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Integrating Intersectionality and Biomedicine in Health Disparities Research

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Persisting health disparities have lead to calls for an increase in health research to address them. Biomedical scientists call for research that stratifies individual indicators associated with health disparities, for example, ethnicity. Feminist social scientists recommend feminist intersectionality research. Intersectionality is the multiplicative effect of inequalities experienced by nondominant marginalized groups, for example, ethnic minorities, women, and the poor. The elimination of health disparities necessitates integration of both paradigms in health research. This study provides a practical application of the integration of biomedical and feminist intersectionality paradigms in nursing research, using a psychiatric intervention study with battered Latino women as an example. **Key words:** *community-based participatory research*, *culture*, *domestic violence*, *feminism*, *health disparities*, *health disparities research*, *intimate partner violence*, *intersectionality*, *immigrant*, *intervention*, *Latina*, *mental health*, *nursing research*, *posttraumatic stress disorder*, *research methodology*

Dominant biomedical conceptualizations of health, with their narrow disease focus, inadequately represent health because they leave out, or only nominally consider, the social forces and contexts that shape women's health and women's lives.

Rusek et al[1(p12)]

Health disparities* have gained the attention of politicians, public and private payers of healthcare, funders of health-related research, healthcare researchers and providers, healthcare consumers, and even movie producers.[3] Health disparities refer to gaps in the quality of health and healthcare across racial, ethnic, and socioeconomic groups.[4] The Congressionally commissioned Institute of Medicine report, which considered healthcare disparities along racial and ethnic lines only, identified discrimination as a likely yet unquantifiable contributor to health disparities that "occur in the context of broader historic and contemporary social and economic inequality, and evidence of persistent racial and ethnic discrimination in many sectors of American life."[5(p19)] The Institute of Medicine recommendations encourage the use of primarily biomedical research to further describe and monitor healthcare access and utilization along singular racial, ethnic, socioeconomic, and linguistic categories. They are likely to fail without consideration of the social and political context, with its inherent relations of power, that contribute to health disparities.

Racial and ethnic healthcare disparities are well-documented as the result of more

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*Some intersectionality scholars use health *inequalities* rather than health *disparities* arguing that disparities suggests the need for measurement rather than action, has only a mild moral connotation, and that it minimizes the urgency and costs of social injustice.[2]

than a decade of biomedical research. Within the past decade, the National Institutes of Health (NIH) has extended its research funding to explorations of determinants other than ethnicity of health disparities, specifically individuals' personal characteristics—for example, socioeconomic status (SES) and health insurance—and biological and behavioral risks—for example, comorbidities and smoking. Researchers are directed to investigate the relative impact of individual indicators on health and healthcare, applying traditional statistical analysis to large data sets.[5]

Recommendations for further research have focused on these proximate causes of health disparities. Investigations into the root causes or interventions to eliminate them have not been conducted.[6,7] These types of investigations have been described as conceptually and methodologically problematic within the biomedical model and therefore discouraged.[4]

Feminist intersectionality is a body of knowledge that frames societal inequities as the result of the intersections of differences, for example, race, class, gender, sexuality, and other dimensions of inequality. Feminist intersectionality was developed in the past 3 decades by feminist scholars, primarily women of color.[8–13] It recognizes that oppressed groups and individuals live at the margins of society with inequitable access to resources.[2,7] "Feminist intersectional scholarship, driven foremost by the pursuit of social justice [seeks] to explicate the processes through which multiple social inequalities of race, gender, social class, and other dimensions of difference are simultaneously generated, maintained, and challenged at the institutional and individual levels, shaping the health of societies, communities, and individuals."[6(pp24–25)] These processes are not amenable to biomedical scientific reduction to independent causes of societal inequalities.

Feminist scholars have characterized feminist intersectionality in a variety of ways: as an essential and critical theory in understanding gender,[14] as itself an important area of research,[15] as a theoretical and methodological approach to research in the social sciences,[16,17] and as an approach to research on health and healthcare inequalities.[2,6] Regardless of its use, there are 3 tenets of the intersectionality perspective: (1) no social group is homogenous; (2) people must be located in terms of social structures that capture power relations implied by those structures; and (3) there are unique multiplicative effects of identifying with more than one social group.[18(p326)]

The extensive social sciences literature on feminist intersectionality as a methodological approach to research is primarily theoretical and is restricted to research within the social sciences. Application of this perspective to empirical research has lagged behind understanding of its importance in such research.[14] Just as biomedical scientists have described the challenges of incorporating the complexity of multiple social identities in research as insurmountable, feminist intersectionality scholars have focused on the qualitative/quantitative methodological debate, rather than strategies to operationalize social identities and processes within feminist intersectionality research.[19] As McCall commented, "research practice mirrors the complexity of social life."[16(p1772)]

Scholars from both biomedical and social sciences have identified the failure of biomedical science to make progress toward the elimination of health disparities.[20] There is a growing body of literature within the health disciplines, including nursing, which faults biomedical science for failing to examine the broader social and political causes of these disparities. Within this literature, the need for an appreciation of the complexity of individuals' differences in the conduct of clinical research and the role of social and political power in creating the social injustice of health disparities is recognized.[21–25] These scholars have called for critical and innovative approaches to health research that are essential to eliminate health disparities. Similarly, some feminist intersectionality scholars have called for application of an intersectionality

approach in health disparities research,[6,7,26,27] citing this as an essential step toward healthcare equality and social justice. However, the discourse of both biomedical and intersectionality scholars is largely theoretical and lacks discussion of the practical application of these approaches.

