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Cultural Consensus and Cultural Diversity

A Mixed Methods Investigation of Human Service Providers' Models of Domestic Violence

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This study uses mixed methods and theory from cognitive anthropology to examine the cultural models of domestic violence among domestic violence agency workers, welfare workers, nurses, and a general population comparison group. Data collection and analysis uses quantitative and qualitative techniques, and the findings are integrated for interpretation. Findings reveal consensus among service providers on how controllable domestic violence factors are and whether they are most characteristic of victims or perpetrators, but diversity with regard to their understandings of the importance of the factors suggesting that occupational category alone is inadequate in predicting service providers' beliefs and subsequent delivery of services. The implications of the findings extend into the areas of domestic violence service delivery, cognitive anthropology, and mixed methods research.

Keywords: *cultural consensus analysis; domestic violence; cultural models; human service providers*

Is there a shared foundation for talking about domestic violence that can link providers from different human service fields? This research was undertaken to answer that question, applying a distributive model of culture to the issue of domestic violence. Communication skills are essential for human service providers because they must communicate on a daily basis with the persons they serve, their coworkers, and often—to best serve their clients—with other providers with whom their clients interact. Ideally, diverse human service providers would share an understanding of the issues that affect their clients. One such issue is domestic violence, a social problem that, research suggests, human service providers poorly understand and disagree regarding its causes and appropriate treatment (see Davis, 1984; Henderson, 2001; Minsky-Kelly, Hamberger, Pape, & Wolff, 2005). In the past 20 years, domestic violence services have improved and programs have become more coordinated with other services (including police responses), but issues of high staff turnaround, internal agency conflicts, and unstable funding sources continue to hamper service effectiveness (Davis, Hagen, & Early, 1994). Another issue, and the one on which this research focuses, is the differences in the ways different service providers might conceptualize domestic violence.

Victims of domestic violence are likely to come into contact with a variety of different social service providers, even though they might not enter domestic violence-specific

services (Davis, 1984; Henning & Klesges, 2002). Providers who work in the areas of health care and welfare benefits are important but often overlooked people who can provide and refer victims to critical services. These providers are in a unique position to become sources of support for victims who might not otherwise have their needs addressed (Eisikovits & Buchbinder, 2000).

Research has demonstrated, however, that the services provided to victims can sometimes be unhelpful, unproductive, and even harmful (Brandwein & Filiano, 2000; Saunders, Holter, Pahl, Tolman, & Kenna, 2005). Providers sometimes fail to identify victims or provide inappropriate services (Brandwein, 1999; Eisikovits & Buchbinder, 2000), in part because victims are often not the main priority for these service providers (Brandwein, 1999) and/or they do not feel qualified to address victims' specific needs (Garimella, Plitchta, Houseman, & Garzon, 2000; Henderson, 2001). Some human service providers express more concern for the impact of domestic violence on children than on the adults involved (Kohl, Edleson, English, & Barth, 2005; Postmus & Ortega, 2005) and/or endorse stereotypes and myths about domestic violence (Danis & Lockhart, 2003), including seeing victims as being at least partly responsible for the abuse they experience.

Research has found that when resources are scarce, as is often the case for human services, the distribution of those resources depends at least in part on providers' perceptions of their clients' needs, why they have those needs, and expectations that scarce resources will be used efficiently (Corrigan & Watson, 2003; Greenberg, 1981). These issues relate to tendencies for service providers to blame victims for their troubles (Danis & Lockhart, 2003; Davis & Carlson, 1981) and suggest that exploring service providers' beliefs regarding causation is crucial.

Although research on attitudes and beliefs about domestic violence has offered some interesting insights, most research has neglected to adopt a strong theoretical framework and has not paid sufficient attention to integrating methodological approaches. Most studies examining service providers' beliefs and experiences have been either purely quantitative or qualitative. Very few studies have integrated the two approaches, combining the sophistication of statistical analyses with the richness of in-depth interviews and thematic analysis to allow stronger inferences about the findings (see Teddlie & Tashakkori, 2003). This study seeks to fill this gap in the literature while providing an update to the Davis (1984) survey research that compared the largest number of different service providers.

A mixed methods approach is particularly useful in domestic violence research for several reasons. Two issues with survey research in this area are the assumptions that the researcher and the participant share perspectives of the world and that self-reports are honest and accurate (Schwarz, 1999). These assumptions are potentially problematic because research has suggested that people might be reluctant to endorse domestic violence stereotypes (Collins, 2002) and will not admit to being unwilling to intervene in domestic violence situations (Collins & Friedman, 1995). As a result of the Violence Against Women Act and accompanying policy changes, human service providers are increasingly undergoing domestic violence training, which effectively sensitizes them to domestic violence issues, even if their behavior or beliefs do not change. It is critical, then, to use another approach for collecting data if we hope to better understand how and why service providers make judgments and decisions about domestic violence victims and situations.

A mixed methods approach is particularly well suited for domestic violence research because of the multiple levels on which domestic violence services themselves operate. Specifically, broad, macro policy issues in government on down into and across agencies have a great deal of impact on domestic violence services that are delivered on a micro or individual level via individual service providers. A mixed methods approach is ideal for capturing elements at different levels of detail. Any effort to understand these multiple levels must use both qualitative and quantitative perspectives, which allows the capture of an understanding of overall attitudes and the richness of provider and client experiences. Ultimately, integrating the two will enable researchers to get a more complete picture of experiences and better identify areas for improvement.

Because the human service system in the United States is fragmented—at best a loose safety net made up of different providers dealing with similar problems—it is critical that human service providers communicate and cooperate with one another if they are to best serve their clients. Having some knowledge of how providers understand the issues with which they deal, and whether these understandings are shared with others, both within and outside their particular service areas will shed light on the effectiveness of services. Thus, we examine the distribution of cultural models of domestic violence within and between groups of human service providers who deal with domestic violence.

Cognitive Anthropology and Cultural Models

The subfield of cognitive anthropology provides a useful theoretical orientation in the study of culture. This perspective suggests that culture is composed of an interconnected framework of schematized, shared knowledge that constructs meaning, represents social reality, directs behavior, and facilitates the interpretation of behavior (D'Andrade, 1984, 1999). Each person's cultural model of a phenomenon is thought to be composed of one part individual biographical/idiosyncratic experience and another part culturally transmitted information shared with others in the cultural group (Shore, 1996). Sharing, then, is central to understanding culture. The questions posed here are examined using cultural models and, in particular, the cultural consensus model, developed by Romney, Weller, and Batchelder (1986), which tests the assumption that a single model organizes the domain of interest. At the same time, it can be used to examine intracultural diversity and the variable distribution of knowledge of a domain both within and between groups (Pelto & Pelto, 1975; Shore, 1996; Weller, 1983; Weller & Baer, 2002).

