

## Introduction

### Risk Factors in the United States

- Adolescents in chaotic home environments may run away or become homeless, increasing the risk of involvement in prostitution as a method of survival.
- Consequently, there is likely to be a transfer from one traumatic environment to another, increasing the severity of PTSD symptoms.

### Adverse Outcomes Associated with Prostitution

- Domestic abuse and sexual abuse are highly prevalent in this population.
- Cognitive functioning could be disrupted by this abuse.
- In neuropsychological tests, maltreated children tend to perform worse on tasks related to attention, working memory, and visuospatial orientation.
- Maltreated children had difficulty processing the visuospatial orientation of the complex figure when completing the Rey-Osterrieth Complex Figure Test, suggesting that their environment may be distorting the information they are receiving.

### Visuospatial Functioning

- There are several forms of visuospatial functioning, including the ability to process complex visual stimuli, locate stimuli in the environment, and put parts together to take a whole picture. In cognition, external representations aid decision-making.
- Maladaptive decision-making may result from a distortion of the environment.
- Adolescents may misinterpret the environment as a result of distortion, such as evaluating the risk of pimps.
- Deficits in visuospatial skills could be indicative of stimuli distortion in everyday life and lead to poor decision-making, such as prostitution as a means of survival.

We hypothesized there would be a significant difference in visuospatial skills between adolescents involved in prostitution and the normative sample. Additionally, we hypothesized that adolescents involved in prostitution with a PTSD diagnosis would exhibit a significant difference in visuospatial skills compared to those without a PTSD diagnosis.

