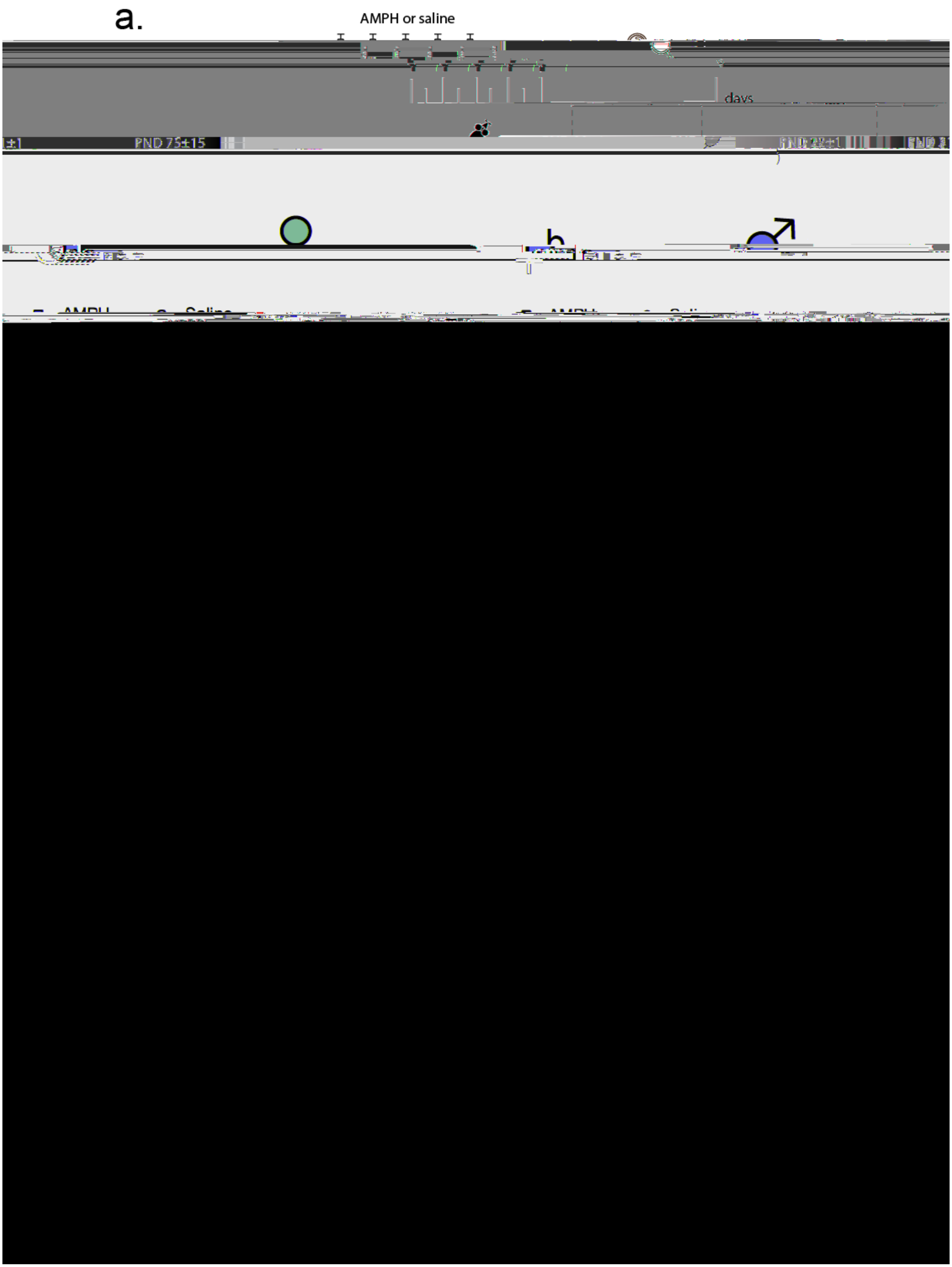
Sex differences in cognitive development following adolescent amphetamine exposure

Sonia Israel (Supervisor: Dr. Cecilia Flores)

Teenagers are vulnerable. Illicit drug use during adolescence significantly increases the risk of developing and struggling with addiction throughout life.[1,2,3] Addiction is a chronic, relapsing brain disease associated with deficits in cognitive functions mediated by y y vulli]TJETtaupy . sy e6(P7(cF3(a)C1 0l)4(/P <</MCID 15>BDC BT1 0 0692 Tf1 0 0 1 4

In adulthood, we administered a Go/No-Go Task adapted to mice in operant conditioning chambers.



AMPH or saline
days
PND 75±15

Figure 1. (a) Experimental timeline of pre-treatment and behavioural assessments in female and male mice (AMPH: amphetamine). **(b) (Left panel)** Female mice treated with amphetamine showed robust drug-induced locomotor activity (two-way ANOVA; main effect of treatment, $F_{1,68} = 77.97$, $p < 0.0001$; main effect of time, $F_{4,68} = 17.62$, $p < 0.0001$; interaction effect, $F_{4,68} = 14.41$, $p < 0.0001$). **(Right panel)** Male mice treated with amphetamine showed robust drug-induced locomotor activity (two-way ANOVA; main effect of treatment, $F_{1,72} = 80.73$, $p < 0.0001$; main effect of time, $F_{4,72} = 21.28$, $p < 0.0001$; interaction effect, $F_{4,72} = 18.18$, $p < 0.0001$). **(c)** Behavioral inhibition is not

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