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## Perceptions of Physical Activity and Motivational Interviewing Among Rural African American Women with Type II Diabetes

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### Abstract

**Purpose**—Motivational interviewing (MI), a patient-centered behavioral counseling style, is a common behavioral intervention strategy. Since intervention outcomes are highly dependent on patient responsiveness to intervention strategy, we evaluated MI perceptions among rural African American women with Type 2 diabetes prior to a physical activity intervention.

**Methods**—Four moderator-led focus groups were conducted with patients age 21–50 who had never participated in a MI intervention and who receive diabetes care in a rural community health center. Patients were asked to share their perceptions of an MI consultation after viewing a DVD-based example. They were also asked to discuss their physical activity perceptions and readiness. A comprehensive content analysis based on grounded theory was performed by two raters in order to identify main themes.

**Main Findings**—Though patients (n=31) had an appreciation for physical activity benefits and high levels of physical activity readiness, themes related to physical activity barriers and lack of motivation were pervasive. Patients regarded the MI consultation as an effective health communication but the patient-centeredness of the approach was negatively perceived. Compared to MI, patients agreed that more traditional paternalistic approaches (i.e. physician-led interactions) were more representative of “good counseling” and more familiar to them. Patients shared deeply about personal experiences and provided words of encouragement to one another.

**Conclusion**—Physical activity interventions including rural African American women should include activities that focus on barrier management and increasing motivation. MI might be an appropriate behavioral counseling model when added to a more traditional cognitive-behavioral

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Correspondence should be sent to Stephanía T. Miller. She had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

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physical activity intervention that is group-based and tailored to patients' communication preferences and the clinical setting.

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## Introduction and Background

Physical activity is a health behavior that is commonly targeted in behavioral interventions to improve health and quality of life of patients with diabetes (Dutton et al., 2009; Ripsin, Kang, & Urban, 2009). In recent years, there has been a surge in the number of physical activity interventions that include a counseling component (Allen, Jacelon, & Chipkin, 2009; Sevick et al., 2008). However, there has been little research addressing patients' perceptions of physical activity and physical activity counseling strategies. Motivational interviewing (MI) is a behavioral counseling strategy that is patient-centered and designed to enhance patients' internal motivation for behavioral change (Miller, 1991). In this study, we conducted focus groups among rural African American women with Type 2, a population at risk for diabetes-related complications (Giger, 2005; Prochaska & Velicer, 1997) due, in part, to high rates of obesity (Brown, 2008; Ogden et al., 2006). The goal was to gather their perceptions of physical activity as well MI as a potential physical activity counseling strategy.

## Methods

### Participants

A research coordinator recruited patients from two rural community health centers (CHC)s. Patient eligibility criteria included: 1) African American; 2) female; 3) 21–50 years old; 4) clinical diagnosis of type 2 diabetes for at least six months; 5) receipt of diabetes care in a rural CHC for at least six months, and 6) no previous participation in a MI intervention.

### Design

The study research protocol and consent forms were approved by the [blinded by WHI editors] Institutional Review Board. A total of four focus groups were conducted; two at each collaborating rural CHC. Focus groups took place in conference rooms of the respective rural CHCs outside of regular clinic hours. For each rural CHC, one moderator facilitated the two focus group sessions. Both moderators were African American females who had previously moderated focus groups in collaboration with the respective rural CHCs and in other local community settings. A co-moderator served as observer, note taker, and logistical assistant for all focus groups.

Following greetings, written informed consent procedures, explanation of focus group ground rules, and meal service, the moderators asked patients a series of open-ended questions from a prepared moderator's guide (See next section). Each focus group was audio and video recorded and lasted 1.5 to 2 hours.