The elimination of health disparities via research necessitates the integration of feminist intersectionality and biomedical paradigms in any reparative actions toward this goal. Each approach brings unique contributions that strengthen research when used together. In health disparities research, the integration of one paradigm with the other requires theoretical and practical movement toward a middle ground. This study will operationalize the integration of feminist intersectionality and biomedical approaches in nursing research, using an intervention study, which addresses the mental health problems of immigrant Latino women who have been abused by an intimate partner as an example.

The purpose of the article is to provide a practical application of the theoretical discourse that has dominated scholarship within each paradigm. This integrated approach to health disparities research holds promise for improving health through social action and knowledge development. The study that serves as an illustrative example of the integration of the two paradigms is a nursing intervention conducted within a community-based participatory research (CBPR) model. The purpose is to test the feasibility and preliminary effectiveness of a weekly group psychotherapy intervention for symptoms of posttraumatic stress disorder (PTSD) in immigrant Latinas who have experienced intimate partner violence (IPV) and to develop local community systems and capacity.

Weber,[6] in "Reconstructing the landscape of health disparities research: Promoting dialogue and collaboration between feminist intersectional and biomedical paradigms," discussed several core themes in feminist intersectionality approaches and their potential contribution to eliminating health disparities. She recommended further dialogue and collaboration among intersectional, critical public health, and biomedical paradigms. Using Weber's[6] article as a foundation, I will discuss the key differences between feminist intersectionality and biomedical approaches, highlight their unique contributions to health research, and describe their integration in the research process.

ORIENTATION AND PURPOSE

The feminist intersectionality and biomedical paradigms provide philosophical orientations and methodological approaches to research. Every step of the research process, from the research problem or question to interpretation of the findings, is informed by these paradigms. The central difference between the two lies in their philosophical orientations and purposes. The purposes of the paradigms essentially determine the phenomena of concern, the research questions, and research process: who or what are we looking at and why? Health disparities research is focused on health and healthcare differences: what they are; why they exist; and how they can be eliminated.

Feminist intersectionality

Feminist intersectionality research is driven at its core by the pursuit of social justice. Social action is used to examine and challenge inequalities in power and social inequities, among them health disparities. Feminist intersectionality concerns individuals' experiences and impact of multiple social identities. Feminist intersectionality health disparities research begins with the multiplicative effects of subordinate social identities and seeks to identify root causes of oppression and address systematic inequalities through social action. Interventions target systems, for example, healthcare, public policy, law, education, and the economy, rather than individuals or groups.[6,28]

Epistemological assumptions about the socially constructed nature of reality and the

role of power relations in social structures determine the preferred methodological approaches of feminist intersectionality research. Knowledge development occurs from the perspective of oppressed rather than that of dominant groups. Value is placed on subjectivity and researchers' engagement as agents of social change. Social structures are the unit of analysis, rather than the individual. Dimensions of difference are intersecting; they are inseparable. Feminist intersectionality research explores macroinstitutional and microinterpersonal power relations in the research problem—that is, health disparities—and in the research process—that is, hierarchy between the researcher and the researched.[6,7]

Biomedicine

Biomedical research is used to promote health and reduce morbidity and mortality at the levels of individuals, groups, and populations. The goals of biomedical research are to identify indicators and causes of disease and to design effective interventions and treatments that can be applied primarily to individuals but to groups and populations as well. Biomedical health disparities research begins with a specific health problem or disease and seeks to identify proximate causes. The manifestations of the disease, that is, its symptoms, and its causes can then be addressed within the healthcare system.

The positivist epistemology of mainstream biomedicine drives methodological approaches that attempt to create objectivity and value-free researcher involvement in the research process. The tenets of biomedical science that were developed by the dominant group, white men, are operationalized in a hierarchical structure, in which the researcher is the source and developer of knowledge about subjects and their illnesses. Individual subjects and diseases are the unit of analysis. Social differences among subjects are considered demographic variables and are isolated and homogenized as much as possible. They are considered individually in relationship to each other and to the research problem being investigated, in the search for direct causal relationships. Proof of these relationships is established via quantitative analysis of data from groups large enough that generalization to other groups has scientific validity.

RESEARCH APPROACH AND DESIGN

Research is conducted within each of these paradigms across spectrums of objectivity/subjectivity, researcher neutrality/engagement, and nature/social construction of reality. Some feminist intersectionality and biomedical scholars view the above descriptions of the paradigms as outdated in their dichotomy, similar to the view in nursing scholarship that the quantitative/qualitative debate is over. These scholars are marginalized within their disciplines, just as feminist intersectionality is marginalized from traditional biomedical science. Evidence of this can be found in the patterns of the largest funder of health research, NIH. Ninety percent of NIH-funded health disparities studies from 1994 to 2005 employed traditional biomedical approaches.[6]

Concurrent with an increasing understanding of the limits of the biomedical paradigmatic approach to research is increasing pressure to use this approach to develop knowledge for evidence-based practice. The criteria for evaluating published research in establishing evidence-based practice guidelines use randomized clinical trials (RCTs) as the gold-standard for generating evidence that is considered valid and reliable.[29–31]

The research designs that are most congruent with the assumptions of the feminist intersectionality and biomedical paradigms can be conceived as located on a spectrum, ranging from qualitative methods to RCTs, respectively (Fig 1). Qualitative methods are used with quantitative methods in mixed-methods studies to enhance validity and theoretical insights.[32] The challenge for scholars across the paradigmatic spectrum is to align research