If sharing is so important, we might ask how sharing comes about and what its forms are. Although many studies have sought to determine whether shared models exist, other research suggests that analyses of the degree and pattern of sharing demonstrate the richness and diversity of such sharing (see Caulkins & Hyatt, 1999; Chavez, Hubbell, McMullin, Martinez, & Mishra, 1995; Garro, 1986; McMullin, Chavez, & Hubbell, 1996). Some studies have found that a complex interplay between a person's status and their interactions with others influences cultural sharing (McMullin et al., 1996; Swartz, 1982). Other studies have identified the behavioral manifestation of shared cultural models, suggesting their importance to understanding behavior (see Chavez, McMullin, Mishra, & Hubbell, 2001; Dressler & Bindon, 2000). Cognitive anthropological researchers have developed methodological approaches for measuring and comparing shared

cultural models. These methods strive to minimize the etic (researcher-determined) and maximize the emic (participant-determined) aspects of the research and thus mix qualitative and quantitative data collection techniques in that goal (see Tashakkori & Teddlie, 1998).

Cultural Domain Analysis and Mixed Methods Research

The approach to data collection discussed in this article is described by Bernard (2006) as "cultural domain analysis." The aim of cultural domain analysis is to elicit from individuals the terms they use to describe some organized sphere of knowledge—the cultural domain—and then to try to discover the salient dimensions of meaning they use to distinguish similarities and differences among those terms. The theoretical and methodological foundations of contemporary cultural domain analysis are found in the intersection of cultural and linguistic analyses developed in anthropology in the 1950s (Goodenough, 1956). The goal is to generate a valid emic description of some domain—that is, a description that remains true to the terms that participants in a particular social setting themselves use to talk about that domain.

Cultural domain analysis represents an important tool in the repertoire of the mixed methods researcher, especially because the methods of cultural domain analysis enable the researcher to seamlessly move from purely qualitative, open-ended interviews to measurements of both the similarities and differences in meaning among terms within a domain and the location of individuals in that space of meaning. Cultural domain analysis begins with open-ended interviews. These can consist of both traditional, semistructured interviews, and somewhat more specialized interviews such as the free list. The aim of each analysis is to generate the terms that individuals use to talk about a particular cultural domain. Once a set of terms has been generated that make up a domain, the similarities and differences in meaning among those terms is explored using a variety of interviewing techniques. The unconstrained pile sort is perhaps the best example of the permeable separation of qualitative and quantitative data. In the unconstrained pile sort, the participant simply indicates how terms are grouped together on the basis of similarity in meaning and separated from other terms in other groups on the basis of differences in meaning. This requires no estimation of quantities on the part of the participant, nor does it impose quantities in the sense of a predefined measurement model; however, the unconstrained pile sort results in a full, square, symmetric matrix of term-by-term comparisons for each participant, where each cell represents the purely qualitative judgment of similarity or difference in meaning, and these individual matrices can be aggregated for the entire sample. Then, using nonmetric multidimensional scaling (MDS; other flexible techniques of numerical induction such as cluster analysis and correspondence analysis can also be used), precise, metric information can be obtained regarding the similarities and differences in meaning among terms by transforming the purely qualitative judgments into distances. In a very real sense, then, within the approach of cultural domain analysis, there is literally no difference between the qualitative characterization of meaning and the quantification of that characterization.

The utility of that characterization can be assessed in a variety of ways, not least of which are the various goodness-of-fit indices used in MDS. But in analyzing a cultural domain, one can make a next step. During the interview for an unconstrained pile sort,

participants will discuss, almost always spontaneously, their thinking process in allocating terms to groups. Based on that information, the researcher can construct another task in which, for example, the participants rate terms according to hypothesized dimensions of meaning. Here, the researcher has taken one step away from a purely qualitative interview by asking the participant to impose a quantified structure on the terms, although a minimal structure (i.e., what terms represent more or less of a given dimension of meaning). These data can then be evaluated against the results of the MDS by using a Property Fitting (PROFIT) analysis. In PROFIT, the ratings of terms as representing more or less of a given dimension of meaning are regressed (using ordinary least squares regression) on the coordinates that locate those terms as similar or different in meaning from the MDS. The results of this analysis literally tell the researcher the degree to which terms are distant from one another in space, or close to one another in space, based on their shared similarity in ratings on that dimension of meaning. In other words, it leads us to ask the question, how well can the purely qualitative judgments of participants in a pile sort be explained by their more graded evaluation of meaning along a given continuum or dimension of meaning? Again, there is a seamless movement from the qualitative to the quantitative.

On first being exposed to cultural domain analyses, some researchers react as though these are an interesting set of party tricks, tantamount to the parlor game of 'Twenty Questions' except that they offer little of practical value in research. But a researcher interested in how the participants in a social setting make sense of the world around them—or how they construct a culturally meaningful representation of the world—will find the precision of these techniques to be useful, especially the systematic link of the qualitative and the quantitative. At the same time, however, most researchers' interests (including our own) are not exhausted by an analysis of how people use words; they are, rather, interested in individual differences among participants in a social setting and the implications of those differences for some outcome. Two approaches have been used to explore these questions. Within the conventions of cultural domain analysis, the cultural consensus model (Romney et al., 1986) has been used to quantify the degree to which individuals agree on the ratings of the meaning of terms. Each individual can be assigned a cultural competence coefficient that indicates how closely he or she corresponds to others' ratings of the terms. In a real sense, this locates the participant in the space of meaning defined by that cultural domain. Does he or she command as much knowledge of the meaning of terms as others? This, in turn, can be used as an independent or dependent variable in any analysis. The key point here is that methods of cultural domain analysis enable the researcher to move seamlessly from unstructured interviews to a numeric characterization of both meaning and behavior. As such, it represents an important set of tools for mixed methods researchers.

An extension of cultural domain analysis to more conventional individual difference analyses has been developed by Dressler (2007) under the rubric of "cultural consonance." Cultural consonance refers to the extent to which individuals, in their own beliefs and behaviors, correspond to the shared beliefs and behaviors encoded in cultural models. The nature of the cultural model of some domain can be revealed by cultural domain analysis. Dressler then uses those results to construct measures of individual difference. Greater cultural consonance in a variety of different cultural domains has been found to be associated with better physical and mental health.

This study uses the methods of cultural domain analysis to address whether providers of services to domestic violence victims think about domestic violence in similar ways—that is, whether they share cultural models of domestic violence. Specifically, the research questions were the following: (a) What terms do human service providers use to explain their beliefs about the causes of domestic violence? (b) How do human service providers organize and categorize these terms? (c) Do human service providers share an understanding of domestic violence with one another, and how are these beliefs distributed? In answering these questions, we examine the distribution of cultural models and illustrate the usefulness of mixed methods research in gaining a better understanding of the thoughts and behavior of professionals who deliver vital human services to victims of domestic violence and their families.

Method

Research Setting and Participants

The research reported in this article took place in a small city in the southern United States, which is surrounded by rural communities and is home to the state's flagship university. The city is thus a center for services to the west-central region of the state, including educational, health, and human services. This made it an ideal place from which to sample a number of different service providers. Four major groups were sampled: welfare workers, domestic violence workers, nurses, and members of the general population. Because we sought participants within particular occupational groups, sampling was purposive (Handwerker, Hatcherson, & Herbert, 1997), snowball sampling was used as statistical requirements, and therefore our need for more participants increased.

