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Authors

Pang, Raina
Kirkpatrick, Matthew
Goldenson, Nicholas
et al.

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AGE AND GENDER EFFECTS ON SUBJECTIVE DRUG EFFECT OF D-AMPHETAMINE

Raina D. Pang¹, Matthew G. Kirkpatrick¹, Nicholas Goldenson¹, Casey R. Guillot¹, and Adam M. Leventhal, Ph.D.^{1,2}

¹Department of Preventive Medicine, University of Southern California Keck School of Medicine, Los Angeles, CA, USA, ²Department of Psychology, University of Southern California Keck School of Medicine, Los Angeles, CA, USA

AIMS Prior studies suggest that sex differences in d-amphetamine response are related to hormonal fluctuations that occur during the luteal phase. Thus, studies control for sex differences by running females during the follicular phase when hormones are relatively low. However, studies showing no sex differences under these conditions have relatively small sample sizes. Thus, it is still unclear if there are sex differences – unrelated to luteal phase hormonal fluctuations– in d-amphetamine response. Age may also be an important predictor of subjective drug response, as illicit drug use varies by age. Few experimental studies have investigated the effect of age on drug response. The present study assessed gender and age as predictors of subjective drug response. **METHODS** Healthy stimulant-naïve volunteers ($n=75$ normally cycling women in the follicular phase; $n = 29$ men) aged 18-35 completed this two-session, double-blind, within-subjects study during which they received a single dose of 20-mg oral *d*-amphetamine or placebo in counterbalanced order. Subjective measures of drug response were completed at repeated intervals before and after drug administration over a 4-hr period and under the curve drug response difference scores (e.g. d-amphetamine – placebo) computed. Partial correlations were run to evaluate relationships between sex, age, and subjective drug response. **RESULTS** After controlling for age, males reported greater subjective responses on the Drug Effects Questionnaire (DEQ) ‘Feel Drug’, ‘Like Drug’ and ‘Want More’ ($r_s = .20 - .21, p_s = .01-.04$). After controlling for gender, younger individuals reported greater scores on the DEQ ‘Want More’ ($r = -.26, p = .007$). **CONCLUSIONS** These results might suggest age and gender differences in abuse liability for young adults who may be prescribed d-amphetamine for clinical conditions (e.g., ADHD or narcolepsy) or start experiment with d-amphetamine recreationally. **FINANCIAL SUPPORT** TRDRP grant 22FT-0062 and NIDA grants R21-DA034768 and K08-DA025041.