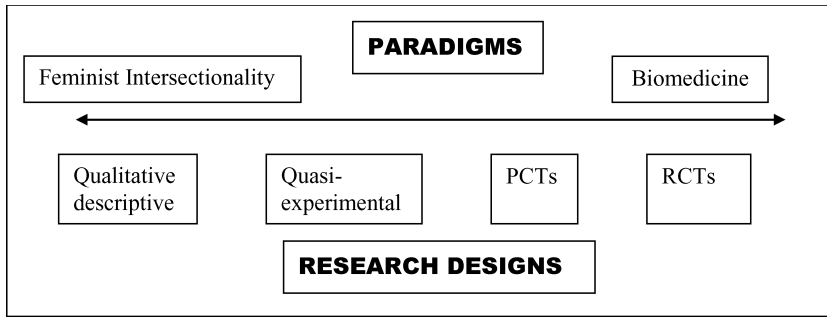

Figure 1. Spectrum of research methods relative to paradigms. PCTs, practical clinical trials; RCTs, randomized clinical trials.

goals and research methods.[14] Mixed methods are becoming more common in health disparities research as the strengths and limitations of single methods in capturing the complexity of the problem are recognized.

A comparison of the feminist intersectionality and biomedical paradigms and their integration in this study are illustrated in Table 1. The integration of feminist intersectionality and biomedical paradigms in research occurs in the selection of the research problem, design, and methods, as well as in the operationalization of the assumptions of each paradigm throughout the research process.

CATEGORIZATION OF DIFFERENCE: WHAT IS THE WHAT? WHO IS THE WHO?

The definitions, conceptualizations, and uses of differences differ in important ways in the feminist intersectionality and biomedical paradigms (Table 2).

Any type of categorization obfuscates individual differences. Categories are generalizations and simplistic. Feminist intersectionality and biomedical scholars recognize the inherent limitations in any categorization while acknowledging their utility in research that considers differences among groups. The intercategorical approach is used by biomedical scholars to compare differences between individual categories. Some feminist intersectionality scholars debating the merits and hazards of a categorical approach have settled on an anticategorical approach, arguing that the complexity of social life is irreducibly complex and that fixed categories are nothing but "simplifying social fictions."[16(p1773)] For the purposes of analysis, specificity along one dimension of difference limits consideration of other dimensions for knowledge development.[16] Other feminist intersectionality scholars use an intracategorical approach in which a previously invisible group, at the intersection of multiple categories, is studied to reveal differences within the group, as well as to articulate the influence of broader social structures in their lives.[16] The intracategorical approach was used in this study.

Biomedical scientists face a similar challenge: increasing levels of specificity lead to homogeneity in groups, which is preferred, but limits generalization of findings to other groups. The process of deciding which categories to use for descriptive or analytic purposes involves gain and loss from each perspective. Given this, researchers should be aware of their decision-making process and be able to "explicitly state *why* we choose particular intersections rather than simply *that* we do."[33(p456)]

Group psychotherapy for symptoms of PTSD in abused immigrant Latinas

The orientation of this study incorporates biomedical and feminist intersectionality

Table 1. Comparison and integration of paradigmatic approaches to research

Paradigm research	Feminist intersectionality	Intervention study for symptoms of PTSD	Biomedicine
Research paradigm	Political; multidimensional	Integrated paradigms	Positivist; reductionist
Purpose	Connect knowledge development with social action and social justice	Test an intervention in the community; collaboration with community partners	Development of empirical knowledge to create evidence-based clinical interventions
Source of phenomena	Unequal social power relations	Biopsychosocial dimensions	Determined by natural law
Question	How do oppressed individuals' and groups' social identities affect their health and healthcare?	What type of intervention will build on the strengths of an oppressed group to improve health and well-being?	What is the cause and effect relationship between variables, with all other variables held constant or controlled?
Source of question	Oppressed groups	CBPR: Community and researcher	Researchers and healthcare providers
Foci	Strengths, social action, social justice	Strengths, symptoms of PTSD, skill building, social connection/ support	Disease, diagnoses, treatment, health
Level of intervention	Macro: societal, marginalized groups	Small group within the community	Micro: individuals and homogenous small groups
Context	Multiple social identities, oppression, social injustice	Demographics, culture, multiple social identities, inequities, violence	Demographics, socioeconomic status, culture, violence
Setting	Community	Community; domestic violence services agency	Clinical setting or research laboratory
Methods	Qualitative	Multiple methods	Quantitative
Sample	Heterogeneity valued	Heterogeneity accepted	Homogeneity ideal
Process	Emergent, flexible, social action	CBPR: Research and social action	Predetermined, controlled, randomized clinical trials
Categorical approach[16]	Anticategorical	Intracategorical	Intercategorical
Variables	Multidimensional	Multidimensional, multiple measures	Discrete
Outcomes	Social justice	Feasible process; effective intervention; empowerment	Reliable and valid evidence

Abbreviations: CBPR, community-based participatory research; PTSD, posttraumatic stress disorder.

Table 2. Feminist intersectionality and biomedical conceptualizations of categories of difference in research

Feminist intersectionality	Biomedicine
Social identities	Independent variables
Socially constructed	Predetermined, inherent, natural state
Emergent, shifting	Static, stable
Qualitatively variable	Dichotomous or linearly continuous
Multiple, can not be separated	Singular, should be separated
Effects are multiplicative	Effects are additive
Context is critical and must be considered	Context immeasurable
Strive for recognition of difference	Strive for homogeneity

perspectives. The purposes of the study are dual: to design an effective mental health intervention for distressing symptoms of PTSD and to address power relations through CBPR. Each purpose fits within the overall goal of eliminating health disparities. Overly simplified, *health* is the domain of biomedicine; *disparities* are the domain of feminist intersectionality.

