

# BSI-FASD

## Biographic Screening Interview for Adults with FASD

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Review, Respond and Relate

Integrating Research, Policy and Practice Around the World

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# Overview

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# Introduction

## **Lina Schwerg**

- BSc Psychologist
- Master student, University of Potsdam
- FASD-Fachzentrum Sonnenhof, Berlin, Germany
  - Apprenticeship
  - Bachelor thesis on Executive Function in Youth with FASD
  - Assistant to Gela Becker
  - Co-Therapist in Group sessions for Adults and Youth with FASD
  - Neuropsychological Diagnostics

## **Sandra M. Ahlert**

- BSc Psychologist
- Master student, University of Potsdam
- FASD-Fachzentrum Sonnenhof, Berlin, Germany
  - Apprenticeship
  - Research on FASD
- Whitecrow Village FASD Society
  - Continued research on FASD
- Master Thesis on Factors for a Successful Adaption

# Background

2014 – 2015 Research Project

*“Development of Group Sessions for Adults with FASD and Risk of Addiction”*

A research project funded by the BMG (German Ministry of Health)

Results: 5 Projects

1. Weighting of the Impairments for Interventions, Analysis and Prospects
2. Group sessions for Adults and Youth with FASD
3. *“FASD und Dann?”* – Self-help book
4. Adults with FASD and similar....
5. Life History Screen → BSI-FASD

# Biographisches Screening- Interview für FASD (BSI-FASD)

Adapted Version of the English Life History Screen (LHS)<sup>1</sup>

<sup>1</sup>Grant, T., Novick Brown, N., Graham, J., Whitney, N. & Dubovsky, D. (2013). Screening in treatment programs for Fetal Alcohol Spectrum Disorders that could affect therapeutic progress. *The International Journal of Alcohol and Drug Research*, 2(3), 37-49.

# BSI-FASD

## Biographisches Screeninginterview für FASD

- Structured Interview
- 32 Items – 30 Items rated
- 9 Domains:
  1. Childhood History – 2 Items
  2. Maternal Alcohol Use – 3 Items
  3. Education – 4 Items
  4. Criminal History – 3 Items
  5. Substance Use – 2 Items
  6. Employment and Income – 2 Items
  7. Living Situation – 2 Items
  8. Mental Health – 3 items
  9. Day to Day Behavior – 11 Items

# BSI-FASD

## Biographisches Screeninginterview für FASD

- Each rated item has a corresponding Red-Flag-Response
- Each category has a minimum amount of Red-Flag-Responses required

<b>Living Situation</b>	<p><b>7. Living Situation</b></p> <p><b>a. As an adult have you ever lived on your own (paying your own rent, etc.)?</b></p> <p><input type="checkbox"/> Yes   <input type="checkbox"/> No   [Interviewer note: red flag response is no]</p> <p>[If 7a = yes, then go to 7b, if 7a = no go to 8a]</p> <p><b>b. How long have you lived on your own at any one time?</b></p> <p>_____ months/years [Interviewer note: red flag response is less than 1 year]</p>
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# BSI-FASD

## Biographisches Screeninginterview für FASD

Screening Results: Who should be referred for diagnosis?

(1) Red Flags in all three Key Life History Domains

Key Life History Domain	Red Flag?
Childhood History	Is 1b. response “more than 2”? <input type="checkbox"/> Yes <input type="checkbox"/> No
Maternal Alcohol Use	Are 2 or more responses “yes” or “unknown”? <input type="checkbox"/> Yes <input type="checkbox"/> No
Day-to-Day Behaviors	Are 5 or more responses “yes”? <input type="checkbox"/> Yes <input type="checkbox"/> No

OR



# BSI-FASD

## Biographisches Screeninginterview für FASD

Screening Results: Who should be referred for diagnosis?

(2) Red Flags in two Key Life History Domains and two or more Red Flags in the other Life History Domains

Other Life History Domain	Red Flag?
<b>Education</b>	<b>Is at least 1 response “yes”?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Criminal History</b>	<b>Is at least 1 response “yes”?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Substance Use</b>	<b>Is at least 1 response “yes”?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Employment and Income</b>	<b>Is at least 1 response “yes”?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Living Situation</b>	<b>Is at least 1 response “yes”?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Mental Health</b>	<b>Are at least 2 responses “yes”?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No

# Why bother?

In Germany there is a gap between the **suspected** prevalence of adults with Fetal Alcohol Spectrum Disorder (FASD) and the number of people with **actual** diagnosis of this disorder. BSI-FASD can help identify those who should be referred for medical diagnosis.