Welfare workers were recruited through the local welfare agency, the Department of Human Resources, which provides social welfare assistance to people in need. The researchers contacted the director of the agency and requested permission to access the workers through supervisors in specific areas of the agency. Participating workers who worked in the areas of child support, food stamps, and family assistance (Temporary Assistance for Needy Families) provided financial assistance services, so throughout the study they are referred to as financial welfare workers, while child protection and foster care workers are referred to as child welfare workers.

Domestic violence workers were recruited through two organizations: the central provider of domestic violence services in the area and a university-based women's resource center. Both organizations are part of a larger state organization that is in turn affiliated with a national domestic violence organization. Workers at the local agency provide sexual assault and domestic violence services to members of the community and surrounding rural areas, including maintaining a 24-hr crisis line and safe house for victims and their children, and through its outreach office, offer counseling services and support groups to victims. Additional services include child care, child advocacy, court advocacy, and educational and prevention programs. The researchers obtained access to the domestic violence workers by contacting the directors of the local agency and university resource center and obtaining permission to recruit individual workers.

Nurses were recruited through the nursing school at the university and through supervisors at the two largest local hospitals. The composition of the general population sample was determined by the makeup of the human service providers (i.e., overwhelmingly female and college educated), and participants were recruited from a local women's social club.

Measures and Design

Methods of cultural domain analysis (described by Weller and Romney, 1988, and Ross, 2004), specifically, free listing, pile sorts, and rating tasks were used. These techniques were applied sequentially—that is, each subsequent data collection step was based on the findings from the step preceding it. Data were collected using a mix of qualitative and quantitative data collection techniques. Participants were questioned about their beliefs about what causes domestic violence at different levels of complexity as the research phases progressed. During the first, purely qualitative phase, participants freely listed their beliefs; and during the second phase that combined qualitative and quantitative analyses, they performed unconstrained pile sorts, essentially analyzing their own patterns of thinking by organizing their beliefs. In the third, quantitative phase of the research, information from the pile sort phase was used to understand the overall dimensions participants used in organizing their beliefs and determine whether participants shared understandings. Finally, a fourth, purely qualitative phase sought to understand how participants' beliefs fit within or diverged from the child welfare model, as well as to make sense of how they put their beliefs about domestic violence into practice as they interacted with clients on a daily basis.

The investigation of the cultural models of domestic violence in these groups is described in terms of these research steps. A schematic of the research steps and accompanying data analysis is included in Table 1. Although a small number of participants completed multiple phases of the research, those numbers are not discussed here because neither the design nor the analyses is within-subject (unless noted otherwise).

Phase I (Qualitative): Generating Terms of the Domain

To determine what terms participants used to describe domestic violence causes, 20 participants (5 from each group of welfare workers, domestic violence workers, nurses, and members of the general population) were simply asked to list all the causes of domestic violence they could think of on a piece of paper. Using that prompt, participants generated between 2 and 16 causes of domestic violence, which were coded and compiled, resulting in a list of 32 unique causes of domestic violence (see Table 2). Seven terms were listed more frequently than the others, including (a) drug use or abuse, and having witnessed abuse (tied); (b) alcohol use and abuse; (c) feeling isolated or alone and having low self-esteem (tied); (d) power and control (tied); and (e) anger and gender inequality (tied).

To determine whether the different groups of participants thought about domestic violence causes similarly or differently, the terms were analyzed according to group. This analysis revealed that domestic violence workers listed only four of the seven most frequently listed terms: having witnessed abuse, feeling isolated or alone, power, and control. In addition, domestic violence workers listed only 11 of the 32 causes that were listed

Table 1
Description and Explanation of Study Phases

Phase	Data Collection Procedures and Sample Size	Linked Data Analysis Procedures	Phase Purpose	How Builds on the Previous Phase
1	Free lists/relevant terms generated ($N = 20$)	Terms collated and coded by group	To identify what participants believe causes domestic violence	N/A
2	Pile sorts/organizing terms by sorting into piles and pile theme interviews ($N = 110$)	Multidimensional scaling and cluster analysis of sorted terms and qualitative coding of themes	To examine how participants see different causes are related to one another	Uses findings from Phase 1 as basis for pile sorts and interviews
3	Ratings of four dimensions of meaning ($N = 136$)	Cultural consensus, Property Fitting, and regression analyses	To quantify and compare participants' beliefs about causes according to certain dimensions	Uses findings from Phase 1 and Phase 2 as basis for ratings and analyses
4	Open-ended individual interviews ($N = 8$)	Qualitative coding and analysis	To explore participants' experiences with domestic violence	Uses parts of all prior phases

members of the other participant groups (in comparison, members of the other groups listed between 22 and 24 of the 32 terms). Three items were mentioned only by domestic violence workers: (a) weak social policy, (b) inadequate support services, and (c) low levels of public awareness, suggesting that they tended to think of domestic violence in structural terms that attribute responsibility to society and/or social structures. These data suggested that domestic violence workers approach the issue of domestic violence differently from other human service providers, by focusing on power and control in conjunction with societal issues. The models of the other providers in the sample, however, concentrated on the contribution made by individual and psychological problems, including drug and alcohol abuse. This finding is consistent with that of other research that notes that people tend to believe that domestic violence originates in the individual rather than in society (Worden & Carlson, 2005).

Although these qualitative data were useful in giving us information about the terms participants used to describe the domain, a data reduction procedure was necessary to better understand whether participants used broader dimensions in their thinking about domestic violence. The next phase of the research focused on examining the structure of participants' thinking about the relationships they perceived between terms generated in the first phase.

Table 2
Frequency of Listed Causes of Domestic Violence by Professional Group

Term	Domestic Violence Workers ($n = 5$)	Nurses ($n = 5$)	Welfare Workers ($n = 5$)	General Population ($n = 5$)	Total ($N = 20$)
Drug use and abuse	0	4	5	1	10
Having witnessed abuse	1	2	4	3	10
Alcohol use and abuse	0	4	2	3	9
Feeling isolated or alone	1	2	4	1	8
Low self-esteem	0	3	2	3	8
Control	5	0	1	1	7
Power	5	1	0	1	7
Anger	0	2	4	1	6
Gender inequality and patriarchy	5	0	1	0	6
Poverty	0	2	2	2	6
Money problems	0	2	3	1	6
Job strains	0	2	1	2	5
Financial dependence	0	1	2	2	5
Mental illness	0	1	1	3	5
Family pressures	0	3	1	1	5
Acceptance of violence in the culture	2	0	1	1	4
Denial	1	1	2	0	4
Having been abused	1	0	2	1	4
Stress	0	1	2	1	4
Poor coping skills	0	1	1	1	3
Problems in the relationship	0	1	1	1	3
Stigma	0	0	0	3	3
Depression	0	0	1	2	3
Low levels of public awareness	2	0	0	0	2
Lack of or low level of education	0	1	0	1	2
Accepting the status quo	0	1	0	1	2
Blaming oneself	0	1	0	1	2
Fear	0	2	0	0	2
Inadequate support services	2	0	0	0	2
Weak social policy	2	0	0	0	2
Infidelity	0	0	1	0	1
Jealousy	0	1	0	0	1

Phase II (Mixed Qualitative and Quantitative): Organizing the Terms of the Domain

Once participants had generated the terms of the cultural domain, we hoped to expand on the findings from the first phase and better understand how they organized and categorized these terms. This step in the research used both quantitative and qualitative data collection techniques and analyses. A total of 110 (19 domestic violence agency workers, 26 nurses, 10 child welfare workers, 28 financial welfare workers, and 27 members of the general population) participants completed the pile sorting phase of the research. Because of the quantitative nature of the pile sort data analysis, more participants were recruited

from local agencies via snowball sampling to participate in the pile sort and subsequent phases of the research.

