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A-177

PERCEIVED STRESS, DEPRESSION, AND DAYTIME SLEEPINESS IN HISPANIC AMERICANS

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Higher levels of perceived stress have been associated with more sleep disruption and daytime consequences of increased sleepiness. Additionally, more daytime sleepiness has been associated with increased levels of depression. Few studies have explored the relationships among stress, depression, and sleepiness in community-dwelling Hispanic Americans (HAs). The present study examined the relationship between perceived stress and daytime sleepiness in HA adults, and explored the potential impact of depressive symptoms on this relationship. A community-based sample (N = 421) of 211 men and 210 women completed the Epworth Sleepiness Scale, an eight-item measure of daytime sleepiness. Self-perceived levels of stress were measured by the Perceived Stress Scale-10, and depressive symptoms were measured by the Personal Health Questionnaire-9. MacKinnon's product of coefficients method was used to determine if perceived stress was predictive of daytime sleepiness and if depression mediated this relationship. First, a linear regression, controlling for age, income, education, and gender demonstrated a significant main effect for perceived stress ($\beta = .617, p < .001$) as a predictor of depression. Second, after controlling for perceived stress, a multiple linear regression revealed depression significantly predicted daytime sleepiness ($\beta = .275, p < .001$). Third, the RMediation program was used to evaluate the indirect effect of perceived stress on daytime sleepiness, as mediated by depression. Results revealed an indirect effect of .115 (95% CI: .061, .172), indicating a significant mediation at $\alpha = .05$. These findings suggest that the relationship between perceived stress and daytime sleepiness in HAs might be attributable to depression. Because this study used cross-sectional data, future studies should investigate these relationships longitudinally to examine temporal and causal relationships.

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A-179

THE ROLE OF SMOKING CUES ON SPEED AND ACCURACY IN SMOKERS AND NON-SMOKERS

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Research has repeatedly demonstrated that addicts show an attentional bias toward drug-related cues (Franken, 2003). Autonomic dysregulation, as indexed by reduced heart rate variability (HRV), has been linked to poor attention regulation and performance on cognitive tasks (Thayer & Brosschot, 2005). However, these measures have not been used together to assess smokers' responses to smoking related visual cues. In the current study, smokers and non-smokers (N = 55, 29 smokers) participated in a reaction time task (match vs. mismatch), which consisted of three types of images (smoking-related, neutral and appetitive), presented in 40 trial counterbalanced blocks. Measures of HRV and self-reported craving (using the Tobacco Craving Questionnaire-Short Form) were collected at baseline and throughout the experimental session. Results suggested that those with higher baseline HF-HRV responded faster during the smoking condition than those with lower HF-HRV ($p < .05$). Likewise, those with higher (vs. lower) baseline HF-HRV also showed differential accuracy across conditions ($p < .05$). Accuracy during each condition also varied between the smokers and non-smokers ($p < .05$); indicating smokers were less accurate during the smoking condition than non-smokers ($p < .05$). There was a moderate negative correlation between accuracy during the smoking condition and craving at baseline ($r = -.35, p < .01$), immediately after the smoking condition ($r = -0.33, p < .05$), and after recovery from the smoking condition ($r = -0.30, p < .05$). These results suggest that smokers' decreased accuracy during the smoking condition compared to non-smokers may be related to their increased craving, which interfered with their ability to respond accurately. Speed and accuracy differences between those with higher and lower resting HRV suggested a trade-off between faster responses and accuracy, particularly during the smoking condition. It appears then that both HF-HRV and smoking status influence performance on a reaction time task that includes visual smoking-related information.

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A-180

SOURCE OF REFERRAL TO A SMOKING CESSATION INTERVENTION PREDICTS MOTIVATION TO QUIT

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As scientists develop behavior interventions, many have turned to new technologies for intervention implementation and study logistics such as participant recruitment. As we turn to Internet-based recruitment, however, a crucial but insufficiently-explored avenue for inquiry involves human-Internet engagement as a recruitment constraint. Among key questions is whether search result promotion strategies yield differently motivated participants than banner advertisements in social media sites such as Facebook.

In conjunction with the National Cancer Institute, we recruited young adult participants to a text-message intervention intended to facilitate smoking cessation. We recruited participants by ensuring the study URL appeared in search engine results and by using banner advertisements on Facebook. We then tracked referral source. That allowed us to predict motivation to quit as a function of referral source.

On a baseline survey, we presented a slider response tool that allowed a participant to select a 1, 10, or any integer in between to report their motivation to quit smoking at that moment. We tracked whether participants reached the study via a "search" avenue or an "ad click" avenue. Those characterized as search-routed participants reached the study URL via the Google, Craigslist or Bing/Yahoo search site. Those recorded as having clicked on a Facebook advertisement or having reported e-mail, an online ad, or Facebook as the referring source were deemed ad click participants. We then assessed an ordinary least squares model predicting cessation motivation as a function of referral source. Source significantly predicted motivation: smoking cessation motivation among search engine referrals was higher than among ad click referrals, $p < .01$, model $F = 8.24$, $R\text{-squared} = .03$, $n = 271$. Results have implications for intervention recruitment, especially for substance use, suggesting broadcast advertisements generally will draw less motivated participants than strategies to optimize search results.

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A-181

USING A COMMUNITY-BASED APPROACH (CBPR) TO REDUCE TOBACCO USE IN HOMELESS SHELTERS

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Background: The epidemiology of tobacco use involving people who are homeless indicates continued high rates of tobacco use (>65%), despite years of statewide tobacco control programs. Providing smoking reduction programs using a CBPR approach tailored for transitional shelters for the homeless may help reduce tobacco use among staff and residents.

Methods: A comprehensive peer-to-peer smoking reduction program featuring 8 weekly one-hour smoking reduction support group sessions with an onsite trained facilitator was implemented in 26 randomly selected shelters in Los Angeles County. Each session featured motivational interviewing, incentives, nicotine patches/gum, and carbon monoxide (CO) testing. Following completion of the support group sessions, study investigators met with the facilitators at each shelter to conduct "mutual learning dialogues", a CBPR strategy for eliciting challenges, benefits, and suggested improvements to the program.

Results: Content analyses of the dialogues identified 7 main topics: changes to the curriculum, CO testing, use of pharmacotherapy, length of the group sessions, use of incentives, facilitator characteristics, and shelter-level tobacco control policies. There was unanimous support for continuing the smoking reduction program but with specific suggestions for improving its user-friendliness and likely effectiveness.

Conclusions: Transitional shelter staff enthusiastically endorsed investing tobacco control resources to help their clients but suggested ways to improve on what they viewed uniformly as a helpful program for reducing tobacco-related disparities faced by the homeless.

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