INTRODUCTION
Cigarette use is the leading cause of preventable death in the United States. Recent research suggests that traditional models of cigarette smoking and nicotine dependence may not apply equally well to all smokers. In particular, cigarette smoking patterns among specific demographic groups may be quite different from the stereotypical daily smoker.

African American and Hispanic adults have been found to smoke less frequently than Caucasian smokers (Bums et al., 2007; Okuyemi et al., 2007).

THE STUDY
We sought to identify prevalent cigarette smoking patterns with latent class analysis (LCA) in national samples of African American and Hispanic adults. Due to expected age differences in smoking (Lawrence et al., 2007), 18-25 year olds and those ages 26+ were analyzed separately.

METHOD
Participants
National Survey of Drug Use and Health Survey 2004
Subsampled based on race and recent smoking (i.e., within the last 30 days).

African American Adults
Ages 18-25: n = 671
Ages 26+: n = 592

Hispanic Adults
Ages 18-25: n = 919
Ages 26+: n = 540

Cigarette History Items
On how many of the past 30 days have you smoked?
- 1-9 days
- 10-19 days
- 20-29 days
- 30 days

On the days smoked, how many cigarettes did you smoke per day?
- <= 1 per day
- 2-5 per day
- 6-15 per day
- 16+ per day

Have you ever smoked every day for a month? Yes/No
Have you smoked 100 or more cigarettes? Yes/No

Nicotine Dependence Covariates
Subscales from the Nicotine Dependence Syndrome Scale (NDSS; Shiffman et al., 2004)
- Drive: Reflects cravings, withdrawal avoidance
- Priority: Value placed on smoking
- Continuity: Need to smoke regularly throughout the day
- Stereotypy: Rigidity in patterns of smoking
- Tolerance: Reduced sensitivity to nicotine

Data Analyses
We fit exploratory LCA models (2-5 classes) and selected unrestricted solutions using G², AIC, BIC, and interpretability of the solution as guides. After identification of unrestricted models, we fit restricted LC models focused on measurement and differentiation of classes.

LC membership was modeled as a function of NDSS subscales.

RESULTS

African American 18-25

<table>
<thead>
<tr>
<th>Number of Days Smoked per Month</th>
<th>Amount Smoked per Day</th>
<th>Smoked Daily for a Month?</th>
<th>Smoked &gt;100 Cigarettes?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1 (36.5%) Light Smokers</td>
<td>2.46 (28)</td>
<td>0.36 (28)</td>
<td>0.38 (28)</td>
</tr>
<tr>
<td>Class 2 (47%) Heavy Smokers</td>
<td>7.06 (28)</td>
<td>0.74 (28)</td>
<td>0.76 (28)</td>
</tr>
<tr>
<td>Class 3 (12.44%) Recent Smokers</td>
<td>4.96 (28)</td>
<td>0.66 (28)</td>
<td>0.68 (28)</td>
</tr>
</tbody>
</table>

African American 26+

<table>
<thead>
<tr>
<th>Number of Days Smoked per Month</th>
<th>Amount Smoked per Day</th>
<th>Smoked Daily for a Month?</th>
<th>Smoked &gt;100 Cigarettes?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1 (64.39%) Heavy Smokers</td>
<td>7.06 (28)</td>
<td>0.74 (28)</td>
<td>0.76 (28)</td>
</tr>
<tr>
<td>Class 2 (19.7%) Low Frequency Smokers</td>
<td>2.46 (28)</td>
<td>0.36 (28)</td>
<td>0.38 (28)</td>
</tr>
<tr>
<td>Class 3 (15.15%) Recent Smokers</td>
<td>4.96 (28)</td>
<td>0.66 (28)</td>
<td>0.68 (28)</td>
</tr>
</tbody>
</table>

Hispanic 18-25

<table>
<thead>
<tr>
<th>Number of Days Smoked per Month</th>
<th>Amount Smoked per Day</th>
<th>Smoked Daily for a Month?</th>
<th>Smoked &gt;100 Cigarettes?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1 (28%) Heavy Smokers</td>
<td>7.06 (28)</td>
<td>0.74 (28)</td>
<td>0.76 (28)</td>
</tr>
<tr>
<td>Class 2 (34%) Light and Low Frequency Smokers</td>
<td>2.46 (28)</td>
<td>0.36 (28)</td>
<td>0.38 (28)</td>
</tr>
<tr>
<td>Class 3 (23%) Recent Smokers</td>
<td>4.96 (28)</td>
<td>0.66 (28)</td>
<td>0.68 (28)</td>
</tr>
</tbody>
</table>

Hispanic 26+

<table>
<thead>
<tr>
<th>Number of Days Smoked per Month</th>
<th>Amount Smoked per Day</th>
<th>Smoked Daily for a Month?</th>
<th>Smoked &gt;100 Cigarettes?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1 (82%) Heavy Smokers</td>
<td>7.06 (28)</td>
<td>0.74 (28)</td>
<td>0.76 (28)</td>
</tr>
<tr>
<td>Class 2 (23%) Low Frequency Smokers</td>
<td>2.46 (28)</td>
<td>0.36 (28)</td>
<td>0.38 (28)</td>
</tr>
<tr>
<td>Class 3 (15%) Recent Smokers</td>
<td>4.96 (28)</td>
<td>0.66 (28)</td>
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DISCUSSION
Application of LCA to the examination of smoking patterns in African American and Hispanic adults supported recent research suggesting that smoking patterns observed in these demographic groups tended to report more light and low frequency smoking.

Modeling LC membership as a function of nicotine dependence was in line with expected differences between heavy smokers and the other smoking profiles.

Thus, in each subsample those likely to be classified as heavy smokers were more likely to endorse higher rates of withdrawal avoidance and a need to smoking throughout the day in order to maintain levels of nicotine.

These results highlight the benefit of incorporating person-centered analyses into our examination of differences in smoking patterns among various demographic groups.