### Focus group questions

At the beginning of the focus groups, patients were asked (Table 1) to describe what the words “physical activity” and “exercise” meant to them. Our rationale for including these questions was to introduce the topic of physical activity and to get an understanding of what images or thoughts were evoked by hearing these words. We felt this would provide relevant information for framing intervention messages and content in a relevant manner. Next, patients were asked to identify and describe their level of readiness to engage in exercise (defined as planned physical activity) on a regular basis using a scale ranging from “not at all ready” to “completely ready”. This question was designed to identify factors that were associated with low levels of readiness (barriers) and higher levels of readiness (enablers) and was based on the Stages of Change model of behavior change (Prochaska & Velicer, 1997). We expected that emerging

themes would help in identifying relevant barrier management and behavioral support strategies that could be included in the intervention design.

Before the final questions, patients viewed two excerpts from a MI training DVD (Miller W & Rollnick S, 1998); one depicting a patient-physician (actors) consultation without the application of MI principles (non-MI consultation) and one demonstrating MI principles (MI consultation). Both consultations depicted the same patient actor. However, two different physician actors were featured. The non-MI consultation portrays the physician dominating the conversation by asking the patient numerous closed-ended questions about lifestyle modification. In the MI consultation, the physician asks the patient several open-ended questions about lifestyle modification, allowing the patient self-expression about lifestyle modifications. The final focus group questions were included to elicit patients' impressions of the non-MI and MI consultations.

## Analysis

### Focus group data were transcribed verbatim

Analysis was conducted by two trained independent raters in several stages. First, each rater performed an initial read of each transcript (15 to 20 minutes/rater/transcript) to obtain an overall sense of the focus group flow and to identify any text that was not clear. Secondly, each rater assigned individual themes to describe the most prevalent responses to each question (1.5 to 2 hours/rater/transcript). Next, the raters compared assigned themes and discussed reasons for assignment of themes (2 hours). Twelve of the final 14 themes (86%) were identified by both raters. The raters discussed the other two themes until consensus was met about inclusion. Consensus was met by examining quotes and patient responses related to these themes. Following this discussion, one of the raters compiled a comprehensive table of identified themes (30 minutes) for review by the other rater. Lastly, the two raters had an additional meeting to review the final themes. Raters were in full agreement on final themes to be presented.

## Results

### Demographics

Table 2 provides a demographic and clinical profile of the thirty-one rural African American women that participated in the four focus groups. The profile depicts a middle age, obese, and educated patient group that had lived with diabetes for several years.

### Physical activity/exercise perceptions

Table 3 lists all the emerging focus group themes. "Physical activity" was associated with activities such as mowing the lawn or doing household chores. Activities such as biking and dancing were associated with "exercise". Additionally, both words resulted in thoughts about weight loss (theme 1) as supported by comments about "burning calories" or using "Slimfast". Though many patients were aware of the benefits of physical activity and exercise, hearing the words "physical activity" and "exercise" also caused reflection on personal barriers to physical activity (theme 2) such as competing priorities and medical conditions.

### Exercise readiness

Low levels of exercise readiness were related mostly to lack of motivation (theme 3) and competing priorities (theme 4). Lack of motivation was often associated with not seeing immediate results from exercise (i.e. weight loss). A representative quote was, "I played basketball every day. And when I do that I never lose weight. So it's all a turn off to me." Another person expressed decreased motivation because of the small number of fat calories

burned during exercise compared to overall calories. She stated, “I was like sometimes I get up to 700 calories, but only 10 fat calories and I’m like that’s almost a whole hour of work. I’m wasting time...” Competing priorities were often expressed in terms of work- and family-related responsibilities such as working a full time job, taking care of children, home maintenance, and spending time with their spouse. Higher levels of readiness were related to confidence in present or past ability to maintain regular physical activity for an extended time period (theme 5). One patient voiced this by stating, “I’ve been doing it [exercise video] now for two weeks and I’ve gotten so good it at that I’m leading the woman [video instructor] now.” Another patient stated, “I am ready right now because I am walking... I am exercising and walk 2–4 times [a day].”