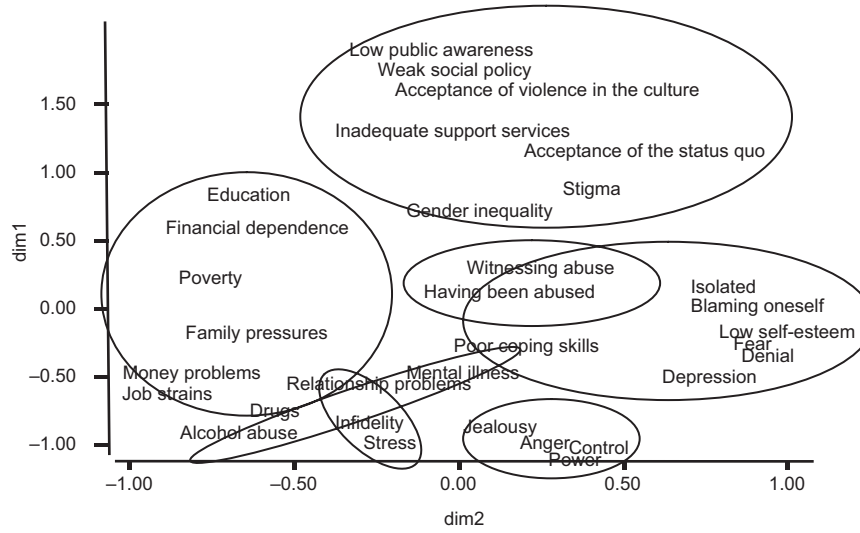
To determine how participants organized their thoughts about domestic violence, the 32 terms generated during the free listing stage were placed onto cards and participants were asked to complete an unconstrained pile sort. This entailed asking participants to place terms that they thought were similar into piles together and recording their answers. Participants were then asked to examine their piles and to write down a name or theme that described how the terms were similar and why they had placed particular terms in piles together. The researcher then conducted semistructured interviews to further explore the participants' pile themes. The researcher then recorded these themes in her field notes for later qualitative coding and analysis. One goal of pile sorting is data reduction, and MDS and cluster analysis were performed to meet that goal. Qualitative analysis of the themes participants gave to their piles was also performed to explain the piles' meaning.

More than 90% of the participants were female, and the mean age was 39 ($SD = 9.97$), although welfare workers were significantly older than other participants, $F(3, 105) = 10.31$, $p < .001$; post hoc least significant difference, $p < .01$; $M = 45.6$, $SD = 10.0$. Participants were well educated, as 80% had completed at least a bachelor's degree. Participants created an average of 5 (+/−2) piles in the pile sort. MDS converts similarity (i.e., two terms being in the same pile) into distance, so that the semantic relations among terms can be represented as a picture in two dimensions (Kruskal & Wish, 1978). The ultimate goal of MDS is to identify the possible dimensions of meaning that participants used in classifying the terms (see Hair, Anderson, Tatham, & Black, 1996; Kruskal & Wish, 1978). The measure of the goodness of fit of a given dimensional solution in MDS is referred to as "stress." In interpreting stress values, high stress indicates a poor fit; that is, the mapped MDS solution poorly represents the relationships calculated in the original similarity matrix. A stress value close to zero, on the other hand, generally indicates a good fit.

MDS analysis was performed on these data, individually by professional group and for the pooled sample. The quadratic assignment procedure, a technique that allows similar matrices to be compared with one another, was then performed in ANTHROPAC (Borgatti, 1996a, 1996c). Because the quadratic assignment procedure analysis revealed that no single group deviated substantially from the overall model with *r*s between .63 and .83, we discuss the findings for the sample as a whole. The MDS configuration is represented in Figure 1. The figure displays participant-generated causes of domestic violence from the first phase of the research. Terms that appear close together (e.g., power and control) indicate that participants saw these terms as similar and belonging together during pile sorting. The stress value for the sample as whole was .18, indicating that the mapped MDS was a good representation of the relationship between the terms (see Sturrock & Rocha, 2000).

Although MDS displays distances among terms, cluster analysis is useful for locating boundaries between groups of terms (Hair et al., 1996). The cluster analysis for the sample as a whole identified seven groups of terms, identified in Figure 1 by circles drawn around groups of terms. The first cluster was made up of education, financial dependence, family pressures, job strains, money problems, and poverty. The second cluster included alcohol abuse, drug use and abuse, and mental illness, while the third contained having witnessed abuse and having been abused. The fourth cluster included depression, denial, fear, feeling isolated or alone, blaming oneself, low self-esteem, and poor coping skills; the fifth cluster

Figure 1
Multidimensional Scaling and Cluster Analysis of Participant-Generated Causes of Domestic Violence



Note: $N = 110$, stress in two dimensions = 0.184. Items closer together in space and within the confines of the identified clusters were more likely to have been placed in piles together during pile sorting.

contained anger, jealousy, control, and power; the sixth cluster included stress, infidelity, and relationship problems; and the seventh cluster included stigma, gender inequality, acceptance of the status quo, inadequate support systems, acceptance of violence in the culture, low public awareness, and weak social policy.

The next step was to analyze the themes participants used to complete their pile sorts and to compare these themes to the results of the MDS and cluster analyses.[1] In all, more than 100 unique individual pile codes were created from these themes. These were then collapsed into 13 comprehensive codes. For example, one comprehensive code, "individual factors," consisted of more than 26 identified themes, including terms such as emotions, personal experiences, psychological factors, and illness, while another code, "causes and contributors" included the themes of stereotypic and mythical explanations for abuse, factors that exacerbate domestic violence, triggers for abuse, and provocation. Although there was substantial consistency across professional groups, there were also some key differences in the ways the different groups categorized their piles. Specifically, domestic violence workers tended to distinguish between factors that might contribute to domestic violence (e.g., having witnessed abuse), and those factors that they saw not as contributing factors but outcomes or consequences of domestic violence, such as low self-esteem. It is essential to note here that domestic violence workers' themes explicitly focused on how important the different factors were in contributing to domestic violence—in fact, some domestic violence workers launched into lengthy explanations of the dynamics of domestic violence, including which factors play a role and which do not.

Factors that are generally external to the individual and considered to be out of an individual's control, such as weak public policy, inadequate support systems, and gender inequality tended to be grouped together in participants' pile sorts. Other terms that are to some extent external to the individual but related to social systems with which the individual interacts closely are also grouped together: education, money problems, financial dependence, and family pressures. The more specific factors contributing to domestic violence were also seen as similar, and thus, depression, fear, low self-esteem, denial, feeling isolated and alone were grouped together. Aggressive qualities of anger, jealousy, stress, power, and control were also often grouped together. Individual pathologies evidenced by the grouping of alcohol abuse, drug use and abuse and mental illness, having witnessed abuse and having experienced prior abuse were also classified together.