## **Diagnosis can help:**

	Service Providers/ Families	Adults with FASD
Explain behavioral and functional impairment	√	√
Form more realistic expectations	√	√
Adopt compensatory strategies	√	√
Acquire appropriate therapy		√
Receive necessary and appropriate services		√
Reduce secondary disabilities and adverse life outcomes		√

(Grant, Brown, Dubovsky, Sparrow, & Ries, 2013)

# Why bother?

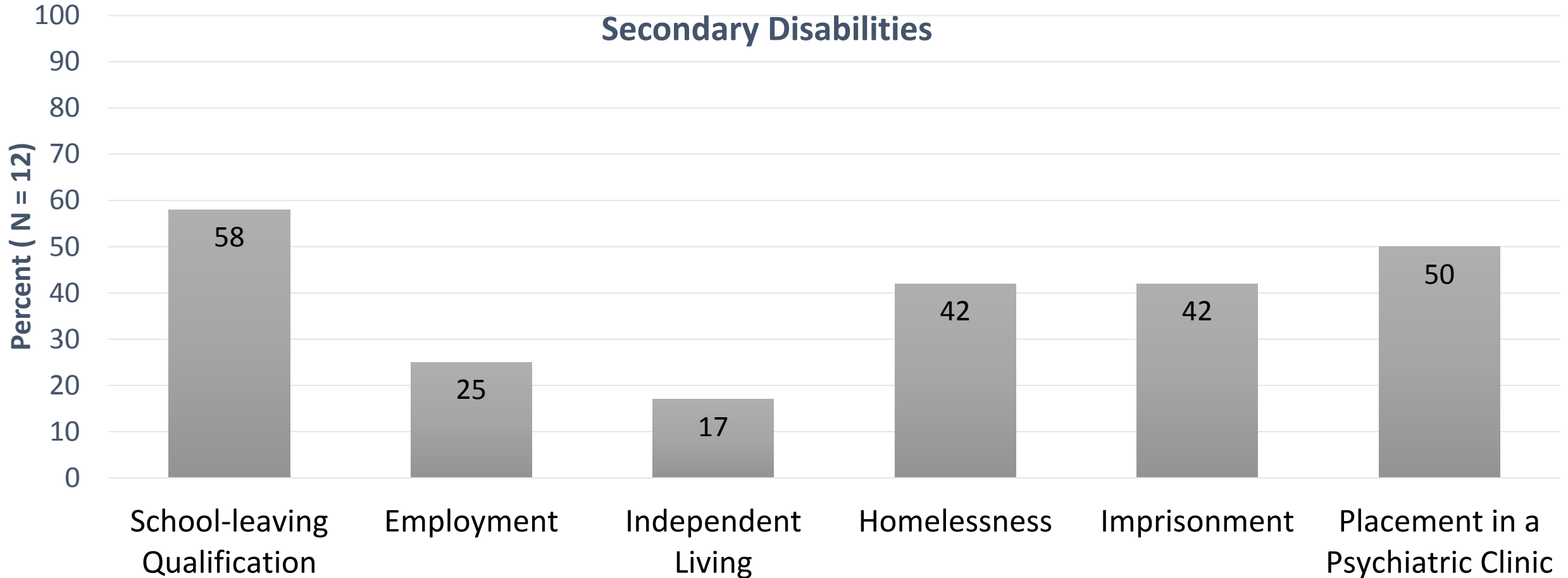


Figure 1. Secondary Disabilities in a recent German Study (Fröhlich, 2015)

# Translation and Adaptation

Step 1

- Translating the LHS (Grant et al., 2013) into German

Step 2

- Re translating the German version into English to ensure no information / meaning was lost

Step 3

- Adapting items to the German culture

Step 4

- Making German items comprehensible by consulting with an FASD-expert
- Adding “B-Notes” for hard-to-understand items

Example of a B-Note for Employment and Income:

- Definition of SSI

**b. Waren Sie jemals auf staatliche Unterstützung angewiesen?**

*[B-Hinweis: Geld vom Amt, Grundsicherung, Arbeitslosengeld, Erwerbsunfähigkeit, Früh-Rente]*