### Perceptions of non-MI consultation

A pervasive theme describing the patients’ perceptions of the non-MI consultation was “poor communication” (theme 6). Patients expressed that the healthcare provider dominated the consultation and that the conversation was very impersonal. One patient said, “I think the exchange between the patient and provider was one-sided with the doctor being impersonal and giving dos and don’ts and the patient didn’t seem to take any part in his treatment or exchange of ideas of information which is important.” In general, patients felt that the healthcare provider, rather than the patient, was more responsible for creating a positive communication environment (theme 7).

Compared to their consultations with their own healthcare providers, patients articulated that the non-MI consultation was of lesser quality (theme 8). Many of the patients reported that they had more positive relationships and communication with their healthcare providers. One patient stated, “[My doctor] sat there and explained to me. And she talked to me. And she told me that my sugar was staying too high and we got to work on that. And that’s what we’ve been doing, we’ve been working on it.”

### Perceptions of MI consultation

Collectively, patients’ identified many aspects of the MI consultation that were representative of good communication (theme 9). Good communication was described in terms of the openness of the consultation, the relaxed, comfortable environment, and active patient involvement. One patient described the communication by saying, “The patient had a communication thing going on between him and the doctor, where he’s able to talk to him about different situations and challenges that were going on.”

Though patients voiced many positive elements about the communication, many patients expressed that the consultation was too patient-centered (theme 10). A representative quote was, “He [provider] was asking the patient more about his decision, instead of him [provider] telling him.” Another patient stated, “He [healthcare provider] [was] not giving the patient much information. He’s supposed to know, he’s a doctor.”

Many patients implied that a more paternalistic consultation approach, where the healthcare provider did most of the talking and offered unsolicited advice, was more representative of a good consultation (theme 11) and what they were used to.

### Emotional Support During Focus Group

Though the goal of the focus groups was to assess patients’ experiences with physical activity and to get their impressions of MI, they also represented a source of emotional support for the patients. Many patients in the focus groups expressed negative emotions related to their diabetes and/or diabetes care. Comments reflecting denial (theme 12), depression (theme 13), and frustration (theme 14) were prevalent. In each case, patients offered immediate support to

each other. This was offered simply as statements like, “Don’t be discouraged...” or “Take care of yourself...”

## Discussion

### Perceptions of Physical Activity/Exercise and Readiness

In general, the focus group themes that emerged regarding perceptions of physical activity/exercise and readiness to exercise were not new. In particular, barriers related to competing priorities and other medical conditions are common (Ainsworth, Wilcox, Thompson, Richter, & Henderson, 2003; Zunker et al., 2008) (Bopp et al., 2006; Fallon, Wilcox, & Laken, 2006). In addition, lack of motivation for physical activity is a recognized sentiment among African American women (Genkinger, Jehn, Sapun, Mabry, & Young, 2006; Sanderson, Littleton, & Pulley, 2002). Physical activity interventions involving this patient population should not only acknowledge barriers but also help patients find realistic and relevant solutions for managing barriers. Family (Gibson, 2002; Watson, Randolph, & Lyons, 2005) and spirituality (Musgrave, Allen, & Allen, 2002) may provide relevant contexts from which to develop and implement solutions given their importance among African American women.

The association between physical activity/exercise and weight loss was also not a new finding. However, based on the disproportionate burden of overweight and obesity (Brown, 2008) and diabetes among African American women (Giger, 2005) and the association between overweight status and incidence of Type 2 diabetes (Keller, 2006), it is a salient theme that should be addressed in interventions involving African American women with Type 2 diabetes. While physical activity is an important component of weight loss, it may be more beneficial to patients if its role in regulating blood glucose levels, and thereby reducing the risk of diabetes complications, is emphasized to a greater degree throughout interventions. For example, if patients’ primary motivation for physical activity is weight loss, and weight loss occurs, the primary motivation is removed. If it is to improve diabetes-related health outcomes, physical activity is more likely to be viewed as a behavior that needs to be maintained over a lifetime.