The rationale for research on IPV-related PTSD from the biomedical perspective derives from its significant morbidity, mortality, and socioeconomic costs. PTSD appears to be the most significant mediator between exposure to violence and negative health outcomes and functioning.[34] IPV and IPV-related trauma symptoms impair survivors' abilities to take care of themselves and manage daily responsibilities, finances, and housing needs.[35] Functional losses related to IPV include reduced employment and increased poverty.[36] Trauma and consequent PTSD are linked with risky behaviors—for example, substance abuse—and lack of health promoting behaviors—for example, exercise, nutrition, and safer sex.[37] Despite the well-documented morbidity and mortality associated with IPV-related PTSD, symptoms of PTSD in battered immigrant Latinas have been overlooked as an important topic of research; no evidence-based interventions have been designed.

Abused immigrant Latinas with PTSD symptoms were chosen as the population because the multiple subordinate identities within this group result in "intersectional invisibility."[38] Intersectional invisibility is socially constructed by specific historical, cultural, political, legal, and geographic contexts.[6,38] In intersectional invisibility, "the challenges associated with misrepresentation, marginalization, and disempowerment will tend to be prominent features of the experience of people with intersectional subordinate-group identities."[38(p383)] In this study, neither the women's PTSD symptoms nor their intersectional invisibility was given primacy over the other in the research process.

From a feminist intersectionality perspective, the multiple oppressed social identities of battered immigrant Latinas are manifested in health inequities. Each social identity places them at a disadvantage in power relations from the majority and renders them invisible. They are women versus men, Latina versus white, immigrants versus US-born, undocumented versus "legal" US residents or citizens, victims/survivors of IPV versus equal partners in relationships. They have limited English proficiency versus English fluency and have low SES versus middle or high SES. They have compromised mental health and lack health insurance and access to healthcare. They typically lack a supportive familial and social network and safety net; they are socially isolated versus socially connected.

Of course, each woman in the study is not necessarily in a subordinate position in each dimension. The intersection of any combination of these social identities creates each woman's experiences of identity, disadvantage, and inequality: a unique situation

of multiple jeopardy.[15] Inevitably, they all experience social injustice. The list of dimensions of difference could go on and on and be defined and categorized in different ways. There is no one "battered immigrant Latina with symptoms of PTSD." Each of these differences is considered an independent variable in biomedical research. Categorization of social groupings is philosophically problematic and practically challenging from both biomedical and feminist intersectionality perspectives, particularly in the context of research. This problem is a key issue in the integration of these two perspectives in health disparities research and is the topic of the next section of this study.

This discussion of the study population will address each dimension of difference by describing the considerations in my decisions regarding the selection and operationalization of categories with an integrated approach.

Intimate partner violence

IPV is typically defined as physical and sexual abuse only and is dichotomized as present/absent in biomedical research. From a feminist intersectionality perspective, IPV is perpetrated within a nonlinear spectrum of types and severity of violence and is experienced uniquely by individual women in the context of their overlapping social locations, their personal worldviews, and lifetime experiences, including earlier trauma. In this study, the category of IPV has qualitative and quantitative characteristics, that is, types, frequencies, and perceived severity of abusive behaviors, including psychological.

Latina

"Latina" connotes both ethnic and cultural dimensions. As a traditional demographic designation used in biomedical research, Latino/a ("Hispanic" also) fails to differentiate between the multiple ethnicities and races subsumed within this term. It is used to indicate essentially every person whose family origin is any Spanish-speaking country within Mexico, Central America, South America, and parts of the Caribbean. Latina was chosen as the racial and ethnic indicator for this study partly for feasibility reasons. There are significant challenges in restricting a sample to a smaller subset, for example, Salvadorans, in the region where the study will be conducted. The Latino population in this area consists of individuals with diverse nationalities. Further, the use of this intervention in clinical practice would very likely occur with a "Spanish" or Latina group, rather than a specific subset of Latinas, given predictable logistic challenges and resource constraints.

Qualitative methods were used to obtain information to design and evaluate the intervention. This was done in the pursuit of "cultural competence," which is the standard of care in healthcare to address cultural differences. I anticipated that it would be informative to conduct the qualitative portions of the study with a group of Latinas, in part to determine if there were critical differences within this group that needed to be addressed in the intervention. From a feminist intersectionality perspective, Latina culture is not a single entity and is only one of many dimensions of difference that influence the effectiveness of an intervention. The phrase "culturally competent intervention for Latinas" may be an oxymoron. However, more categorical specificity, for example, by nationality, would significantly hinder the feasibility and data analysis of the study.

Immigrant

Immigration to the United States often locates individuals at the margins of society, literally and figuratively, particularly those who are undocumented. They often lack access to economic resources due to barriers to employment, unjust employment practices, lack of education and job skills, ineligibility for public financial support, and language barriers, all of which contribute to health disparities. The political climate of the first decade of the 21st century places Latinas/os in an ideological, political, and legal maelstrom, stigmatized and vilified. Undocumented immigrants are subject to increased enforcement of current immigration laws without

regard to their social contributions while in the United States. From a feminist intersectionality perspective, the dominant group has exercised its power and reconstructed the United States from a nation of immigrants to a closed society. This secures this group's resources, such as wealth, employment, education, and healthcare.[13,39,40] In biomedical research, the variable of immigrant status is easily dichotomized with categories of US-born versus foreign-born; legal versus illegal, referred to politically and legally as "aliens"; and English versus non–English-speaking.