Once coding was complete, the codes were summarized to assess how frequently they had been used. This procedure essentially quantitized our qualitative data (as discussed in Tashakkori & Teddlie, 1998). Participants used four comprehensive codes more frequently than any others: (a) individual factors, (b) society, (c) victim, and (d) perpetrator, accounting for 21.4%, 17.7%, 13.5%, and 11.9% of the coded text units, respectively. Four key dimensions of meaning were identified from the pile sort themes and discussions with participants: (a) the importance of each factor in contributing to domestic violence; (b) the extent to which the factor is controllable; (c) whether factors are characteristic of victims, perpetrators, neither or both; and (d) whether factors are causes of domestic violence, effects, neither, or both. Overall, the ways participants sorted the causes suggested that they did not believe domestic violence has a single cause. In many cases, they distinguished between the factors they saw as contributing to the risk for domestic violence developing (e.g., having experienced abuse) and factors they saw as exacerbating a domestic violence situation (e.g., alcohol abuse and drug use and abuse). Further examination of the themes revealed that domestic violence workers think about domestic violence causes differently than other providers do, confirming our early impressions from the first phase of the research.

Phase III (Quantitative): Evaluating Terms of the Domain

Once we had achieved an initial understanding of what terms participants used to think about domestic violence and how they organized and understood these terms, we sought to determine whether the groups of participants shared perspectives with one another. Consistent with cultural consensus analysis, which uses quantitative analytic techniques, a larger number of participants were recruited for this phase, and data from the pile sort phase were compiled to create a survey that would facilitate a reliable cultural consensus analysis. Thus, during this phase, purely quantitative data collection techniques and analyses were used.

In all, 135 participants completed the ratings phase of the research (66 of these participants had also completed pile sorts). The sample was composed of 22 domestic violence workers, 27 nurses, 33 financial workers and 24 child welfare workers, and 29 members of the general population. More than 90% of participants were women, and the mean age was 38 years ($SD = 10.1$), though financial welfare workers were significantly older than participants in the other groups, $F(4,125) = 8.162$, $p < .001$; post hoc least significant

difference tests, $p < .001$. Although most participants were European American (77.9%), 20.6% were African American, and 1.5% Asian; domestic violence workers and financial and child welfare workers were more likely than nurses and members of the general population to be African American, $\chi^2(6) = 20.001$, $p < .001$.

Participants in the ratings phase of the research completed a packet that included demographic and background information, as well as several pages of survey questions relating to their thoughts about domestic violence causes. In addition to standard demographic questions, participants were asked to indicate the number of years they had worked in their occupation, their religion and level of religiosity, their experiences with domestic violence (asked as a simple multiple choice question, with answer choices of personal and/or professional), and whether they had undergone any domestic violence training. Most participants reported that they were religious, and both type of religion and level of religiosity varied significantly according to professional group. Most participants (81.6%) said that they thought of themselves as Christians, but fewer members of the general population and domestic violence workers reported that they were Christian, and less than half reported being very religious. Experiences with domestic violence varied significantly as a function of participant's professional group, $\chi^2(12) = 83.74$, $p < .001$, with domestic violence workers having had more personal and professional experiences with domestic violence than those in any other group. Just over half of the participants reported that they had undergone any domestic violence training; domestic violence workers and welfare workers (both child welfare and financial) were more likely than those in other groups to report to have been trained on domestic violence issues, $\chi^2(4) = 41.879$, $p < .001$.

On the survey section of the packet, participants evaluated each of the 32 terms (identified in the free listing) that contribute to domestic violence based on each of the four dimensions of meaning uncovered during the pile sort phase of the research: (a) how important the factors are in contributing to the occurrence of domestic violence (1 = *not at all important*, 7 = *very important*); (b) the extent to which each factor is within or outside a person's control (1 = *within a person's control*, 7 = *out of a person's control*); (c) whether the factors are characteristic of a victim and/or perpetrator, or neither; and (d) whether they are a cause and/or effect of domestic violence, or neither. Each dimension represented a separate page in the survey, and the 32 factors were presented in random order on each page.

Analyses of the ratings addressed three key issues: (a) whether the sample shared a model of domestic violence, assessed using consensus analysis[2]; (b) how sharing among participants was distributed, using multiple regression analysis; and (c) to what extent the four dimensions of meaning were actually used in the pile sorts, assessed with PROFIT analysis (Carroll & Chang, 1964; Kruskal & Wish, 1978).[3]

Cultural consensus analysis. Cultural consensus analysis ultimately allows us to perform quantitative analyses on what began as qualitative data. It is a factor analytic-type technique that examines the level of agreement among respondents in a set of data. It produces an eigenvalue ratio that indicates whether there is a sufficient level of agreement among individuals in the analysis to conclude the existence of a shared model. The rule of thumb is that a first eigenvalue at least three times that of the second indicates a shared model (Romney et al., 1986). Cultural consensus analysis also estimates each individual's

"cultural competence," which indicates each individual's level of agreement with the shared model. Finally, cultural consensus analysis produces a cultural "answer key," which is the best estimate of the responses of a culturally competent respondent.

Overall, cultural consensus analysis revealed that only child welfare workers shared ideas about the importance of the factors in contributing to domestic violence (see Table 3); neither the sample as a whole nor the other individual groups of workers shared these ideas (all eigenvalue ratios <2.8, competence coefficients $<.48$).[4] Consensus analyses of the victim and perpetrator and controllability dimensions revealed that all groups shared beliefs on those dimensions, whereas only the general population group shared beliefs on the cause and effect dimension (see Table 3).

The fact that child welfare workers differed from the group in their ratings of importance fits in well with the previous literature on domestic violence. Much of the previous scholarship on domestic violence has debated the importance of different causes of domestic violence. In addition, given our participants' positions as human service providers and therefore as persons who can distribute goods and/or services to the clients they serve based in part on their assessment of need, their views on the importance of the causes of the clients' situations (by extension, their blameworthiness) becomes vital (Corrigan & Watson, 2003; Greenberg, 1981).

Our participants' discussions of their identification and categorization of the causes of domestic violence at the free list and pile sorting phases of the study also suggested that the importance of the factors was critical. At times in their pile sorts, participants made piles that they referred to as containing irrelevant terms, and more than once, they noted that a particular term had "nothing to do with it." As mentioned earlier, domestic violence workers also placed a high value on the issue of importance. Because we were surprised that domestic violence workers did not demonstrate stronger sharing on the issue based on findings from the first two phases of the research, further analyses examined this issue in more detail. Although many items were rated similarly, child welfare workers tended to rate terms such as isolation and financial dependence as more important, and mental illness, money problems, infidelity, poverty, and depression as less important than did the rest of the sample.

Because of the previously mentioned differences in the ways domestic violence workers responded to the free list and pile sorting phases of the research, their answer key was also examined separately and compared with that of the key from participants in other groups. Domestic violence workers and the sample as a whole agreed on only 2 of the 10 factors rated as most important: power and control. Although domestic violence workers rated these factors first and second most important, the rest of the sample rated them a bit lower—fifth and sixth most important. On the other hand, gender inequality, weak social policy, and low public awareness were listed among the top five most important factors for domestic violence workers, but these factors were identified as the 10 least important for the sample as a whole. In fact, low public awareness, which was the fifth most important factor for domestic violence workers, was considered the least important factor for the rest of the sample.

