



**Sterling Clarren Award Presentation:
Northern Ontario Health Care Students'
Knowledge and Self-Efficacy Regarding Fetal
Alcohol Spectrum Disorder**

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Learning Objectives

- Understand how health care delivery may be impacted by providers' personal attitudes and beliefs
- Increase participants' knowledge and self-efficacy regarding FASD and pregnancy counselling regarding alcohol use



Is it okay to drink
alcohol during
pregnancy?



Rachel Weisz causes controversy talking about drinking while pregnant

When asked at the premiere of *The Fountain* whether having a glass of wine during pregnancy is fine, she replied: *"Personally I do. They say not in the first three months though, but I think that after that it's fine. I mean in Europe they drink it"*.

OCT 22, 2014

SEX & RELATIONSHIPS PREGNANCY DRINKING

Why I Drank While I Was Pregnant

More educated, thirtysomething women, myself included, are drinking in moderation during pregnancy. Why do we do it?



By Michelle Ruiz

7.6k

f SHARE

t TWEET

p PIN

✉ E-MAIL





Parent Experiences

Both my girls have fetal alcohol [syndrome]. I listened to what the doctor said. I never drank [before I was pregnant], the doctor said 'have a drink each night, it'll help the baby sleep and you'll get a better sleep.' So I produced two fetal alcohol children. Those two have produced eleven fetal alcohol children.

- Adrianna
Biological grandmother to four grandchildren with FASD



“Doctors and Nurses...All Need to be Educated”: More Training for Professionals

“[The GP] always argues with me... ‘No, no, no. You know what? This does not apply. She does not have FASD.’ Despite the diagnosis, every time I go in... ‘She is way too smart for this...this report card indicates that she has an A in this [subject]. She cannot have FASD.’...But...literally that was the fourth [doctor] in town that I went to and he was the closest to understanding FASD.”

- Patricia,
adoptive mother of one daughter with FASD

Health Care Professionals in Ontario

Inconsistent Recommendations

- “If no history of alcohol abuse I say OK in moderation”
- “Occasional drink is fine only after first trimester”
- “But no harm shown for occasional consumption”
- “Occasional drink for special occasion only”



Health Care Professionals' Knowledge and Awareness of FASD

- Play a critical role in the prevention of FASD
- Canadian results suggest that:
 - Less than half of family physicians discuss the risks of alcohol use, drug use, or smoking during pregnancy
 - Physicians require clarification of the definition of moderate alcohol consumption
 - Confusion regarding what knowledge health care professionals *do* have compared to what knowledge they *should* have
- Discrepancy between FASD knowledge and application of that knowledge



Health Care Professionals' Knowledge and Awareness of FASD

- Women believe that their healthcare provider holds expert knowledge
- Few studies examining medical students' knowledge, awareness, and self-efficacy
 - Based on American medical curricula
 - Heavy reliance on survey methods
- Limited research examining **nurse practitioners and midwives**

Primary Research Question

- What do Northern Ontario health care students (medical students, midwifery students, nurse practitioner students) know about FASD, and where do they obtain their information about FASD?

1. Knowledge of FASD and attitudes regarding drinking during pregnancy
2. Beliefs and attitudes
3. Self-efficacy and experiences





Methodology and Methods

- Two phase, sequential mixed methods approach
 - Phase 1: Questionnaires
 - Healthcare Student Questionnaire (Minnes et al., 2012)
 - Fetal Alcohol Spectrum Disorder Survey for Healthcare Students (Public Health Agency of Canada, 2005; Tough, Clarke, Hickers, & Clarren, 2005)
 - Phase 2: In-depth, semi-structured interviews + Vignettes



Phase I Participants

- Three programs
- Recruited via e-mail and via social media
- Draw to win a Microsoft Surface Pro 3

○ Characteristics of health care students (n = 45)

Medical Students	22
Lower Year (3)	12
Upper Year (4)	10
Age (SD)	27.95 (5.03)
% Female	63.6%
Ever Pregnant (n)	2
Currently Pregnant (n)	0

Midwifery Students	12
Lower Year (3)	5
Upper Year (4)	7
Age (SD)	25.75 (3.08)
% Female	91.7%
Ever Pregnant (n)	5
Currently Pregnant (n)	1

Nurse Practitioner Students	11
Lower Year (1)	6
Upper Year (2)	5
Age (SD)	30.00 (8.88)
% Female	90.9%
Ever Pregnant (n)	4
Currently Pregnant (n)	1



Phase II Participants

- Subset of the sample of participants who partook in Part I of the study
 - All students who participated in Phase I were provided with the opportunity to participate in Phase II
- Students were given a \$10 Tim Horton's gift card to thank them for their participation

○ Characteristics of health care students (n = 21)

Medical Students

Lower Year (3)	7
Upper Year (4)	2
Age (SD)	5
% Female	28.71 (6.05)
% Ever Pregnant	57.1%
% Currently Pregnant	0%

Midwifery Students

Lower Year (3)	8
Upper Year (4)	2
Age (SD)	6
% Female	26.63 (2.83)
% Ever Pregnant	87.5%
% Currently Pregnant	50%

Nurse Practitioner Students

Lower Year (1)	6
Upper Year (2)	3
Age (SD)	3
% Female	33.33 (11.15)
% Ever Pregnant	83.3%
% Currently Pregnant	50%