In this study, data on immigration status, years living in the United States, acculturation, and English proficiency are used to capture the complex category of immigrant. There are multiple factors inherent in the category of immigrant, with their compression comes a loss of understanding of the multiplicative effects of several dimensions of difference.[25] Immigrant Latinas who are abused face threats to their safety outside of the home, danger within the home, social isolation, and lack of resources. The intersections of their social identities exponentially magnify their vulnerabilities and losses of power, resulting in compounded mental health problems, including symptoms of PTSD.

PTSD. Symptoms of PTSD rather than the dichotomous *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*[41] diagnosis of PTSD are the focus in this study in order to address the qualitative nature of symptoms: their constellation, severity, frequency, and duration. The definition and measurement of PTSD are controversial, even within the field of psychiatry. They have been critiqued as overly conservative and somewhat artificial.[42] The diagnostic criteria for PTSD are supported by others as essential to validity and reliability in defining the phenomenon,[43] an argument clearly aligned with the biomedical approach.

Community-based participatory research

CBPR is a collaborative process in which community partners and researchers mutually participate in research, draw on the strengths of each partner, and address topics of concern to the community, including health disparities. Key features of CBPR are that it builds on strengths and resources within the community, promotes co-learning and capacity building among all partners, integrates and achieves a balance between research and action for the mutual benefit of all partners, involves community systems development, and involves a long-term process and commitment.[44] This approach is ideal for feminist intersectionality research as it intentionally addresses multilevel power relations and requires researcher subjectivity, engagement, and reflexivity.[6] While sometimes considered a research design, CBPR can guide strategies and decisions in studies with other designs, as it was in this study.

The integration of feminist intersectionality and biomedical paradigms in research ideally occurs within individual studies and throughout a program of research. This can be achieved using a CBPR approach. This study is the fourth study in a CBPR program of research I have been conducting in a long-term collaboration with a domestic violence services agency. This agency was the site for all of the studies. The first study was a qualitative study that described the healthcare experiences of battered immigrant Latinas.[45,46] The findings poignantly illustrated multiple overt and covert barriers to healthcare and IPV intervention that were the result of oppression and control at interpersonal, systemic, and societal levels, including familial relationships, healthcare systems, child protection services, and US Customs and Immigration Services.

The next study was a descriptive pilot study about the health status, health services utilization, and healthcare needs of abused immigrant women. The purpose of the study was to obtain data to inform potential healthcare interventions and that could also be used to secure programmatic funding for the agency. The finding that 66% of the women had symptoms diagnostic of PTSD is the basis for the current study.

Within the biomedical research paradigm, the preordained next step following the pilot

study would be a large descriptive study with a randomized sample to confirm and elaborate on the pilot data findings prior to an intervention study. The decision to conduct an intervention study at this point was collaborative and gave primacy to the goals of the agency staff and participants, who were anxious to move beyond description to action to make mental health services available to those in need.

As a feasibility study for a new intervention in an unconventional site, this study was initially designed for implementation in English to facilitate testing the logistics and preliminary effectiveness of the intervention without the complications of conducting the intervention in Spanish. However, the staff at the study site cited the urgent need for psychotherapy services in Spanish for survivors of IPV; they strongly urged the inclusion of a Spanish-speaking group in this study. Consistent with CBPR, a second group was conducted in Spanish. This decision accelerated the step-by-step approach to research within the biomedical model and incorporated the tenets of feminist intersectionality.

A separate descriptive study of mental health symptoms in abused women is being conducted concurrently with this study for several purposes: (1) to provide additional descriptive data that will serve as comparison data for this study and (2) to expand on the pilot study on the health status of abused women in order to (*a*) describe the mental health symptoms of abused women from various ethnic groups; (*b*) obtain data that can be used by the agency toward its service provision, advocacy, and development goals.

The design and implementation of this separate study was a multistep process that originated with the agency's request for data on the mental health of its participants. Staff were involved in each research-related decision and co-learning via training sessions. These 2 studies represent a realistic integration of feminist intersectionality with biomedicine within a model of CBPR, using both research and action.

In the language of the biomedical paradigm, this nursing intervention study uses a quasi-experimental multimethod 2-group, pretest-posttest design to test a group psychotherapy intervention for symptoms of PTSD in immigrant Latinas who have experienced IPV. It is considered quasi-experimental because it lacks randomization to the intervention conditions and the use of a control or comparison group. Randomization and the use of a control group are not feasible because of the small sample size, the use of a single social services agency as the research site, and the limited number of potential research subjects. Homogeneity in research subjects in RCTs is sought by controlling for individual differences along as many dimensions as possible. From a feminist intersectionality perspective, homogeneity is nonexistent and is not desirable.

RESEARCH METHODS

The study uses quantitative and qualitative methods. Quantitative methods are being used to assess changes in participants' symptoms of PTSD and other outcome variables. While qualitative methods are traditionally considered irrelevant and inappropriate for intervention studies from a biomedical perspective, they are "especially useful for further describing or explaining subject variation on outcome variables, verifying outcomes obtained from standardized instruments, and clarifying and evaluating interventions in their real-life contexts."[32(p359)] Qualitative interviews and focus groups were conducted with agency staff and participants prior to the development of the intervention to guide appropriate strategies for this particular population. Postintervention interviews and focus groups were used for verification of the quantitative findings and for evaluation of the intervention. This integration of methods maximizes the conditions considered essential for an adequately rigorous study from a biomedical perspective. Few methods-related decisions find the exact middle ground between the two paradigms. Rather, decisions

are based on maximizing the strengths, minimizing the limitations, and achieving the research goals of both paradigms.