### Perceptions of MI consultation

Although patients viewed the MI consultation as an effective communication exchange, there were concerns about the patient-centeredness of the consultation. Moreover, patients’ statements indicated that they were more comfortable with more paternalistic communication approaches where they are simply told what they need to do (Deci & Ryan, 1987). It was also clear that many of the patients had long-standing, quality relationships with their healthcare providers. This raises the question of whether patients were more comfortable with paternalistic communication, as opposed to autonomy-supported communication where patient choice and involvement is promoted (Deci & Ryan, 1987), because they actually preferred to be less involved in the consultations or because they had become accustomed to them over time.

Patient communication preferences are based on Self Determination Theory (Ryan & Deci, 2000) that posits that autonomy-supported communication enhances one’s self-motivation and well being while paternalistic approaches diminishes them. In a study by Resnicow et al, autonomy- versus paternalism-supported communication preferences were assessed as part of an fruit and vegetable intake intervention among African Americans. Results showed that those that preferred autonomy-supported communication styles were more likely to increase fruit and vegetable after receiving printed fruit and vegetable educational materials utilizing MI constructs (Resnicow et al., 2008). Work by Street et al (Street, Gordon, Ward, Krupat, & Kravitz, 2005) explored the extent to which patient participation in medical interactions is influenced by personal characteristics, physician communication style, and clinical setting. Results showed that though actively involved patients were more educated, Caucasian, and

had physicians that supported patient autonomy, the strongest predictor was the clinical setting. In rural clinical settings where there are often physician shortages (Hart, Salsberg, Phillips, & Lishner, 2002), there may be less time for relationship building and active patient involvement during each clinical encounter. In this scenario, patients that are routinely involved in such consultations may become comfortable with paternalistic approaches even if they don't necessarily prefer them. In sum, these two studies suggest that both patients' communication style preferences and the clinical setting can influence patients' comfort with more paternalistic communication approaches. Therefore, physical activity interventions utilizing MI among rural African American women might benefit from tailoring MI sessions to the rural clinical setting and patients' communication preferences. For instance, there are many examples of brief MI counseling strategies that could be modified for limited patient/provider encounters (Copeland, 2008; Steinberg, Ziedonis, Krejci, & Brandon, 2004). Moreover, patient communication preferences could be assessed using scales such as the Autonomy Preference Index (Ende, Kazis, Ash, & Moskowitz, 1989) prior to interventions. For example, patients that prefer more paternalistic approaches might prefer being advised about different types of physical activity that they can engage in once they are sufficiently motivated to make changes. In this instance, adhering to the MI strategies, the provider could ask the patients' permission before offering this advice. Alternatively, patients that prefer autonomy-supported communication might prefer coming up with their own unique physical activity options or choosing from a menu of options, a common MI strategy (Rollnick, Miller, & Butler, 2007).

Motivational interviewing strategies are most commonly utilized as an adjunct to more traditional behavioral strategies in a way that is behavioral action-oriented when the patient exhibits motivation for change. West et al utilized this model by adding in person MI sessions to a traditional behavioral weight loss intervention among African American and Caucasian women. While MI was associated with greater weight loss compared to the weight loss intervention alone, the benefit was diminished in African American women (West, DiLillo, Bursac, Gore, & Greene, 2007). Using both in person and phone MI consultations, a similar study involving African American reported no MI benefit (Befort et al., 2008). Therefore, based on the findings of these two studies, the possible influence of patients' communication preferences and the clinical setting on MI consultations as described above, and our study findings, we conclude that the inclusion of MI as an adjunct to a physical activity intervention among rural African American women may be an appropriate intervention model. However, additional work is needed to identify factors that might influence patients' responsiveness to MI (i.e. MI implementation format, communication preferences, clinic setting).