Results

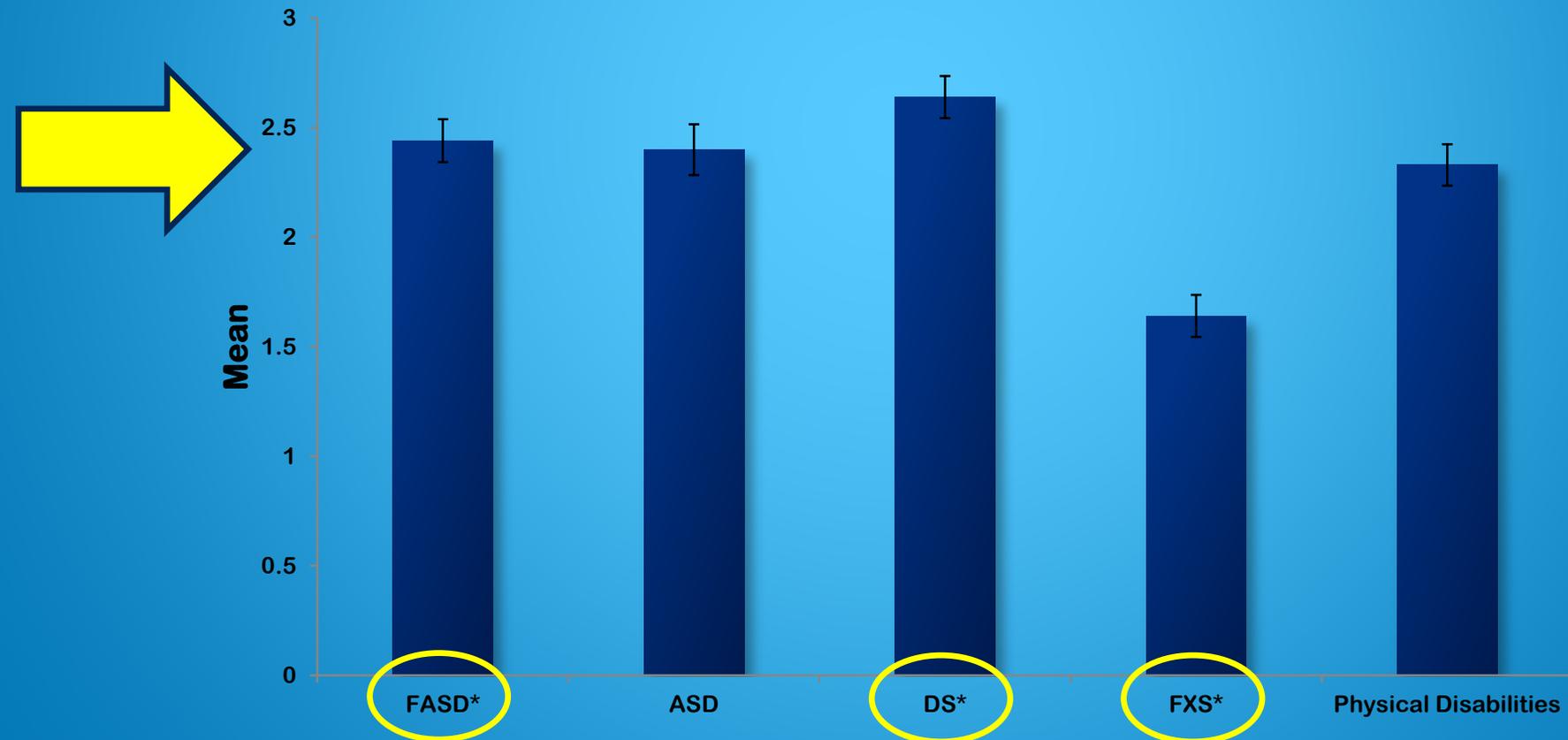
Knowledge of Developmental Disabilities: Assessment and Diagnosis

We would like to ask you some questions on your knowledge about developmental disabilities.				
10. How would you rate your current level of knowledge regarding the <u>assessment/diagnosis</u> of individuals with the following:	<i>Very limited</i>	<i>Limited</i>	<i>Moderate</i>	<i>Extensive</i>
Autism spectrum disorders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Down syndrome	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fragile X syndrome	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fetal alcohol spectrum disorder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physical disabilities (e.g., cerebral palsy)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hearing and/or visual difficulty	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other disability (please specify): _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1 = very limited
2 = limited
3 = moderate
4 = extensive

Knowledge of Developmental Disabilities: Students

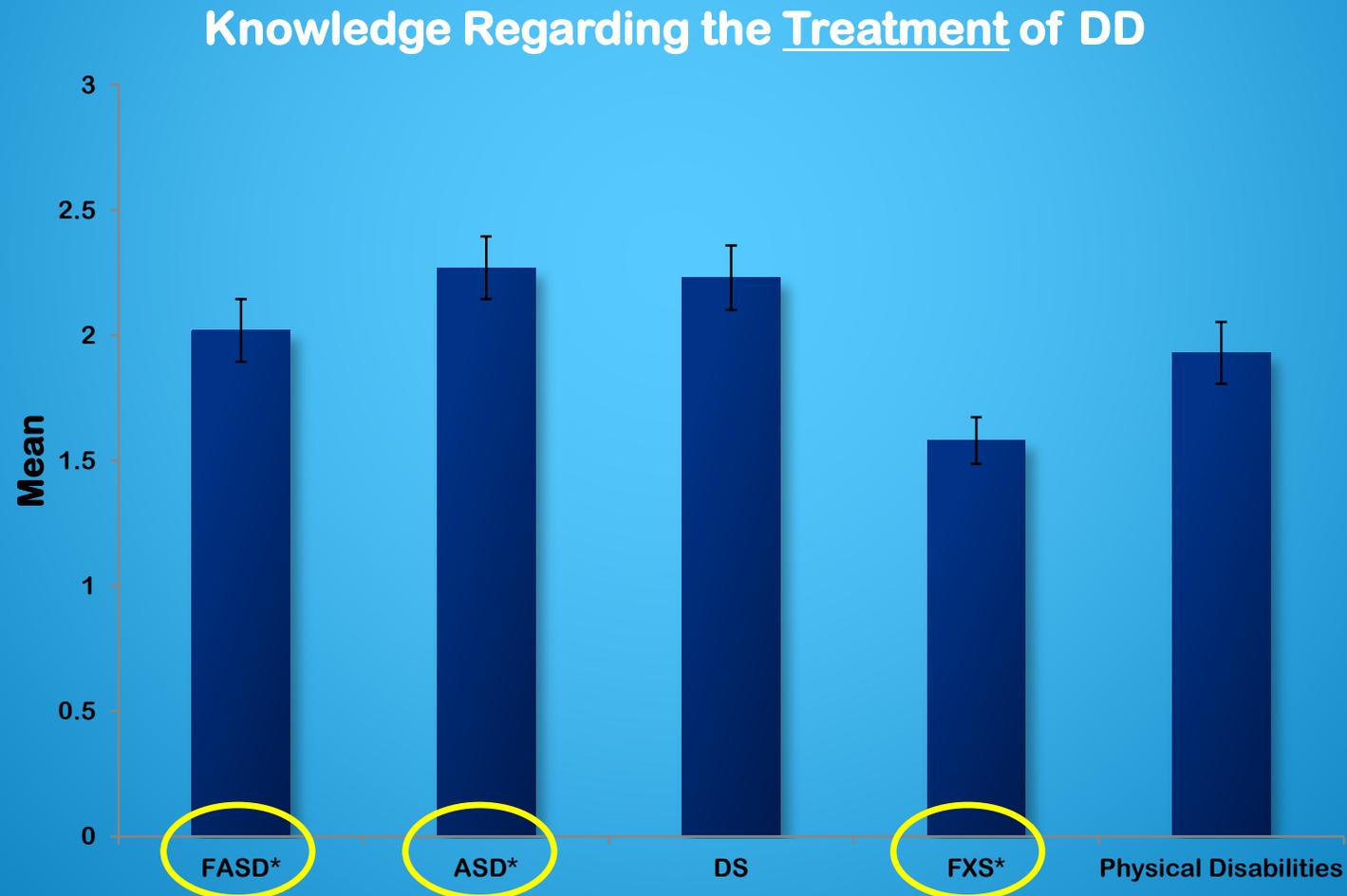
Knowledge Regarding the Assessment and Diagnosis
of DD