Ja  Nein

*[Anmerkung: alarmierende Antwort ist Ja]*

# *BSI-FASD Diagnostic Process:* Staff Training & Participant Recruitment

Staff Training *prior to* participant recruitment:

- In-depth staff training on FASD and the medical diagnosis of FASD
- Training on the administration of the BSI-FASD diagnostic tool
- Sensitivity training on how to respectfully interact with FASD adults regarding difficult topics, such as maternal alcohol use

# Recruitment of Participants

*Participants were recruited from four sources:*

(1) Paracelsus-Wiehengebirgsklinik Bad Essen: an alcohol and prescription drug rehabilitation clinic

- $N = 122$  screened with the BSI-FASD
  - $N = 8$  (7.2 %) positive screens
  - 4 released early, 1 declined,  
1 the doctor was not able to see,  
2 completed the diagnostic

# Recruitment of Participants

*Participants were recruited from four sources:*

(2) FASD-Fachzentrum Sonnenhof

➤  $N = 17$

- 12 with pre-diagnosed FASD
- 5 with a pre-diagnosed negative result
- (7 more chose not to participate)

(3) Self-help Group for people with FASD

➤  $N = 3$  with pre-diagnosed FASD

- (4 more chose not to participate)

(4) Member of FASD-Deutschland

➤  $N = 1$  with pre-diagnosed FASD

# Diagnostic Process

for participants without pre-diagnostic



➤  $N = 90$  completed this process



# Overall Participant Demographics

➤ ***N* = 111**

## Gender:

- 74 male (66.7%),
- 37 female (33.3 %)

Age-Range: 20 – 74 ( $M = 46.2$ ,  $SD = 13.482$ )

## Diagnostics:

- 90 completed the diagnostic process
- 16 were pre-diagnosed with FASD
- 5 had a pre-diagnosed negative result

# Implementation of the BSI-FASD

- Each interview lasted between 5 – 8 minutes
- The closer the interviewer stayed to the wording of the interview, the smoother it went
- All items that participants found hard to understand in the initial wording could be explained by using the B-Notes
- Overall the interview was easy to implement
- The option “unknown” as a red-flag-answer to the maternal alcohol use questions proved very helpful, as many did not know

Q: Did your mother drink alcohol while she was pregnant with you?

A: “I don’t know, I was in the womb you know.”

# Results – Descriptive Analysis

Table 1  
*Descriptive Analysis.*

	<i>N</i>	Sex		FASD Diagnosis	
		Male	Female	Negative	Positive
Negative Screening	91	60	31	89	2
Positive Screening	20	14	6	6	14
Total	111	74	37	95	16