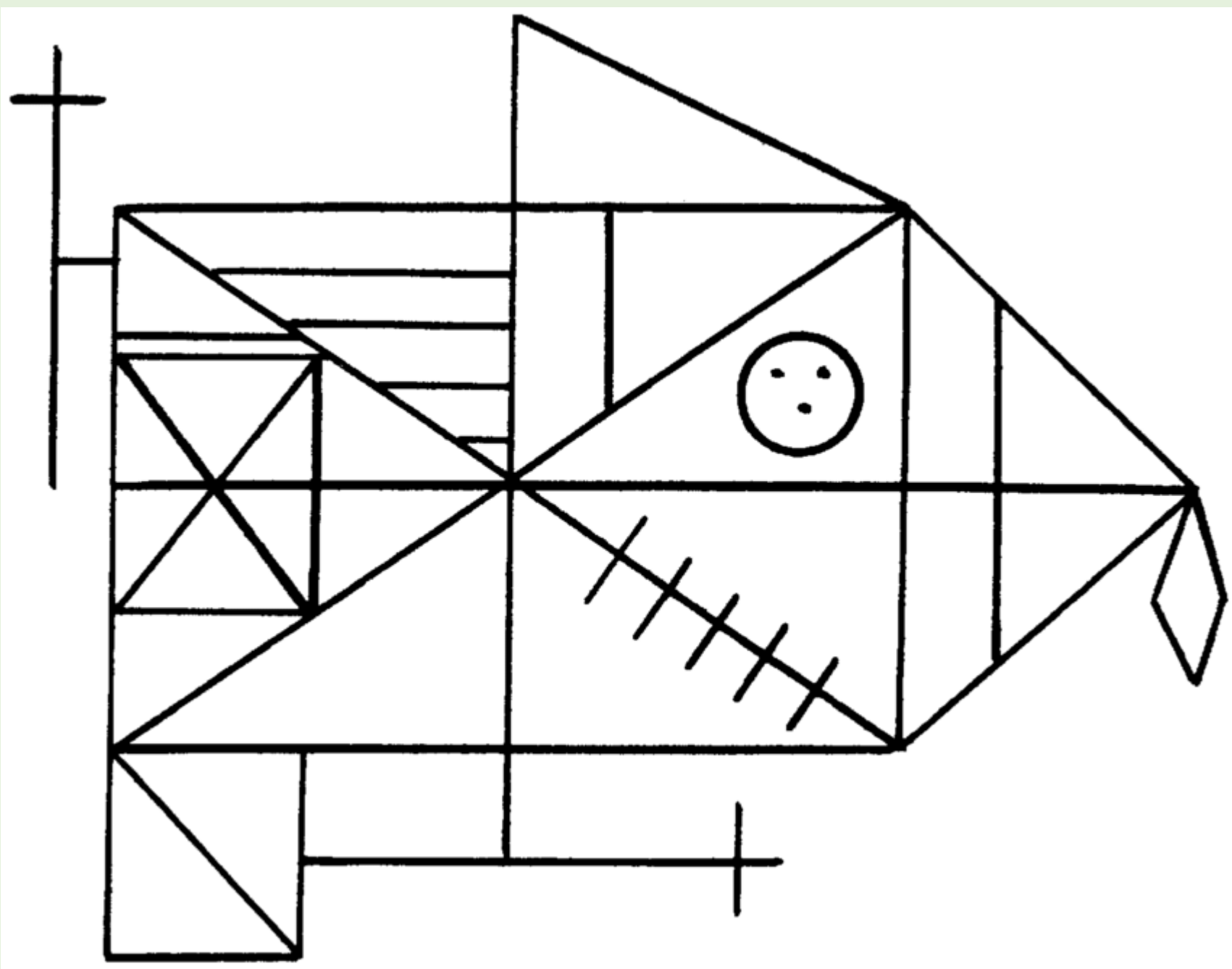
## Methods

### Participants

- 22 adolescents (21 female, 1 transgender) between the ages of 14 to 18 ( $M = 16.2$  years,  $SD = 1.0$ ) who were previously involved in prostitution.
- Participants were assessed for PTSD via a clinical interview with a licensed psychologist and then categorized into a PTSD ( $n = 16$ ) or non-PTSD ( $n = 6$ ) group depending on their diagnosis.
- The participants' Verbal Comprehension Indices (VCI) ranged from 72 to 112 ( $M = 85.4$ ,  $SD = 13.3$ ).
- The sample self-identified as 13% Caucasian, 35% Latina, 35% African American, and 17% biracial.

### Measures

- *Intellectual Functioning*
  - Wechsler Adult Intelligence Scale (WAIS) for participants 16 years of age and older
  - Wechsler Intelligence Scale for Children (WISC) for participants younger than 16 years of age
- *Visuospatial Functioning*
  - Rey-Osterrieth Complex Figure Test (ROCF)



## Results

Adolescents involved in prostitution scored significantly lower on the copying trial ( $M = 24.2$ ,  $SD = 7.89$ ) than the normative sample ( $M = 33.6$ ,  $SD = 2.98$ ),  $t = -5.60$ ,  $p < .001$ .

Results of One Sample t Test Comparing Rey-Osterrieth Copy Scores with the Normative Sample

Measure	M	SD	t(21)	p	Cohen's d
Rey-Osterrieth copy scores	24.1	7.89	-5.60***	<.001	-1.194
	8				

Note.  $N = 22$ .  
\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

There was no significant difference on ROCF scores between participants diagnosed with PTSD ( $M = 24.69$ ,  $SD = 6.41$ ) and those not diagnosed with PTSD ( $M = 22.84$ ,  $SD = 11.62$ ),  $F(1, 20) = 0.23$ ,  $p = 0.64$ , even controlling for age and intellectual functioning.

Summary of ANCOVA for Rey-Osterrieth Copy Trial Scores across VCI and Age for Adolescents Involved in Prostitution

Measure	Total		PTSD		No PTSD		<i>F</i>	<i>p</i>	$\eta^2$
	Sample		Diagnosis		Diagnosis				
	<i>(N</i> = 22)		<i>(n</i> = 16)		<i>(n</i> = 6)				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Rey-Osterrieth						11.6			
copy scores	24.2	7.89	24.7	6.41	22.8	2	.23	.64	0.01
Covariates									
		11.3				13.7			
VCI	88.2	2	89.9	10.28	83.8	5	.39	.54	0.03
Age	16.3	1.03	16.2	1.11	16.5	0.84	.53	.47	0.14

Note. VCI = Verbal Comprehension Index  
\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

## Discussion

- The current study extended literature by examining a particular type of traumatic experience, involvement in prostitution during adolescent years, and the distortion in visuospatial skills.
- The findings suggest that adolescents who experienced the trauma of prostitution are likely to have deficiencies in visuospatial functioning.
- The study also suggests that visuospatial deficiencies are related to complex trauma, regardless of PTSD diagnosis.

### Limitations

- Small sample size

### Future Directions

- As this study was one of the first to examine neuropsychological functioning in adolescents involved in prostitution, future studies should continue to make efforts to understand and support the cognitive needs of this population

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