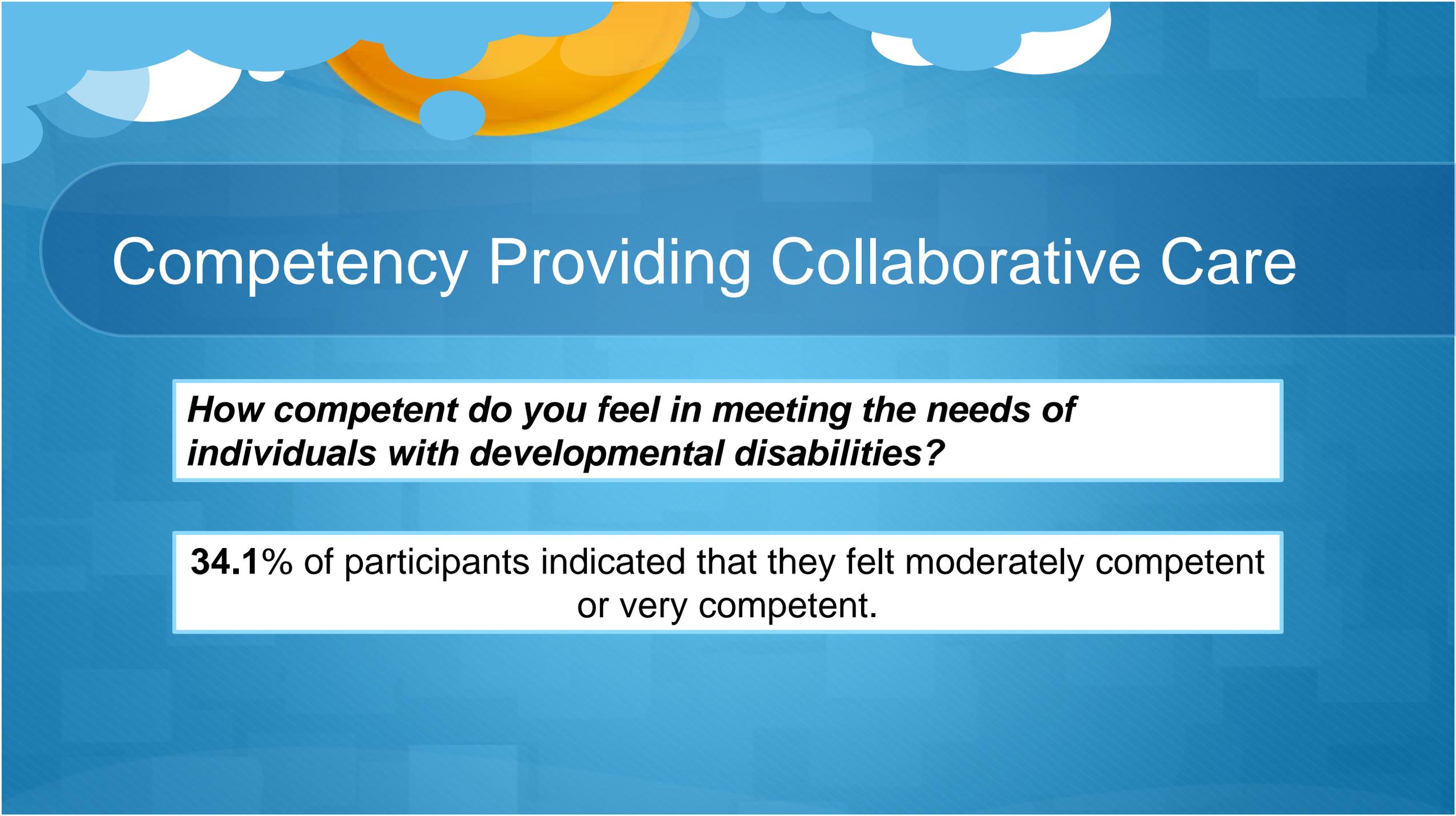


Knowledge of Developmental Disabilities: Treatment

11. How would you rate your current level of knowledge regarding the <u>treatment</u> of individuals with the following:	<i>Very limited</i>	<i>Limited</i>	<i>Moderate</i>	<i>Extensive</i>
Autism spectrum disorders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Down syndrome	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fragile X syndrome	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fetal alcohol spectrum disorder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physical disabilities (e.g., cerebral palsy)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hearing and/or visual difficulty	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other disability (please specify): _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Knowledge of Developmental Disabilities: Students