# Results – Screening

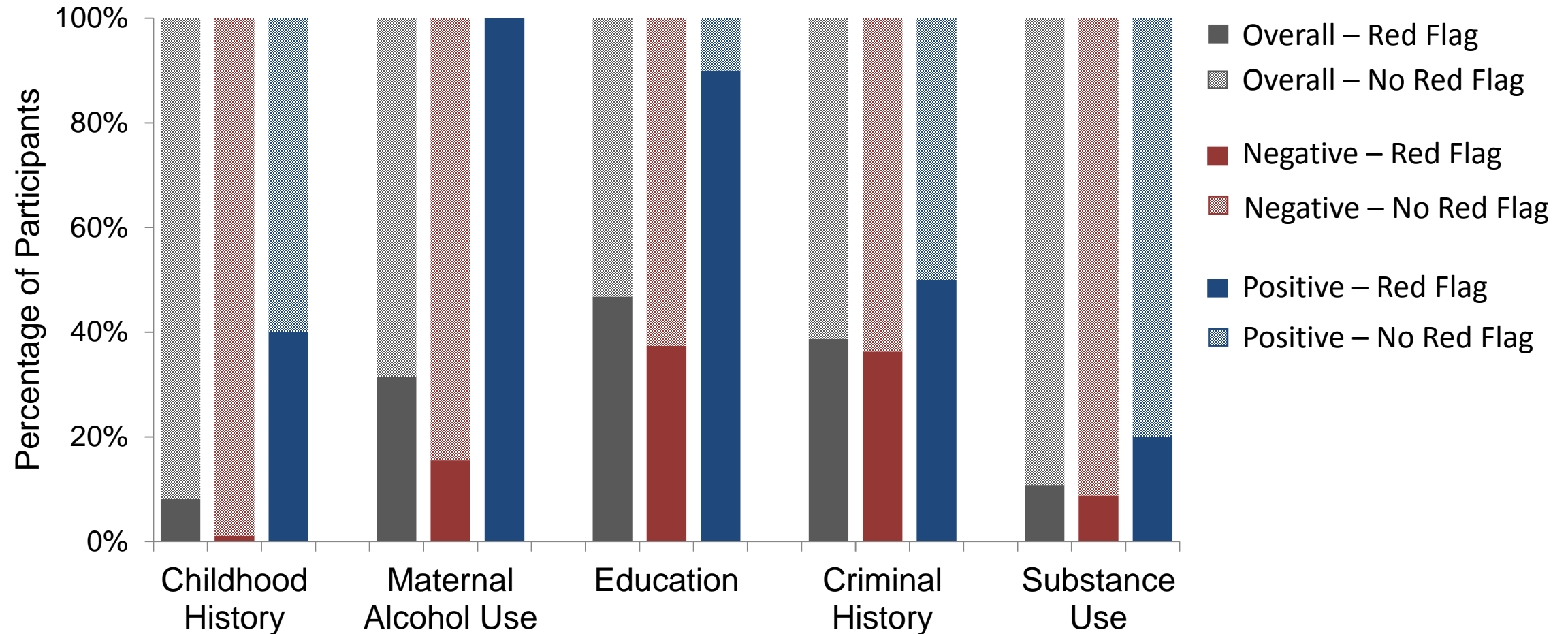


Figure 2. Comparison of Red Flag Responses in the BSI-FASD Categories between Participants with Negative Screening, Positive Screening and Overall (Part 1).