Setting

The decision to conduct the study at a community-based social services agency was based on the failure of traditional healthcare system, particularly the mental healthcare system, to meet the needs of abused immigrant Latinas; a more flexible system and setting are necessary, one that is accessible and considered safe by the participants.

Recruitment and retention

Successful recruitment and retention require frequent communication with overworked agency staff and a difficult to reach participant pool. Challenges to communication with enrolled participants included safety concerns, work schedules, lack of consistent telephone access, and language barriers for non–Spanish-speaking study staff. Even in a collaborative research model, the onus is on the researcher to facilitate and ensure communication. In an intentional reversal of the traditional power relations of clinical research, communication strategies focused on facilitating access to the researcher by agency staff and research participants, for example, 24-hour access to the researcher by cell phone, scheduling of screening and intake interviews outside of business hours, and researcher presence in the agency at least 3 days a week during recruitment and implementation of the study.

Sampling

The above discussion of categorization addressed several sampling issues. Inclusion and exclusion criteria are conventionally used to obtain samples that are as homogeneous as possible, increasing the likelihood of significant findings. These criteria often serve to "weed out" the most complicated cases, that is, those with the most severe manifestations of the problem and most in need of intervention. In this study, exclusion criteria included only immediate safety risks, current alcohol or drug use, symptoms of schizophrenia, and a plan to return to the abuser. The conditions that frequently exclude participants from research samples such as pregnancy, psychosis, suicidal ideation, psychiatric comorbidities, and psychiatric medication use were not exclusion criteria in this study. Any interested women who met the inclusion criteria, that is, abused, immigrant, Latina, with symptoms of PTSD, and did not have any of the exclusion criteria, were offered enrollment in the study. While all of the women fit within the categories of the study, they had diverse personal and social circumstances.

Measurement

One challenge in measurement is to find the balance between obtaining a rich and nuanced understanding of the phenomena of concern while being both practical and considerate of participant burden. This is particularly the case when the true complexities of phenomena are being explored, that is, multiple social identities. The inclusion of too many variables is also statistically problematic. The feasibility and necessity of the multiple measures used in this study will be critically evaluated.

Psychotherapy intervention studies present challenging biomedical measurement issues, particularly the "dose" of the intervention and its outcomes. Psychotherapy, particularly feminist psychotherapy, is a flexible process that is individualized, relational, adaptive in content and duration, and employs an eclectic combination of strategies. The concept of dose is anathema to feminist intersectionality interventions, which are conceived and proposed at a macrolevel,* with social action and social justice as foci. However, within the biomedical model,

*See Weber[6] for an illustration of this with smoking as the problem.

interventions are designed and implemented at a microlevel with individuals and small groups, at predetermined doses, and with specific outcome measures. This difference reflects the primarily long view of feminist intersectionality and the more proximate view of biomedicine.

Various parameters have been used to measure dose in psychotherapy research: the duration of the intervention; the level of participation by the subject; and research subject adherence to the intervention, for example, completing "homework." In this study, intervention dose was measured in minutes of group session attendance and individual face-to-face or phone contact with the intervention nurses outside of the group.

Intervention

The premise of this strength-based intervention is that experiences of oppression and inequality do not obviate the strengths of the women in this population and the possibilities for mobilizing those strengths. This approach is grounded in feminist intersectionality and guides intervention strategies that differ in part from the current evidence-based treatment for PTSD, that is, cognitive behavioral therapy (CBT). It is precisely this population's position at the intersections of their multiple social identities that creates the need for strategies that differ from those designed and tested with majority populations. These intersections lead to social isolation and lack of material resources, which we theorized are significant factors in the women's experiences of their symptoms and impede their recovery. The intervention focused more on developing an ongoing social support network for emotional and tangible support than on CBT techniques. For example, the women were encouraged to talk with group members about not only their emotional struggles but also their day-to-day challenges, for example, childcare and transportation. The group as a whole was encouraged to provide emotional support and practical problem solving. The intervention is a synthesis of supportive psychotherapy and CBT and was conducted by 2 advanced practice psychiatric nurses.

The intervention duration was shortened from 10 to 6 weeks in consultation with the agency staff based on the view that the complexities of the participants' lives were not conducive to the longer time frame. The option of extending the intervention was offered to the groups and discussed at the third and fifth sessions. The collective decision of the Spanish group was to stop at 6 weeks. Approximately half of the women in the group described employment as the most problematic barrier to their participation in the group, particularly their powerlessness to control or change their work schedule when necessary. The women in the English group opted to continue to meet.

DISCUSSION

Integration of feminist intersectionality and biomedical paradigms in health research is essential to eliminate health disparities. There are growing numbers of calls from feminist intersectionality scholars and biomedical scientists to change the prevailing biomedical paradigm of health research. These scholars, who call for consideration of the other paradigm, are marginalized within their disciplines.[6] The challenge for researchers operating within these paradigms is to walk the line of the legitimizing pressures of their respective paradigms in their attempts to create a body of knowledge that is recognized and accepted by both, one that holds promise for health equality.

