**INTRODUCTION**

Lifestyle interventions for obesity produce both clinically significant weight reductions and improvements in key health indicators.\(^1\) Given that US rates of obesity and associated health problems are higher among African American than Caucasian populations,\(^2\) there is a need to investigate the impact of behavioral treatment on short- and long-term weight loss outcomes in these groups. The current literature has yielded mixed outcomes regarding potential differences in initial response to lifestyle intervention. Some studies have yielded similar weight losses in both African American and Caucasian participants,\(^3\) while others have indicated more modest effects among African American participants as compared to Caucasian participants.\(^4,5\)

Preventing weight regain following a period of initial loss has become an important priority in the context of obesity treatment. Extended-care programs following initial lifestyle intervention can be effective in minimizing weight regain,\(^6\) but the results of studies examining differential treatment response by ethnicity have been inconsistent.\(^5,7,8\) For example, a study conducted by Smith West and colleagues\(^5\) found that during a 6-month weight loss intervention that included a year-long extended-care program, African American participants achieved smaller weight losses than Caucasian participants at both short- and long-term follow-up. Results from at least one independent clinical trial suggest, however, that patterns of long-term weight regain following an intensive lifestyle intervention may vary by ethnicity. Stevens and colleagues\(^8\) and the Diabetes Prevention Program Research Group\(^7\) found no significant differences between Caucasian and African American participants in net weight losses at long-term follow-up; however, patterns of weight change varied by ethnicity.\(^8\) African American participants lost less weight during the initial weight management intervention, but were better able to maintain their losses compared to Caucasian participants; contrastingly, Caucasian participants lost more weight initially, but exhibited a more rapid weight regain. In the Diabetes Prevention Program,\(^7\) Caucasian participants were initially more successful with reaching the weight loss goal (57% achieved a 7% weight loss, while only 30% of African American participants reached this goal), but there were no differences by ethnicity at follow-up.

A recent randomized trial, Treatment of Obesity in Underserved Rural Settings (TOURS), provided an excellent opportunity for further investigation into this question. The TOURS trial was a behavioral weight management intervention that included a 6-month lifestyle intervention phase followed by a 12-month extended-care phase.\(^9\) Utilizing data from the TOURS study, the primary aim of the current study was to evaluate ethnic differences in weight change during the initial and extended-care phases of the intervention. Specifically, we were interested in investigating ethnic differences in weight maintenance between the extended-care and control conditions. Secondary aims focused on evaluating ethnic differences in changes in cardiovascular disease risk factors (ie, blood pressure and cholesterol), dietary intake, physical activity, and functional mobility.

**Objective:** The current study examined ethnic differences in patterns of weight loss and regain in response to an initial behavioral weight loss intervention followed by an extended-care maintenance program.

**Methods:** We analyzed data from 224 women (African American \(n=43\), Caucasian \(n=181\)) from rural communities who participated in an initial 6-month lifestyle intervention for obesity and were then randomized to a face-to-face, telephone, or educational/control extended-care condition.

**Results:** African American participants lost less weight during the initial phase of treatment than Caucasian participants (mean \(\pm SE = -6.8 \pm .80\) vs \(-10.7 \pm .38\) kg, respectively, \(P = .003\)). Investigating weight change during month 6 to month 18, we found a significant interaction between ethnicity and the provision of an extended-care program. Caucasian participants randomized to either of two extended-care programs regained less weight than those assigned to the control condition (1.2 \(\pm .58\) and 4.2 \(\pm .79\) kg, respectively, \(P = .003\)), but the provision of extended care did not influence weight regain among African American participants (1.9 \(\pm 1.12\) and 1.34 \(\pm 2.04\) kg, respectively, \(P = .815\)).

**Conclusion:** Collectively, these findings suggest that although African American participants lost less weight during the initial phase of treatment, they exhibited better long-term weight-loss maintenance than Caucasian participants. Further, while the provision of extended care successfully enhanced weight maintenance among Caucasian participants, African American participants maintained their initial weight losses regardless of extended care. (Ethn Dis. 2011;21(2):170–175)

**Key Words:** Weight Loss, Weight Regain, Ethnicity, Racial Difference, Lifestyle Intervention