# Results – Screening

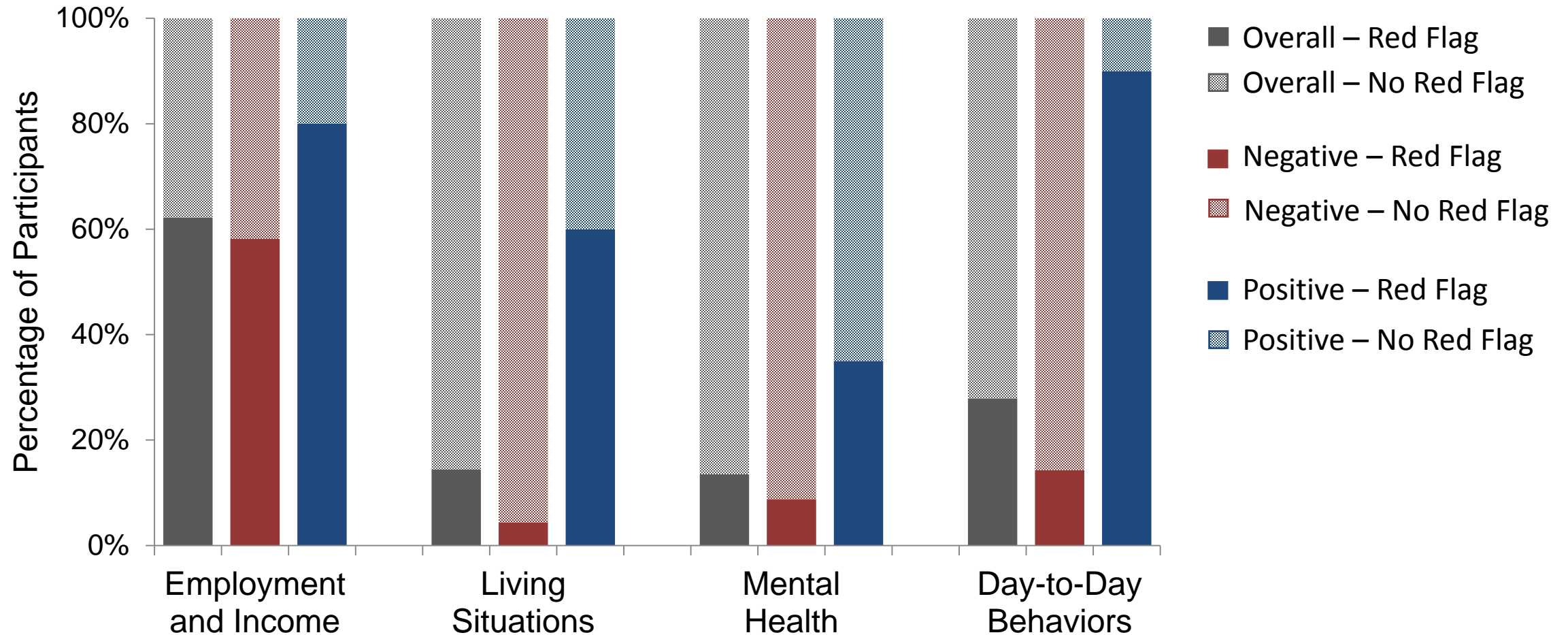


Figure 2. Comparison of Red Flag Responses in the BSI-FASD Categories between Participants with Negative Screening, Positive Screening and Overall (Part 2).

# Results – Screening

Table 2

*Comparison of Group 1 (Negative Screening) and Group 2 (Positive Screening) on Categories with Red Flag Responses.*

BSI-FASD Category	Group 1 - Negative Screening (N = 91)	Group 2 – Positive Screening (N = 20)	$\phi$
Childhood History	1 (1.1%)	8 (40%)	.548***
Maternal Alcohol Use	15 (16.5%)	20 (100%)	.691***
Education	34 (37.4%)	18 (90%)	.405***
Criminal History	33 (36.3%)	10 (50%)	.108 n.s.
Substance Use	8 (8.8%)	4 (20%)	.139 n.s.
Employment and Income	53 (58.2%)	16 (80%)	.172°
Living Situations	4 (4.4%)	12 (60%)	.608***
Mental Health	8 (8.8%)	7 (35%)	.295**
Day-to-Day Behaviors	13 (14.3%)	18 (90%)	.649***