Without incorporation of this integrated approach into the mainstream within and across disciplines, health equality and broader social change are unlikely to occur. These scholars bridge the chasm between the two paradigms and suggest new research approaches for knowledge development. However, the practicalities and specifics of integrating these paradigms with one another have not been discussed in this scholarly literature. This study provides an example of this practical application.

The assumptions and preferred research methods of the feminist intersectionality and biomedical paradigms are in direct opposition. Both research approaches have been discounted by proponents of the other using arguments of scientific fallibility. Feminist intersectionality scholars critique the positivism, dualism, and reductive analysis of biomedicine and its failure to recognize the impact of power relations and multiple oppressions on health. Biomedical scientists object to the politicized nature of feminist intersectionality and fault it for failing to control for the confounding influences of differences among research subjects, rendering research findings unreliable and invalid.

As a nurse clinician conducting health disparities research, the only tenable position I find is in the middle ground created by integrating the two paradigms. The goals of social action and social justice on the one hand and identification of proximate causes and treatment of health problems on the other are not necessarily mutually exclusive. As a clinician, I cannot wait for social change to occur without seeking effective interventions for my patients who are suffering ill health. As a proponent of feminist intersectionality, I cannot restrict my view to proximate and surface causes of illness and inequality and fail to take social action to address the social injustice of health disparities.

It is worth noting that nursing literature, despite significant scholarship in health disparities, rarely considers the feminist intersectionality paradigm.[47,48] Likewise, despite extensive discussion of the need for interdisciplinary scholarship and integration of feminist intersectionality in health disparities research, the discipline of nursing and nursing scholarship are absent in the feminist intersectionality literature. Scholarship and action within each of these disciplines would be strengthened by interdisciplinary collaboration. CBPR is one area of common ground with potential for an integrated approach to knowledge development and social action.

Academicians, researchers, and clinicians share the same goals of improving health and healthcare in the United States and eliminating health disparities. Theoretical discourse within the feminist intersectionality and biomedical paradigms calls for the integration of these paradigms as the requisite approach to achieving these goals. Any integration will inevitably fail to completely meet the theoretical and scientific demands of each paradigm. However, significant theoretical and practical movement toward the other can maximize the unique contributions of each paradigm to knowledge development and social action that are crucial to eliminating health disparities. Ultimately, it is important to articulate new criteria for conducting and analyzing science that incorporate feminist intersectionality and biomedical paradigms in a new epistemology.

REFERENCES

1. Rusek S, Olesen V, Clarke A, eds. *Women's Health: Complexities and Differences.* Columbus, OH: Ohio State University Press; 1997.
2. Mullings L, Schultz AJ. Intersectionality and health: an introduction. In: Schultz AJ, Mullings L, eds. *Gender, Race, Class, and Health: Intersectional Approaches*. San Francisco, CA: Jossey-Bass; 2006:3–17.
3. Moore M. *Sicko* [DVD]. New York, NY: Weinstein Co; 2007.
4. US Department of Health and Human Services. *Healthy People 2010: Understanding and Improving Health.* 2nd ed. Washington, DC: US Government Printing Office; 2000.
5. Smedley BD, Stith AY, Nelson AR, eds. *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care.* Washington, DC: National Academies Press; 2003.
6. Weber L. Reconstructing the landscape of health disparities research: promoting dialogue and collaboration between feminist intersectional and biomedical paradigms. In: Schultz AJ, Mullings L, eds. *Gender, Race, Class, and Health: Intersectional Approaches*. San Francisco, CA: Jossey-Bass; 2006:21–59.
7. Weber L, Parra-Medina D. Intersectionality and women's health: charting a path to eliminating health disparities. *Adv Gender Res.* 2003;7:181–230.