With regard to the least important factors, domestic violence workers rated the least important factors much lower than did the sample as a whole. For example, although the entire sample thought anger was very important, domestic violence workers disagreed; they

Table 3
Consensus Analysis Results

Occupational Group	Importance			Controllability			Victim and Perpetrator			Cause and Effect		
	Eigenvalue Ratio	Mean Competence	*SD*	Eigenvalue Ratio	Mean Competence	*SD*	Eigenvalue Ratio	Mean Competence	*SD*	Eigenvalue Ratio	Mean Competence	*SD*
Domestic violence workers ($n = 22$)	1.67	.31	.37	5.55[a]	.57	.30	5.29[a]	.59	.14	1.37	.17	.37
Nurses ($n = 27$)	2.72	.48	.17	6.48[a]	.56	.23	4.59[a]	.59	.13	1.35	.41	.21
Child welfare workers ($n = 24$)	3.09[a]	.53	.16	6.04[a]	.56	.23	4.35[a]	.62	.12	2.29	.46	.15
Financial assistance workers ($n = 33$)	2.80	.45	.22	3.96[a]	.45	.36	3.77[a]	.54	.14	1.88	.41	.19
General population ($n = 30$)	2.26	.43	.25	5.77[a]	.62	.25	5.22[a]	.59	.12	3.35[a]	.52	.16
Total ($N = 136$)	1.96	39	.27	6.37[a]	.54	.28	4.67[a]	.58	.13	2.23	.40	.24

a. Indicates levels of sharing to conclude cultural consensus.

listed anger as the sixth least important factor. The fact that domestic violence workers' answers about what was important tended to diverge from those of the rest of the sample coincides well with findings from the first phase of the study in which domestic violence workers listed fundamentally different elements as causes of domestic violence, using what appears to be a distinct cultural model. These findings also further underscored our belief that domestic violence workers' ideas could not be easily understood as simply shared or unshared on the basis of consensus analysis but that another issue was driving their divergence from the shared model.

Rethinking professional groupings and the distribution of sharing. Knowing that child welfare workers were the only ones to share ideas about importance, while domestic violence workers' ideas were quite divergent, we suspected that professional group alone might be inadequate for explaining sharing. The question then became, how is sharing distributed? That is, do some individuals diverge from the child welfare model, and are there some professionals whose ideas converge with it? The next analysis explores these questions in more detail.

To examine the distribution of sharing, we sought to determine what factors predict sharing in the child welfare model. A series of regressions were performed in which each individual's competence in the shared child welfare workers' model was the dependent variable and professional group (dummy-coded with the general population group serving as the reference group) was the key independent variable. To compute the dependent variable, we calculated the correlation between each individual's rating of the importance of an item as contributing to domestic violence and the cultural answer key for the child welfare workers. This is precisely the participant's cultural competence in the child welfare worker model. Age, years in their occupation, education (recoded 1 = *higher than a bachelor's degree*, 0 = *a bachelor's degree or below*), having undergone domestic violence training (0 = *no*, 1 = *yes*), and having had experience with domestic violence (0 = *none*, 1 = *personal experience*, 2 = *professional experience*, 3 = *both personal and professional experience*; personal experience was dummy coded for regression analyses), along with professional group, were used as independent variables. Race (recoded 0 = *non-White*, 1 = *White*) and religion (recoded so 1 = *very religious Christians*, 0 = *all others*) were also entered as covariates. The regression models were entered in two blocks. The first block contained all variables except race and religion, and the second added these two variables.

Findings for the two regression models were similar and significant, $F(11, 103) = 3.17$, $p < .001$; $F(13, 101) = 3.56$, $p < .001$. Two variables—being a domestic violence worker and having personal experience with domestic violence—predicted significantly lower cultural competence. In the second model, however, being White and a very religious Christian predicted higher competence (see Table 4).

Mapping the relationships between phases of the research. Next, so that we could link the results from the pile sort to those of the ratings phase, we evaluated the extent to which participants used the four dimensions of meaning we had inferred from our analysis of their pile sorts. This was performed using PROFIT analysis. In PROFIT, the coordinates of the MDS are used as the independent variables, and the "attributes" (the causes of domestic violence), which come from the consensus analysis answer key, are used as the dependent

Table 4
Regression Coefficients (Betas): Correlation with Child Welfare Model Competence Regressed on Professional Groups and Control Variables

Variable Entered	Importance
Domestic violence workers	−.30*
Nurses	−.16
Child welfare workers	.23
Financial assistance workers	−.05
Age	−.25
Education	−.19
Years in occupation	.11
Any domestic violence training	.10
Personal domestic violence experience	−.22*
Professional domestic violence experience	−.13
Both personal and professional domestic violence experience	−.16
White	.22*
Very religious Christian	.20*
R^2	.31*

Note: All continuous variables are standardized; Results are from second block of regressions.
*$p < .05$.

variables in a regression analysis (Borgatti, 1996b). PROFIT yields a set of coordinates showing the relationship between the terms in the pile sort data and the attributes and hence how important these attributes were in influencing the arrangement of the terms, effectively connecting the pile sort data with the ratings data and triangulating the findings.

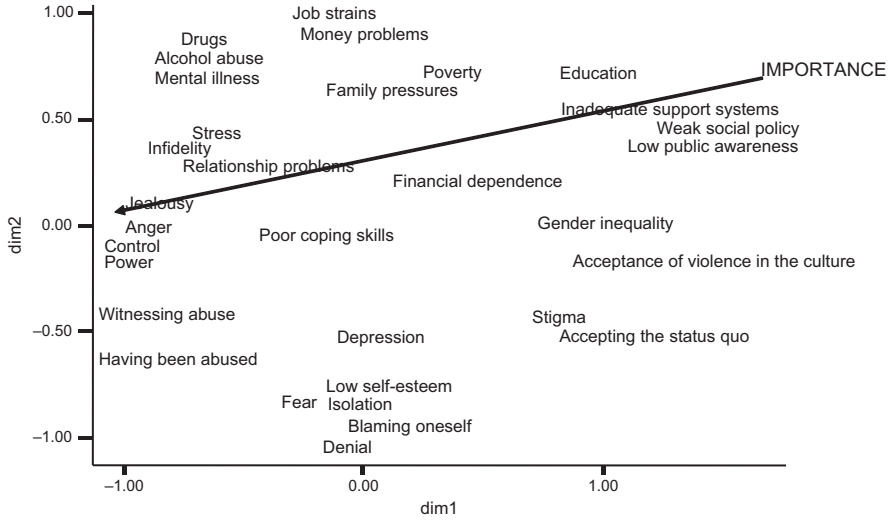
The fact that there is distributed agreement with the child welfare model despite the lack of overall consensus, together with the theoretical importance of the dimension, led us to focus on the answer key for importance in our PROFIT analysis. The pattern of responses on the importance dimension, in fact, accounted for significant portions of the variance in the pile sort data (multiple $R = .80$, $p < .001$), suggesting that our participants used the importance of a domestic violence cause as a central theme in organizing their ideas about terms' relationship in their pile sorts.