°p < .1, \*p < .05, \*\*p < .01, \*\*\* p < .001

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# Results – FASD Diagnosis

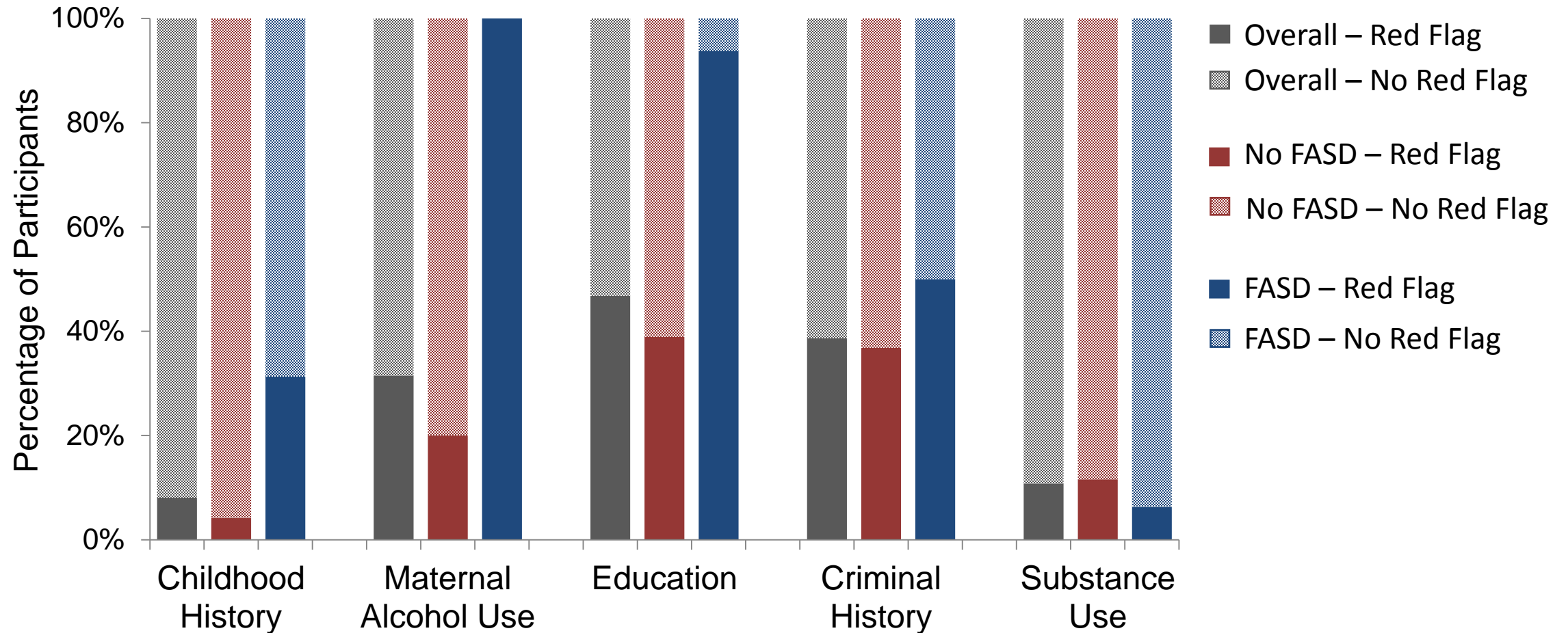


Figure 3. Comparison of Red Flag Responses in the BSI-FASD Categories between Participants without FASD Diagnosis, with FASD Diagnosis and Overall (Part 1)

# Results – FASD Diagnosis

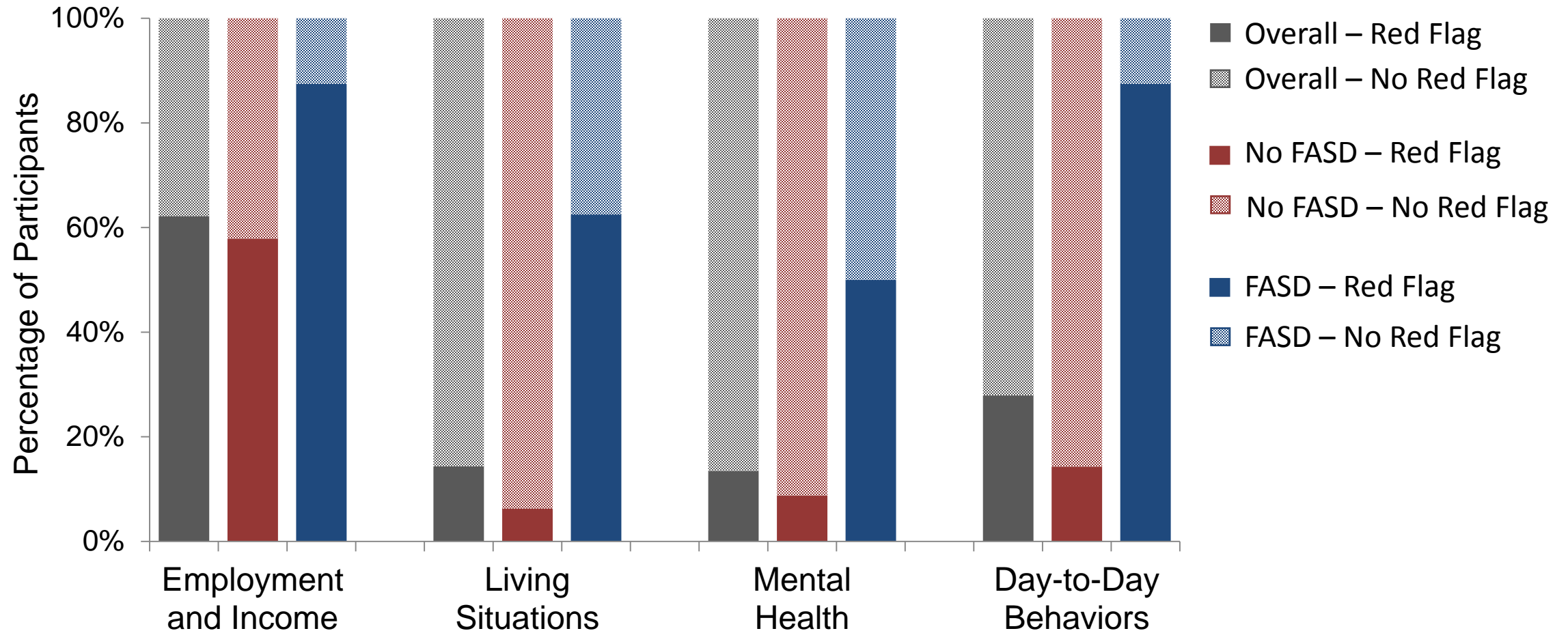


Figure 3. Comparison of Red Flag Responses in the BSI-FASD Categories between Participants without FASD Diagnosis, with FASD Diagnosis and Overall (Part 2).

