995). Qualitative interviews in medical research. British Medical Journal, 311(6999), 251-253.
Chapple, A. (1998). Interviewing women from an ethnic minority group: Finding the sample, negotiating access and conducting semi-structured interviews. Nurse Researcher, 6(1), 85-92.
Gorrill, J. R. (2005). Malaysian social and business culture: A Malaysian cultural overview. Retrieved November 11, 2005, from http://www .communicaid.com/pdf/Malaysia\%20Fact\%20File.pdf
Holloway, I., \& Wheeler, S. (2002). Qualitative research in nursing (2nd ed.). Oxford, UK: Blackwell Science.
McCaffrey, K. J. (2003). Using qualitative methods in health research: A practical guide to qualitative interviewing. Australasian Epidemiologist, 10(2), 18-23.
Minichiello, V., Aroni, R., Timewell, E., \& Alexander, L. (1995). In-depth interviewing: Principles, techniques, analysis (2nd ed.). Melbourne: Longman.

Minichiello, V., Sullivan, G., Greenwood, K., \& Axford, R. (2004). Handbook of research methods for nursing and health science (2nd ed.). Frenchs Forest, NSW: Pearson-Prentice Hall.
Munoz, C. C., \& Luckmann, J. (2005). Transcultural communication in nursing (2nd ed.). Clifton Park, NY: Thomson/Delmar Learning.
Patton, M. Q. (2002). Qualitative research \& evaluation methods (3rd ed.). Thousand Oaks, CA: Sage.
Radhakrishnan, A. (2003). Malaysia. Singapore: Times Editions.
Roberts, K. L., \& Taylor, B. J. (2002). Nursing research processes: An Australian perspective (2nd ed.). South Melbourne: Nelson.
Rubin, H. J., \& Rubin, I. (2005). Qualitative interviewing: The art of hearing data (2nd ed.). Thousand Oaks, CA: Sage.
Seidman, I. (1998). Interviewing as qualitative research: A guide for researchers in education and the social sciences (2nd ed.). New York: Teachers College Press.
Sorrell, J. M., \& Redmond, G. M. (1995). Interviews in qualitative nursing research: Differing approaches for ethnographic and phenomenological studies. Journal of Advanced Nursing, 21(6), 1117-1122.
Strauss, A. L., \& Corbin, J. M. (1998). Basics of qualitative research: Techniques and procedures for developing grounded theory (2nd ed.). Thousand Oaks, CA: Sage.
Tollefson, J., Francis, D., Usher, K., \& Owens, J. (2001). What you ask is what you get: Learning from interviewing in qualitative research. Contemporary Nurse, 10(3/4), 258-264.
Victorian Transcultural Psychiatry Unit. (2005). Draft guidelines for working effectively with interpreters in mental health settings. Retrieved November 10, 2005, from http://www.vtpu.org.au/resources/publications/ guidelines.php

Watson, J., Hodson, K., \& Johnson, R. (2002). Developing strategies to gather information about the maternity experiences of indigenous women in an acute care setting. Australian Journal of Rural Health, 10(3), 147-153.
Wimpenny, P., \& Gass, J. (2000). Interviewing in phenomenology and grounded theory: Is there a difference? Journal of Advanced Nursing, 31(6), 1485-1492.

Melanie J. Birks, MEd, RN, is a PhD Candidate in the School of Nursing and Midwifery at Monash University, Gippsland Campus, Churchill, Victoria, Australia. She received her Masters degree in Education from the University of New England at Armidale, NSW. Her research and teaching interests include cross-cultural/ international education and distance education.

Ysanne Chapman, PhD, RN, MSc, MRCNA, is an associate professor in the department of School of Nursing and Midwifery at Monash University, Gippsland Campus. Her PhD is from The University of Adelaide; her dissertation topic was the experience of sadness in community nurses who give palliative care. Her research/teaching/clinical interests include end of life care, cardiac care, palliative care in acute care settings, qualitative research in nursing, nursing education, and nursing in different cultures.

Karen Francis, PhD, RN, MEd, is a professor of Rural Nursing in the School of Nursing \& Midwifery at Monash University, Gippsland Campus. She received her PhD in community nursing from Adelaide University. Her teaching and clinical interests include community nursing, rural health, and rural nursing.


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