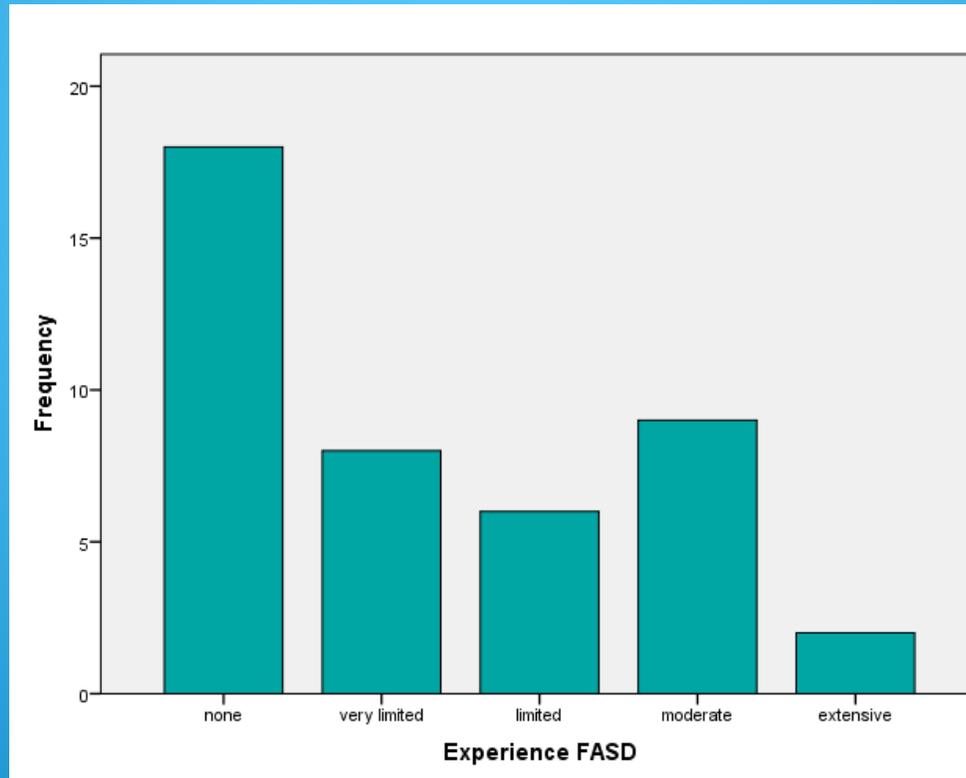
Competency Providing Collaborative Care

How competent do you feel in meeting the needs of individuals with developmental disabilities?

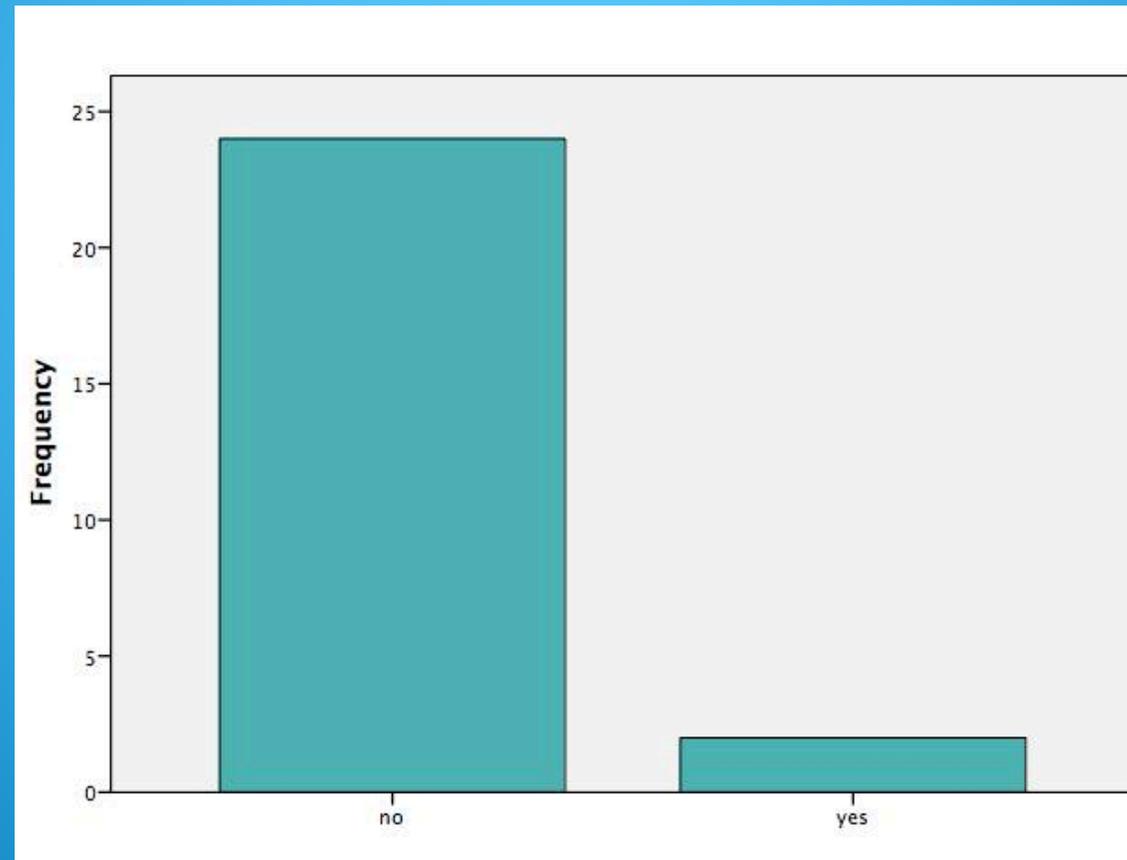
34.1% of participants indicated that they felt moderately competent or very competent.

Do you have experience (work or volunteer) with individuals with **FASD**?

Students



Did you participate in any training sessions or workshops on FASD as part of your undergraduate degree?