# Results – FASD Diagnosis

Table 3

*Comparison of Group 3 (No FASD) and Group 4 (Diagnosed FASD) on Categories with Red Flag Responses.*

BSI-FASD Category	Group 3 – No FASD (N = 95)	Group 4 – FASD (N = 16)	$\phi$
Childhood History	4 (4.2%)	5 (31.3%)	.348***
Maternal Alcohol Use	19 (20%)	16 (100%)	.605***
Education	37 (38.9%)	15 (93.8%)	.386***
Criminal History	35 (36.8%)	8 (50%)	.095 n.s.
Substance Use	11 (11.6%)	1 (6.3%)	-.06 n.s.
Employment and Income	55 (57.9%)	14 (87.5%)	.214*
Living Situations	6 (6.3%)	10 (62.5%)	.562***
Mental Health	7 (7.4%)	8 (50%)	.438***
Day-to-Day Behaviors	17 (17.9%)	14 (87.5%)	.545***

\*p < .05, \*\*p < .01, \*\*\* p < .001

# Results – Screening and FASD Diagnosis

- Strong correlation:  $\phi = .742$  ( $p < .001$ )
- Similarities for people with a positive screening and people with FASD
  - All participants had 3/3 red flag responses in maternal alcohol use
  - More than 40% had 2/2 red flag responses in education
  - 50% had 2/2 red flag responses in living situations
  - More than 50% had difficulties in 7+ day-to-day areas

# Results – Sensitivity & Specificity

Table 4  
*Calculating Sensitivity and Specificity*

	FASD Diagnosis	No FASD Diagnosis
Positive Screening	14	6
Negative Screening	2	89

- Sensitivity: 87.5%
- Specificity: 93.7%
- False positive: 6.3%
- False negative: 12.5%

➤ Correctly identified: 92.8%

# Results – ROC Analysis

Table 4  
*ROC Analysis – Area under the Curve.*

Category	AUC	SE	p-value
Childhood History	.635	.085	n.s. <sup>°</sup>
Maternal Alcohol Use	.953	.019	***
Education	.856	.051	***
Criminal History	.579	.081	n.s.
Substance Use	.477	.077	n.s.
Employment and Income	.707	.070	***
Living Situations	.777	.075	***
Mental Health	.803	.063	***
Day-to-Day Behaviors	.912	.030	***

<sup>°</sup>p < .1, \*p < .05, \*\*p < .01, \*\*\* p <.001

# Results – ROC Analysis

## Optimal cut-off values:

<b>Category</b>	<b>LHS</b>	<b>BSI-FASD</b>	
Childhood History	1/1	1/1	
Maternal Alcohol Use	2/3	3/3	→ missings?
Education	1/3	1/3	
Criminal History	1/3	1/3	
Substance Use	1/2	2/2	→ little informative value
Employment and Income	1/2	1/2	
Living Situation	1/2	1/2	
Mental Health	2/3	1/3	→ Sensitivity = .875; Specificity = .568
Day-to-Day Behaviors	5/11	5/11	→ Sensitivity higher when using 4/11

# Discussion

## Conclusion:

- BSI-FASD is able to correctly identify:
  - 87.5% of the people affected by FASD
  - 93.7% of the people without FASD
  - 92.8% overall
- Areas which illustrate significant and strong connection to both a positive screening and an FASD diagnosis include:
  - Maternal Alcohol Use
  - Living Situations
  - Day-to-Day Behaviors



# Discussion

## Conclusion:

- Areas which illustrate little or no significant connection to both a positive screening and an FASD diagnosis include:
  - Employment and Income
  - Criminal History
  - Substance Use

# Discussion

## Limitations and Recommendations:

- Sample size – further evaluation necessary
- Difficult to reach participants with suspected FASD
- Diagnostic challenges:
  - No standard diagnostic guidelines exist for adults in Germany
  - It's difficult to clearly specify standard facial expressions and growth characteristics
  - Proof of prenatal alcohol exposure is difficult

# Discussion

## Limitations and Recommendations:

- Cut-off values
  - Using different cut-off values for categories
  - Verify item-based cut-off values
- Consider cultural differences
  - Living situations in childhood
  - School subject which caused the most problems

# Thank you for your attention!

Feel free to contact us should any questions arise:

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Sandra M. Ahlert [sahlert@uni-potsdam.de](mailto:sahlert@uni-potsdam.de)

Please take a moment to evaluate us.