### **Emotional Support During Focus Groups**

In this focus group study, beyond race, African American women were brought together based on a shared clinical diagnosis of Type 2 diabetes. Though it was beyond the scope of this study to explore the nature and extent of patients' emotions related to diabetes, it was clear that many of the patients were frustrated and experienced other negative diabetes-related emotions. Importantly, the sharing of these feelings was acknowledged by words of encouragement from other patients during the focus group discussions. Rural locale was also a shared life factor among this patient group though it was not addressed directly during the focus group discussions. This commonality in geographical location could have promoted another level of sharing and mutual understanding between patients. In the future, it would be interesting to explore what "living in a rural area" means to this patient group and how it might impact mutual understanding and emotional support among them.



## Methodological Considerations

The major study strength is its focus on patients' physical activity perceptions and readiness and MI prior to the actual intervention. This foreknowledge provides opportunities to design a more relevant and effective physical activity intervention using MI strategies. Another major strength of this study was our ability to recruit African American women living in rural areas, an accomplishment that is important in insuring that geographically underserved populations are represented in research and can benefit from relevant findings (UyBico, Pavel, & Gross, 2007). In addition, the qualitative research design allowed for an elaboration on patients' thoughts about physical activity and MI that would not have been possible using quantitative measures.

Most of the negative views of MI in this study were related to the patient-centeredness of the consultation. While MI does embrace healthcare providers getting involved in patient goal setting and treatment plan implementation (Miller, 1991), we only showed a single example of MI and it did not show specific examples of patient-provider interactions in this context. It is possible, then, that many of the negative views persisted because patients were not given the opportunity to fully appreciate the essence of MI principles and strategies. Moreover, beyond rural African American women with Type 2 diabetes, the findings have limited generalizability.

## Conclusion

Physical activity interventions including rural African American women with Type 2 diabetes should include activities that focus on managing barriers to physical activity and increasing motivation. Additionally, MI might be an appropriate behavioral counseling model when added to a more traditional cognitive-behavioral physical activity intervention that is group-based and if it is tailored to patients' communication preferences and the clinical setting.

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**Table 1**

## Focus Group Questions

When you hear the phrase “physical activity”, what comes to your mind?
When you hear the phrase “exercise”, what comes to your mind?
How ready are you to engage in exercise on a regular basis using the following scale: not all ready, somewhat ready, and completely ready.
Why?
What is your impression of the exchange between this patient and healthcare provider (in the nonMI consultation DVD)?
What is your impression of the exchange between this patient and healthcare provider (in the MI consultation DVD)?

**Table 2**

## Patient Profile

n	31
41–50 years old (%)	50
Some college or above (%)	64.2
Average Body Mass Index	35.9± 8.9
Average Duration of Type 2 diabetes (years)	10.2±4.9

**Table 3**

## Emerging Focus Group Themes

<b>Perceptions of Physical Activity/Exercise</b>	
Theme 1	Physical activity/exercise viewed as a way to lose weight
Theme 2	Physical Activity/exercise evoked thoughts about barriers to exercise
<b>Readiness to Exercise</b>	
Theme 3	Lower levels of exercise readiness associated with lack of motivation
Theme 4	Lower levels of exercise readiness associated with competing priorities
Theme 5	Higher levels of exercise readiness associated with confidence (maintenance of exercise regimen currently or in the past)
<b>Perceptions of non-MI Consultation</b>	
Theme 6	Poor communication
Theme 7	Healthcare provider more responsible (than patient) for creating positive communication environment
Theme 8	Of lesser quality compared to patients' communication with their own healthcare providers
<b>Perceptions of MI Consultation</b>	
Theme 9	Good communication strategies
Theme 10	Too "patient-centered"
Theme 11	Endorsement of a more "physician-centered" counseling approach
<b>Emotional Support for Negative Emotions during Focus Groups</b>	
Theme 12	Support for being in denial about having diabetes
Theme 13	Support for feeling depressed about having diabetes
Theme 14	Support for feelings of frustration regarding systemic barriers to diabetes care