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## Introduction

In recent years, there has been a steady increase in ADHD medication use by young adults, including women of childbearing age and during pregnancy. Most data on the safety of these medications are from recreational abuse of methamphetamine. Little is known on the safety of amphetamine stimulants for ADHD treatment during breastfeeding. Amphetamines are excreted into human milk and may be found in the urine of nursing infants. Poor sleeping and irritability have been reported in some nursing infants, but long-term developmental effects were not described.

## Methods

This is a prospective pilot study of women who approached the Drug Consultation Center Zerifin between the years 2017-2022 seeking information on the safety of amphetamine stimulants use – lisdexamphetamine (Vyvanse®) or mixed racemic amphetamine salts (Adderall®) during breastfeeding. A telephone follow-up interview was conducted to assess adverse effects and the psycho-motor development of the children by using Pediatric Quality of Life (PedsQL\*), and Denver Developmental Scale.

## Results

Thirteen women were included in the analysis, 6 (46%) exposed to lisdexamphetamine, and 7 (54%) to mixed racemic amphetamine salts. Mean maternal age at the time of the first contact was 32±5.8 years. Most of the women had academic education (11/13, 85%). Seven women used amphetamines during pregnancy, and 4/13 (31%) were exposed throughout pregnancy. Three (23%) women used concomitant psychotropic medications. All children were reported to have normal gross motor development, based on Denver Developmental Scale. Psycho-motor development, as measured by PedsQL\*, was also normal with very high scores.

**Table 1**

Offspring's adverse effects and psycho-motor outcomes

	<b>Amphetamines during lactation N=13</b>
Infants' age at follow-up, months (median, IQR)	18 (5.25-34)
Lactation full (yes), N, (%)	9 (69%)
Adverse effect in breastfed infant (yes), N, (%)	5 (38%)
Somnolence (yes), N, (%)	1 (8%)
Crying/restlessness (yes), N, (%)	3 (23%)
GI (colic/constipation) (yes), N, (%)	4 (31%)
Denver scale development (normal)	13
PEDsQL Total (median, IQR)	97.16 (91.48-100)
PEDsQL Psychosocial Health (median, IQR)	99.33 (94.83-100)
PEDsQL Physical Health (median, IQR)	98.75 (87.8-100)

## \* PedsQL

The PedsQL measures four to five aspects of functioning depending on age: physical, emotional, social, cognitive, and school-related. A delay in psychomotor development was considered when the infant failed to reach a grade of 90 in the total score.

## Conclusions

Exposure to amphetamine stimulants during breastfeeding was not associated with negative psycho-motor development of the offspring. However, due to the small sample size, further studies are needed in order to conclude on the effect of prolonged exposure to amphetamine stimulants during breastfeeding.