8. Collins PH. Learning from the outsider within: the sociological significance of Black feminist thought. *Soc Probl*. 1986;33(6):S14–S32.
9. Collins PH. *Black Feminist Thought: Knowledge, Consciousness, and the Politics of Empowerment.* New York: Routledge; 2000.
10. Crenshaw K. Mapping the margins: intersectionality, identity politics, and violence against women of color. *Stanford Law Rev.* 1991;43(6):1241–1299.
11. Hurtado A. Strategic suspensions: feminists of color theorize the production of knowledge. In: Belenky MM, Goldberger NR, Tarule JM, Clinchy BM, eds. *Knowledge, Difference, and Power: Essay's Inspired by Women's Ways of Knowing.* New York: Basic Books; 1996:372–392.
12. Zambrana RE. A research agenda on issues affecting poor and minority women: a model for understanding their health needs. *Women Health.* 1988; 12(3/4):137–160.
13. Zinn MB, Dill BT. Theorizing difference from multiracial feminism. *Fem Stud.* 1996;22:321–331.
14. Shields SA. Gender: an intersectionality perspective. *Sex Roles*. 2008;59:301–311.
15. Bowleg L. When black + lesbian + woman ≠ black lesbian woman: The methodological challenges of qualitative and quantitative intersectionality research. *Sex Roles.* 2008;59:312–325.
16. McCall L. The complexity of intersectionality. *Signs*. 2005;30(3):1771–1800.
17. Sokoloff NJ, Dupont I. Domestic violence at the intersections of race, class, and gender: challenges and contributions to understanding violence against marginalized women in diverse communities. *Violence Against Women.* 2005;11(1):38–64.
18. Mahalingam R, Balan S, Haritatos J. Engendering immigrant psychology: an intersectionality perspective. *Sex Roles.* 2008;59:326–336.
19. DeVault ML. *Liberating Method: Feminism and Social Research.* Philadelphia, PA: Temple University Press; 1999.
20. Committee on Assuring the Health of the Public in the 21st Century. Institute of Medicine. *The Future of the Public's Health in the 21st Century.* Washington, DC: National Academy of Sciences; 2003.
21. Ali A. Where is the voice of feminism in research on emotional abuse? *J Gender Stud.* 2007;16(1):73–77.
22. Flaskerud JH, Nyamathi AM. New paradigm for health disparities needed. *Nurs Res.* 2002;51(3):139.
23. Kinser PA, Lewis JA. Understanding gender construction: creating space for feminist health care practice and research. *Health Care Women Int.* 2005;26:422–429.
24. Kirkham SR, Baumbusch JL, Schultz ASH, Anderson JM. Knowledge development and evidence-based practice: insights and opportunities from a postcolonial feminist perspective for transformative nursing practice. *ANS Adv Nurs Sci*. 2007;30(1):26–40.
25. Kneipp SM, Drevdahl DJ. Problems with parsimony in research on socioeconomic determinants of health. *ANS Adv Nurs Sci.* 2003;26(3):162–172.
26. Geiger HJ. Health disparities: what do we know? What do we need to know? What should we do? In: Schultz AJ, Mullings L, eds. *Gender, Race, Class, and Health: Intersectional Approaches*. San Francisco, CA: Jossey-Bass; 2006:261–288.
27. Zambrana RE, Dill BT. Disparities in Latina health: an intersectional analysis. In: Schultz AJ, Mullings L, eds. *Gender, Race, Class, and Health: Intersectional Approaches*. San Francisco, CA: Jossey-Bass; 2006:192–227.
28. Fonow MM, Cook JA. Feminist methodology: new applications in the academy and public policy. *Signs.* 2005;30(4):2211–2236.
29. Agency for Health Care Research and Quality. Making health care safer: a critical analysis of patient safety practices: Chapter 3: evidence-based review methodology. http://www.ahrq.gov/clinic/ptsafety/chap3.htm. Published July 20, 2001. Accessed February 8, 2009.
30. Harris RP, Helfand M, Woolf SH, et al. Current methods of the U.S. Preventive Services Task Force: a review of the process. Methods Work Group, Third U.S. Preventive Services Task Force. *Am J Prev Med*. 2001;20(3S):21–35.
31. Guyatt G, Rennie D, Meade MO, Cook DJ. *Users' Guides to the Medical Literature: A Manual for Evidence-Based Clinical Practice.* 2nd ed. New York: McGraw-Hill; 2008.
32. Sandelowski M. Using qualitative methods in intervention studies. *Res Nurs Health.* 1996;19:359–364.
33. Warner LR. A best practices guide to intersectional approaches in psychological research. *Sex Roles.* 2008;59:454–463.
34. Green BL, Kimberling R. Trauma, post-traumatic stress disorder, and health status. In: Schnurr PP, Green BL, eds. *Trauma and Health: Physical Health Consequences of Exposure to Extreme Stress*. Washington, DC: American Psychological Association; 2004:13–42.
35. Gorde MW, Helfrich CA, Finlayson ML. Trauma symptoms and life skill needs of domestic violence victims. *J Interpers Violence.* 2004;19:691–708.
36. Wuest J, Ford-Gilboe M, Merritt-Gray M, Berman H. Intrusion: the central problem for family health promotion among children and single mothers after leaving an abusive partner. *Qual Health Res.* 2003; 13(5):597–622.
37. Rheingold AA, Acierno R, Resnick HS. Trauma, posttraumatic stress disorder, and health risk behaviors. In: Schnurr PP, Green BL, eds. *Trauma and Health: Physical Health Consequences of Exposure to Extreme Stress*. Washington, DC: American Psychological Association; 2004:217–243.
38. Purdie-Vaughns V, Eibach RP. Intersectional

invisibility: the distinctive advantages and disadvantages of multiple subordinate-group identities. *Sex Roles*. 2008;59:377–391.
39. Weber L. A conceptual framework for understanding race, class, gender and sexuality. *Psychol Women Q.* 1998;22:13–32.
40. Weber L, Hancock T, Higginbotham E. Women, power, and mental health. In: Rusek S, Olesen V, Clarke A, eds. *Women's Health: Complexities and Differences.* Columbus, OH: Ohio State University Press; 1997:380–396.
41. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*, *Fourth Edition*, *Text Revision*. Washington, DC: American Psychiatric Association; 2000.
42. Weathers FW, Keane TM. The Criterion A problem revisited: controversies and challenges in defining and measuring psychological trauma. *J Trauma Stress.* 2007;20(2):107–121.
43. Maier T. Weathers' and Keane's, "The Criterion A problem revisited: controversies and challenges in defining and measuring psychological trauma." *J Trauma Stress.* 2007;20(5):915–916.
44. Minkler M, Wallerstein N, eds. *Community-Based Participatory Research for Health.* San Francisco, CA: Jossey-Bass; 2003.
45. Kelly U. "I'm a mother first": The influence of mothering in the decision-making processes of battered immigrant Latino women. *Res Nurs Health.* 2009;3(32).
46. Kelly U. What will happen if I tell you? Battered Latina women's experiences of healthcare. *Can J Nurs Res*. 2006;38(4):78–95.
47. Guruge S, Khanlou N. Intersectionalities of influence: researching the health of immigrant and refugee women. *Can J Nurs Res.* 2004;36(3):32–47.
48. Henderson D. Intersecting race and gender in feminist theories of women's psychological development. *Issues Ment Health Nurs.* 1997;18:377–393.