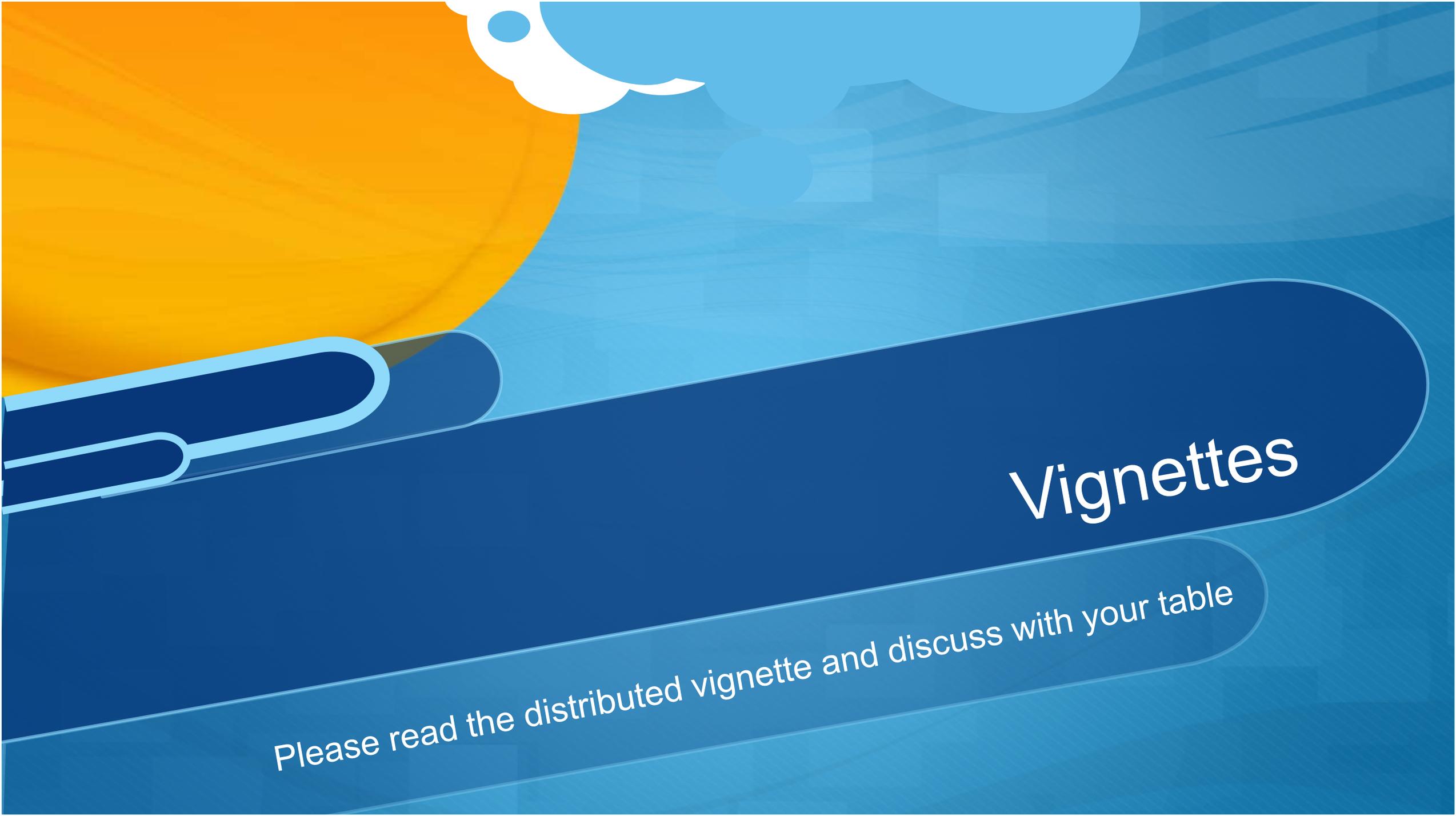
Perceived Self-Efficacy

- Diagnosis:
 - Deferring responsibility to make a diagnosis and treat FASD
 - Belief that it is not within their scope of practice to diagnose or address FASD
- Little training in school about FASD
 - “I think the resources are there, but the education might not be”
- Not comfortable discussing alcohol use in general or alcohol use during pregnancy

Addressing Fetal Alcohol Spectrum Disorder

Which of the following best describes the advice you would give pregnant women regarding alcohol use during pregnancy?

- No alcohol is recommended – **84.2%**
- Alcohol is only dangerous during the first trimester
- A glass of beer or wine in moderation is OK
- No specific recommendations would be given
- Other (please specify) – **15.8%**
- Combination of growth, brain, and facial abnormalities – **65.8%**



Vignettes

Please read the distributed vignette and discuss with your table



Vignettes: Consider the following

- What are your first impressions of this vignette?
- Do you think what ___ is doing during her pregnancy poses any risks to her unborn child? Why or why not?
- Do you think the advice the family doctor gave poses any risks to her unborn child? Why or why not?

Vignette #1: Shannon

Shannon is a 32-year-old woman who is currently 20 weeks pregnant. She has been drinking alcohol during her pregnancy and is concerned about the health of her baby. She has been told by her doctor that drinking alcohol during pregnancy is not safe and that it can cause fetal alcohol spectrum disorders (FASD). She is looking for information to help her decide whether or not to continue drinking alcohol during her pregnancy. She has found a website that claims that drinking alcohol during pregnancy is safe and that it does not pose any risk to her baby. She is looking for information to help her decide whether or not to continue drinking alcohol during her pregnancy.

There is no conclusive evidence that drinking alcohol during pregnancy will harm the baby. Shannon feels that the risk of not drinking alcohol during pregnancy is greater than the risk of drinking alcohol during pregnancy. She is looking for information to help her decide whether or not to continue drinking alcohol during her pregnancy.

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Vignette #2: Kimberly

Kimberly has a strong social support network and has been pregnant before. Her friends and family are in town, and she lives in the same community. However, Kimberly's partner and the father of her child continue to drink in front of her, even though Kimberly has requested that he not drink in certain social situations. Her partner has urged her to have a couple drinks to help her relax and have fun. In these instances, Kimberly is currently five months pregnant. Kimberly found out she was pregnant at eight weeks. Even though Kimberly rarely drinks, she stopped drinking completely upon finding out she was pregnant. However, Kimberly attended a friend's birthday party before she discovered she was pregnant and recalls drinking about ten drinks on that occasion, during her third week of pregnancy.

Vignette #3: Jessica

Jessica is currently ~~three~~ ~~months~~ ~~pregnant~~. With her ~~gestational diabetes~~ appointment to see her ~~family~~ ~~doctor~~, she expressed ~~some~~ ~~concern~~ ~~and~~ ~~anxiety~~ ~~about~~ ~~her~~ ~~pregnancy~~. Because ~~of~~ ~~this~~ ~~is~~ ~~diabetes~~ ~~in~~ ~~her~~ ~~pregnancy~~, she is worried and ~~uncertain~~ about ~~what~~ ~~to~~ ~~expect~~. Her doctor reassured her that ~~everything~~ ~~was~~ ~~fine~~ ~~and~~ ~~that~~ ~~if~~ ~~she~~ ~~was~~ ~~really~~ ~~worried~~, she should have a few drinks to help her relax and to get a better sleep. Although Jessica never drinks alcohol, she accepted the doctor's advice.