Using the coordinates given by the PROFIT analysis, a vector is drawn through the MDS map for each of the four dimensions of meaning (see Figure 2). The arrowhead represents more of a given dimension (Borgatti, 1996b)—that is, items that are closer to the arrowhead for importance are considered more important. In this study, factors such as weak social policy and acceptance of violence in the culture were rated as less important (except by domestic violence workers, as noted earlier), but anger, jealousy, power, and control were considered to be highly important and are closer to the arrow's head. Based on its strength and significance in accounting for the pile sorts, we concluded that importance was the principal criterion that participants used in completing the sorting task.

Phase IV (Qualitative): Examining Consensus in Practice

In-depth follow-up qualitative interviews were conducted with a small sample ($n = 8$) of selected participants based on their calculated competence with the child welfare

Figure 2
Property Fitting Analysis: Connecting Participants' Pile Sorts to Their Ratings of Domestic Violence Causes



Note: Causes of domestic violence located closest to the arrowhead were estimated to be more important.

worker model during the ratings phase of the research. Child welfare workers who had especially high competence and domestic violence workers who had low competence with the child welfare model were selected for inclusion for comparison with one another. Both sets of workers were asked a number of questions, including ones about their experiences with domestic violence in their work, how they had formed their beliefs about domestic violence, and their thoughts on why child welfare workers seemed to share a model when other workers did not. Only a small portion of these findings is discussed here. These in-depth interviews contributed a richness of detail to the findings from the earlier phases of the research and especially helped to expand on, clarify, and explain the findings of the cultural consensus analysis.

One child welfare worker's interview was particularly enlightening. She explained why she thought child welfare workers think about domestic violence differently than other service providers this way: "We're always communicating with each other . . . because there may be something that I'm running up against that another worker has already experienced . . . we have what's called an ISP [individualized service plan] team, which is attorneys . . . parents, foster parents, teachers . . . " Another child welfare worker noted: "we get more involved with the families than other people do . . . some agencies, they're just working with the adult, whereas here, I have the child, I have the adult, I have attorneys, I have teachers, I have doctors. So, I'm able to see a lot more than other people . . . " This interdisciplinary approach was unique among the professional groups; no other group expressed being involved with clients on so many levels.

Discussion

The research reported here used qualitative and quantitative methods of data collection and analysis in a sequential methods study (Tashakkori & Creswell, 2007) to examine the following: (a) the terms professionals use to describe domestic violence causes; (b) the ways professionals organize their thinking about these terms; and (c) the extent to which professionals share understandings about the ways these terms are organized, as well as how these understandings are distributed.

In the first, purely qualitative phase of the research, we learned that there were more than 32 terms that professionals use to describe the domain of domestic violence causes in their own words via free listing. Although we were able to see some of the ways in which the professional groups were similar and different—principally that domestic violence workers seemed to use different terms than members of the other groups did—this phase alone was inadequate for telling us how participants organized their thinking and whether they shared ideas on a systematic basis. During the second phase, we used the terms from the first phase and again asked participants to tell us, in their own words, how they understood the relationships between the terms generated in the first phase. The categorizations they made were analyzed both qualitatively and quantitatively and enabled us to infer broader categories and understandings about participants' ideas about domestic violence causes. The third phase was purely quantitative, as we hoped to draw inferences about our professional groups with regard to the degree to which they shared understandings of how the terms related to these broader categories.

Overall, the results of this study suggest that although there is general agreement on the broad outlines of a cultural model of domestic violence, as evidenced by both qualitative and quantitative findings from the scaling of the pile sort and the quantitative findings of agreement on the victim/perpetrator and controllability dimensions of the model, there is little agreement on the causes and effects of domestic violence or the importance of factors contributing to domestic violence. This finding of general agreement on the outlines of an issue with disagreement on other dimensions echoes findings of other research (see Weller, Romney, & Orr, 1987, on corporal punishment; also Ross & Medin, 2005) and suggests the importance of considering domestic violence as a multidimensional issue.

Intracultural diversity can explain why welfare workers achieved consensus on only one of the four dimensions of meaning and why participants viewed domestic violence as a multifaceted issue (Pelto & Pelto, 1975). This theory gives us insight into why it might be that only one subgroup shares a model. Our research design was geared toward exploring how models of domestic violence might be distributed across groups that, on the basis of working with similar groups of clients, could at least tentatively be thought to share a model. The theory of intracultural diversity suggests that we might not anticipate wide sharing on some domains, therefore, our findings that only one subgroup (i.e., child welfare workers) does in fact share a coherent model suggests, however, that in the case of domestic violence, occupational diversity trumps culture. That is, even though all the occupational groups in this study deal with domestic violence cases at some level in their work, other features of their jobs lead them away from a shared model, whereas child welfare workers' jobs lead them to develop (and likely maintain and transmit to others) a shared model.

As was demonstrated in the in-depth interviews, child welfare workers often interact with one another and frequently work as part of a team that might include health care providers, attorneys, school personnel, and others to discuss cases, identify the importance of various factors in a client's case, and generate possible solutions. Child welfare workers' shared constructs regarding the causes of domestic violence are thus likely to be negotiated in face-to-face social interaction with one another. That is, in discussing cases in detail with other professionals and with one another, these workers spend time working toward building a common conceptual scheme, particularly surrounding issues of domestic violence, whereas this might not necessarily be the case for other workers.

Our findings of consensus among child welfare workers suggest that this agreement is an example of an evidence-based professional model due to these workers' education, professional training in systems theories, and experiences. Although there seems to be support for this conclusion, the fact that participants from other professional groups also demonstrated consensus with these workers suggests that what appears to be a unique child welfare model might instead be an elaboration of a more general model, possibly even a folk model of domestic violence (see D'Andrade, 1987, 1995). Our previous research with students supports this idea as well. In that work, on some dimensions, social work students demonstrated strong, distinctive agreement, but on others, all students shared agreement (Collins & Dressler, in press). To develop a better understanding of the mechanisms that drive consensus and intracultural diversity, both within and among groups of professionals and the general population, future research should seek to replicate this study as well as examine aspects of domestic violence beyond cause(s).

Domestic violence workers' knowledge of and experience with domestic violence is presumably greater than those of any other group, and yet they did not demonstrate consensus. Lack of consensus in this group can be explained by the realities of modern domestic violence services: low pay, poor benefits, and stressful work conditions leading to high turnover and less time to form and maintain a work culture. Domestic violence workers also had a great deal of heterogeneity in their job descriptions—workers were court advocates, counselors, administrators, and community educators, though all received the same general training. Although some of these arguments can be made for welfare workers as well, in this sample, child welfare workers had worked in their occupations an average of 6 years longer than had domestic violence workers. The two groups also had different educational backgrounds, with more child welfare workers having completed postgraduate work. Despite their lack of consensus, however, domestic violence workers nevertheless managed to remain distinctive throughout the study, generating different terms, explaining their piles with different themes, and rating the items differently than those participants in any other group.

More evidence for the distinctiveness of domestic violence workers in this sample lies in their negative competence coefficients, which Caulkins and Hyatt (1999) argue is characteristic of a contested domain. Indeed, the study's findings bear this idea out. By rating anger, poverty, alcohol abuse, drug use and abuse, stress, mental illness, and low self-esteem as quite important in causing domestic violence, child welfare workers appeared to endorse a model characterized by individual risk factors. In contrast, domestic violence workers follow a model that focuses on how society supports, reproduces, and reinforces domestic violence.

Implications for Domestic Violence Research

The victim of domestic violence has suffered a traumatic past and faces an uncertain future. The research conducted here suggests that victims may face obstacles as a result of the lack of a shared understanding of their dilemmas within the social service system. The fact that few domestic violence victims ever seek assistance from social service providers (Brookoff, O'Brien, Cook, Thompson, & Williams, 1997) reinforces why it is imperative to improve providers' communicative and collaborative skills when they are faced with victims.

Prevailing psychological, sociocultural, and feminist theories in current domestic and family violence scholarship (Chornesky, 2000; Heise, 1998; Jewkes, 2002) coincide with our participants' beliefs. Many participants preferred psychological explanations for domestic violence, such as having experienced or witnessed abuse (and therefore being more likely to abuse others; Wallace, 2002), anger, low self-esteem, denial, depression, mental illness, alcohol and drug abuse, explanations that tend to be comforting, enabling one to see domestic violence as a problem that is "perpetrated by people other than us" (Gelles, 1993, p. 40), and maintaining a view of the world as safe and predictable. Participants (especially domestic violence workers) also included social structures such as inadequate support services, weak social policy, education, poverty, financial dependence, money problems, acceptance of violence in the culture, and low public awareness as factors that influence domestic violence. Overall, however, our participants did not describe causes of domestic violence as linear and discrete. Although most participants did not agree with domestic violence workers' ideas about how important factors such as gender inequality and weak social policy are in contributing to domestic violence, they seemed to believe, instead, that a constellation of individual factors was most important.

Current trends in domestic violence scholarship are to recognize the multidimensionality of domestic violence and to integrate seemingly divergent beliefs and approaches to treatment (Chornesky, 2000). Ecological models (Heise, 1998) and others (e.g., Jewkes, 2002) that recognize the complexity of the issue and attempt to integrate the multiple layers of the domestic violence into a cohesive whole, acknowledging the multiple, interconnecting, and mediating roles of different factors will have the most potential for advancing our understanding of domestic violence.

Implications for the Cultural Consensus Model and Intracultural Diversity

This research contributes to a growing body of work on the sharing and distribution of culture, pointing to the utility of using cultural models research in applied realms. Although previous research revealed that human service providers think about domestic violence differently (e.g., Davis, 1984) and suggested that such differences could account for inadequacies in service delivery, that research lacked a mechanism by which to examine sharing in conjunction with intracultural diversity. The cultural consensus model is ideal for answering questions of both sharing and diversity and has the added advantage of valuing the distinctive features of a model as defined by the participants themselves. The current study has identified areas in which human service providers share ideas as

well as where their ideas diverge, using techniques that are methodologically and analytically more sophisticated than examining simple mean differences on a typical researcher-constructed survey.

Ultimately, this study has demonstrated how cultural consensus theory is useful in understanding the intricacies of shared understandings within and between different groups of human service providers who deal with similar client populations—in this case, domestic violence victims. The findings identify domestic violence as a contested model of meaning among providers and reveal intracultural diversity in cultural models among providers. Anthropological research has found that some of the largest differences in cultural sharing are within groups rather than between them (Swartz, 1982; Weller & Baer, 2002), and this idea was borne out by a follow-up analysis of the domestic violence workers. This analysis revealed that the small group of university-based domestic violence workers ($n = 5$) demonstrated strong consensus, whereas the community-based domestic violence workers did not. The university-based domestic violence workers endorsed social-structural factors such as weak social policy and low public awareness to explain domestic violence and emphasized the need for education more so than did the community-based workers. This finding supports Swartz's notion of sharing depending on a particular configuration of status and social interaction rather than simple status sharing (i.e., sharing the same general job description, "domestic violence worker"), and parallel the findings of McMullin et al. (1996), who found differences in community and university-based physicians' models of breast cancer risk factors.

Although these findings are intriguing, conclusions should be drawn cautiously, because the university-based sample size was so small. Future research should replicate these findings in other geographic locations and with a larger sample of different types of domestic violence workers. Future research should also focus on continuing to use mixed methods approaches, thereby strengthening conclusions and improving our understanding of how people think about and respond to domestic violence. It would be useful, for example, to integrate qualitative interviews of victims' experiences with the cultural consensus analysis findings for service providers. Having a wider picture of service providers' beliefs, agreement with one another, approach to and experiences in practice, along with domestic violence victims' experiences with these providers would go a long way toward giving us something close to a complete picture of interactions between service providers and victims that no one approach alone could achieve. Such an achievement would represent a tremendous step forward in increasing the sophistication of current domestic violence research.

Implication for Mixed Methods Research

The study demonstrates the importance of using mixed methods and emphasizes the richness of information gained from combining approaches. Examining the findings from any one phase of the study alone would lead us to draw conclusions about our participants that would not necessarily be accurate. For example, the findings of the free lists' qualitative data alone would give us information on content but could not tell us about the structure of our participants' thoughts or beliefs; nor could we draw an inference that they systematically shared beliefs. Using the quantitative techniques in the third phase of the research, however, we could confirm and elaborate on the findings from the first two phases of the research,

and they therefore served a triangulation function. In addition, the distinctiveness of domestic violence workers was realized only because we used a mixed methods approach to the study. Had we relied simply on either the quantitative or qualitative findings without integrating them, the nuances of these workers' perspectives (i.e., how and why they differed from child welfare workers) would not necessarily have emerged.

Ultimately, each successive phase of the research explained more about how our participants were thinking about domestic violence, widening our view of their worlds. Thus, this research successfully achieves one of the aims that Creswell and Tashakkori (2007) argue is critical in mixed methods research: to both confirm and elaborate on research findings. Integration has been one of the principal challenges of the mixed method researcher (Bryman, 2007), and we believe that both the structure of cultural domain analysis as well as the tools used require integration, making it a natural fit for contributing to mixed methods research. Simply put, without integration, our research findings would be incomplete and could not adequately answer our research questions.

This sequential mixed method study asked questions that required both qualitative and quantitative data, it used quantitative and qualitative data collection techniques and analyses, and inferences were drawn based on the integration of those data. These concepts are critical in successful mixed methods research (Tashakkori & Creswell, 2007). This study is therefore well positioned for helping to advance not only domestic violence research but also that of mixed methods by introducing cultural domain analysis as a useful tool for the mixed method researcher. Use of such a tool has the potential for the collection of rich data that can help explain social phenomena and, in our case, to ultimately improve the lives people in need through obtaining better understandings of their experiences.

Notes

1. Qualitative data were analyzed using NUD*IST (Qualitative Solutions Research, 1998).
2. See Note 1.
3. Consensus analysis and Property Fitting analysis were performed using ANTHROPAC (Borgatti, 1996a).
4. See Note 3.

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