Vignette Questions

- What are your first impressions of this vignette?
- As a health care professional, what advice would you give to _____ at this stage of her pregnancy? What advice would you have given to _____ at the beginning of her pregnancy?
- Do you think what _____ is doing during her pregnancy poses any risks to her unborn child? Why or why not?
- Do you think the advice the family doctor gave poses any risks to her unborn child? Why or why not?
- How comfortable do you feel addressing this situation?



“Officially, no alcohol is recommended, **but...**”

- Attitudes regarding amount of alcohol and timing of exposure
 - Alcohol exposure before pregnancy identification
 - Amount of alcohol exposure
- Obligation, but no conclusive evidence
 - Responsibility to talk to patients
 - Knowledge of potential risks
- Personal choice
 - Respecting the mother



“Recommendations that are Selectively Made to Selective Types of People”

- Divergent recommendations for different women
 - Perceptions of level of education
 - Perceptions of culture and ethnicity
 - Perceptions of the ability to stop drinking
- Understanding the social determinants of health
 - Complex relationship between women and alcohol
 - Partner violence

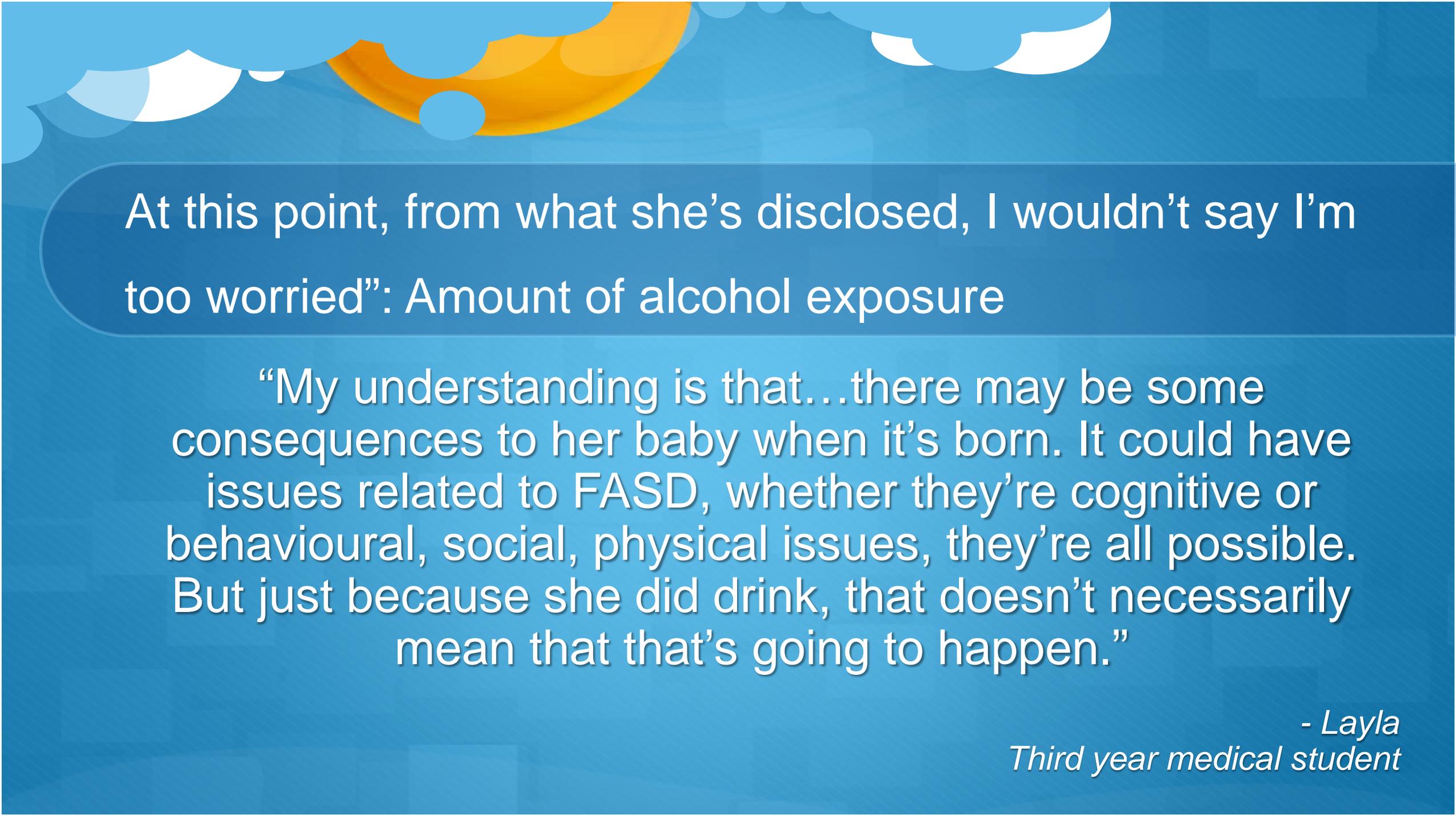


“So many clients ask if they have ruined their babies”:

Alcohol exposure before pregnancy identification

My first impression is that a lot of people drink before they realize that they are pregnant and often times what we say to people is there's ... this lovely all or nothing effect...I wouldn't be concerned about that one incident of drinking and would talk to her about how we encourage...officially no alcohol...but not to hold on to worries about that one night.

- Eva
Fourth year midwifery student



At this point, from what she's disclosed, I wouldn't say I'm too worried": Amount of alcohol exposure

“My understanding is that...there may be some consequences to her baby when it's born. It could have issues related to FASD, whether they're cognitive or behavioural, social, physical issues, they're all possible. But just because she did drink, that doesn't necessarily mean that that's going to happen.”

- Layla
Third year medical student



“Obligation to inform that no alcohol is best”: Responsibility to talk to patients

- “technical” or “theoretical” risk
- Lack of “clear”, “conclusive”, or “concrete” evidence
- “right in the fact that there is no conclusive evidence”
- “no amount of alcohol is ever safe for a woman when she is drinking during her pregnancy”



“If we don’t know what the risks are, people aren’t making informed choices”: Knowledge of potential risks

“How many drinks she has and how big the beer is and how big the glass of wine is to see how much, in the measurement form, she is in-taking.”

- Grace
Fourth year midwifery student



“As long as she’s informed...she can make her own choice”: Respecting the mother

“If you preface with public health information you can pretty much say ‘as a health care provider, I’m required to say X-Y-Z’...Especially from the midwifery angle, talk about choice. So here is the guideline and of course...your pregnancy is your choice. Your lifestyle, your choice.”

- Sally
Fourth year midwifery student

Ability to conduct own research: Perceptions of level of education

- “More experience” “professional placements” have a “good class” of a “one” “with a degree” “and a wife” “from well-off communities” “tend to be very well informed and fairly confident” about their pregnancies.
the second or third trimester, and beyond is probably okay. And those are recommendations that are selectively made to selective types of people, depending on their educational level, depending on whether or not we have concerns about alcohol and drug use otherwise in the pregnancy, and if that one drink is gonna tip somebody back into binge drinking....
- Women who are “educated and stable” are the women who “tend to know more about the effects of alcohol on pregnancy and have more resources not to drink during pregnancy.”
Often women who have maybe just completed high school or not completed high school, the other usual feelings like pregnancy, and have come where they’ve gone to university or gone to college.... So the recommendations that are made to women who don’t have the higher level of education of university or college or beyond, they often aren’t the same recommendations in terms of alcohol use.
- “if you can trust that she never drinks alcohol”

- Ruby

Third year midwifery student

Stereotypical beliefs: Perceptions of culture and ethnicity

- “marginalized populations”, including mothers who have “an addiction or an illness”, “First Nations” and “Aboriginal populations [with] a high incidence of FASD”, and “more rural areas...that acknowledge they have a higher incidence of...alcohol consumption during pregnancy”
- “everybody I’ve ever met who has FASD has been First Nations”
- “tone” with which FASD and alcohol consumption during pregnancy are discussed compared to other disabilities like Down Syndrome or Autism

Harm reduction and binge drinking: Perception of the ability to stop drinking

“It’s sad, but it’s not something that can be prevented. But you can’t stop women that drink from getting pregnant. Even though you have resources that we have, if the person really doesn’t want to stop, I have to do my very best to guide her. Children’s Aid, and they just go back to the home anyways, I’m sorry to say. I’m being negative, from experience.”

- Sierra,

First year nurse practitioner student

- Charlotte

Second year nurse practitioner student



Complex relationship between women and alcohol

“It’s interesting to mesh together that relationship between how people actually consume alcohol versus what the research actually says... There’s a normalizing of alcohol consumption... So I feel like... it doesn’t necessarily reflect the lived realities of people who are drinking during their pregnancies.”

- *Eva,*
Fourth year midwifery student



Partner violence and recognition of other risk factors

- “Concerned” or “worried” about Kimberly’s situation
- “red flag”
- “pretty normal almost” and “common” in rural and Northern Ontario

Discussion

- Stressors for families as a result of limited support (e.g., locating educated professionals)
- Perception that some women are protected from having a child with FASD
 - Pressing need to educate about the risks of low to moderate alcohol consumption during pregnancy
 - Continued debate about a threshold effect, below which there is no harm to the developing fetus

Discussion

- Cognitive dissonance between students' beliefs regarding safe levels of alcohol exposure, at different times and amounts during pregnancy, compared to an outright recommendation to drink
- Women often do not feel safe about disclosing their use of alcohol out of fear or judgment by health care professionals
 - Belief that only certain types of women can have a child with FASD may perpetuate this fear and stigma



Discussion

- Need for partner involvement
 - FASD thought of as a female issue
- Personal choice
 - Students' perceptions that it is an informed choice
 - Unique moral and ethical dilemma
 - Messaging to women about alcohol consumption during pregnancy

Discussion

- Implications for health care curricula
- Implications for practice: self-reflection/self-positioning and *critical* reflection
- Improving the confidence of (future) health care professionals regarding FASD
 - Adequate knowledge + strong sense of self-efficacy
 - Primary, secondary, and tertiary prevention of FASD

Describing Four Levels of FASD Prevention: Canada-wide Collaboration on the Creation of a Resource for Program Planners

Fetal Alcohol Spectrum Disorder (FASD) Prevention: Canadian Perspectives

Introduction

At the 2007 International Conference on FASD, a panel presented an FASD prevention framework, comprised of four interconnected levels of prevention.

The 12 panelists linked the four levels shown here, to their work in service provision and policy development.

Following the conference, the FASD Team at the Public Health Agency of Canada provided support to develop and produce a web and print resource of this framework.

Fetal Alcohol Spectrum Disorder (FASD) Prevention: Canadian Perspectives has been designed to inspire and support the work of prevention program planners.

Outcome

A large team of service providers, health system planners and researchers came together to prepare and edit the material. This FASD prevention resource illustrates how effectively collective efforts can work to:

- Capture what we know about multi-level prevention.
- Describe who is doing it successfully in Canada.

This resource honours all the work being done and demonstrates how it is interconnected:

- Embedded web links, for print resources and prevention-in-action projects, inspire learning from many jurisdictions across Canada.
- The resource reminds us to take strength from joining efforts and that no one service provider can accomplish all this work alone.

Level 1

This level is directed broadly to all sectors of society with the goals of:

- raising awareness of the risks of drinking in pregnancy; and alternatives to alcohol use;
- signalling where help is available;
- promoting involvement by community members in bringing awareness to FASD prevention.

KEY RESOURCES:

- Examples of initiatives:
- Info sheets
 - Media campaigns
 - Booklets with basic information
 - Community-based speakers bureaus
 - Community-wide development strategies

Level 2

This level involves collaborative discussion with all women of childbearing years on:

- alcohol use and related risks;
- ways of coping without alcohol;
- available prenatal supports;
- supports for pregnancy planning.

KEY RESOURCES:

- Examples of initiatives:
- Multi-sectoral training for service providers
 - On-line learning programs for health care professionals
 - Information and support lines for women
 - Canada Prenatal Nutrition Program (CPNP)

Level 4

This level involves supporting new mothers to:

- maintain healthy changes they have been able to make during pregnancy;
- access post-partum support, and continuing addiction treatment if necessary;
- continue to improve their health as well as the health of their children;
- provide early intervention services for their children.

KEY RESOURCES:

- Examples of initiatives:
- Community-based mentoring programs
 - Community Action Program for Children
 - Home visiting programs
 - On-going discussions of alcohol and health, with service providers and lactation consultants

Level 3

This level reaches girls and women who are using alcohol during pregnancy and involves:

- respectful and accessible health care and substance use treatment;
- holistic perinatal support, which may include assistance with nutrition, housing and income support.

KEY RESOURCES:

- Examples of initiatives:
- Holistic, "one-stop" community services
 - Mother-centred addiction treatment
 - Low threshold drop-in and outreach services
 - Networked services, supporting "wrap-around" care



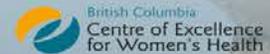
"No known safe amount or safe time to drink alcohol during pregnancy."

Project leads:

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Holly McKay, Public Health Agency of Canada, Ottawa

Project Collaborators:

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Wendy Burgoyne, Best Start, Wawa
Wendy Reynolds, AWARE, Kingston



Fetal Alcohol Spectrum Disorder (FASD) Prevention: Canadian Perspectives is available on the Public Health Agency of Canada Fetal Alcohol Spectrum Disorder website: www.publichealth.gc.ca/fasd

For a hard copy email: DCA_public_inquiries@phac-aspc.gc.ca

“...And even if they think they don't need to be educated, they need to be re-educated. And that's such a big deficit. *Such* a big deficit.”

-Stacey,
adoptive mother to one son with FASD



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Questions or Comments?



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“They’re Better Out West...Ontario’s About the Slowest
Province”: Lack of Perceived Support in Ontario

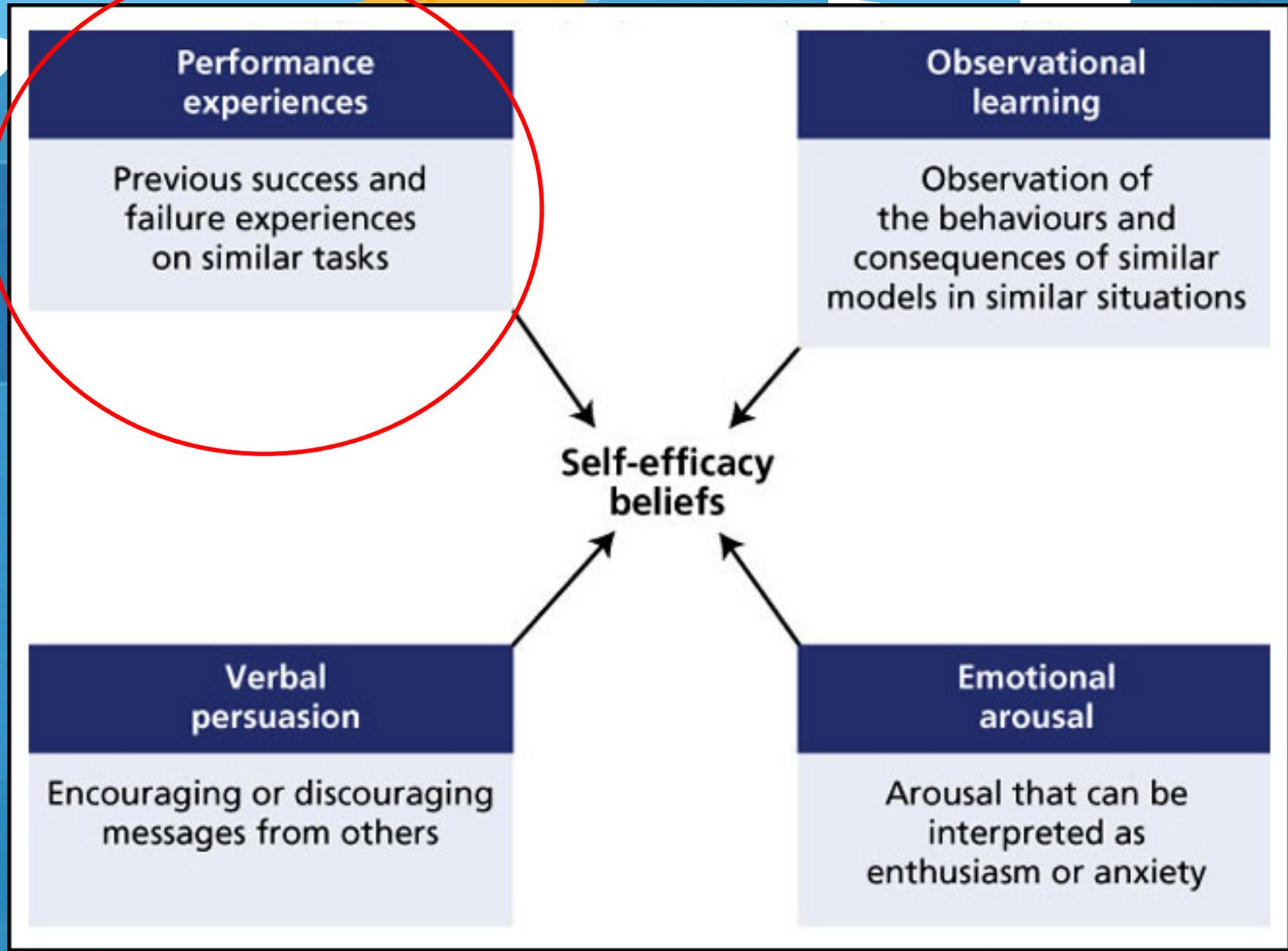
“I’m scared. I’m scared ‘cause there’s not a lot of things in Ontario for Mackenzie and not a lot of places. The neuropsychologist said that when Mackenzie turns 16, if something has not happened in Ontario yet, move out West. And when a neuropsychologist is telling you that, it’s sad. It’s scary.”

- Jennifer,
Adoptive mother to one son with FASD

Self-Efficacy



- Belief that one can master a situation and produce positive outcomes
- Judgments we make about how effective we are **in given situations**
 - Important in determining our choices of activities and in influencing the amount of interest and effort we expend
- Mastery experiences
 - Success raises efficacy expectations
 - Failure lowers them



Performance experiences

Previous success and failure experiences on similar tasks

Observational learning

Observation of the behaviours and consequences of similar models in similar situations

Self-efficacy beliefs

Verbal persuasion

Encouraging or discouraging messages from others

Emotional arousal

Arousal that can be interpreted as enthusiasm or anxiety

Limitations

- Changing terminology (e.g., fetal alcohol syndrome, fetal alcohol effects) and recently updated diagnostic guidelines
- Limited applicability outside of Ontario, given differences in provincial and territorial policies to address FASD
- Participant-selecting bias presented in qualitative research