

Anxiety and Stress in Pregnancy:

The relationship of maternal anxiety and stress in pregnancy with drug and alcohol intake, psychosocial functioning and spousal abuse.

Triple B Study

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Introduction

•The Triple B study is a longitudinal study focusing on factors that impact infant development, including alcohol and drug use, physical health, family functioning and mental health.

•More than half of all pregnant women report some alcohol or substance use during pregnancy, representing a major public health issue (AIHW, 2010).

•Psychological distress has been reported as a strong predictor of risky parental alcohol consumption (Maloney et al., 2010).

•Problematic use of alcohol by women in pregnancy has been linked to poorer relationship quality and domestic violence (Bakhireva, 2011 and Hedin, 2000).

•Spouse abuse and drug use increase the chance of high antenatal stress by 3 to 4 times (Woods et al., 2010). While psychosocial influences such as partner and family support, and job and financial stability may be associated with lower stress (Schetter, 2011).

•Maternal mood disturbances throughout the antenatal and postnatal periods are a focus of research attention due to their potential impact on developmental outcomes for children.

•A longitudinal birth cohort is currently being conducted to improve understanding of the relationship of substance use among pregnant women with anxiety, stress, psychosocial functioning and spouse abuse.

Aims

- To describe the demographic and psychosocial characteristics of a sample of pregnant women.
- To examine the amount of anxiety and stress women report during pregnancy.
- To examine the relationship of mothers' drug and alcohol intake, psychosocial functioning and spouse abuse with anxiety and stress during pregnancy.

Method

•200 Pregnant women were recruited through general antenatal and specialised drug services antenatal clinics at The Royal Prince Alfred Hospital and The Royal Hospital for Women, Sydney.

•Participants completed the Depression Anxiety Stress Scales (DASS inventory) relating to their *Anxiety and Stress* in each trimester of their pregnancy. Participants were also interviewed about the frequency and quantity of their *alcohol and drug use* in the three months prior to pregnancy, and during each trimester of their pregnancy.

•Participants completed the *Index of Spouse Abuse (ISA)*, and the *OTI-Social Functioning (OTI-SFS)*. The ISA (30-items) assesses physical (ISA-P) and non-physical (ISA-NP) spouse abuse. The OTI-SFS (12-items) assesses domains of social functioning such as employment, interpersonal conflict and social support.

Results

Table 1. Demographics

Characteristics	N = 200
Mean Age	32.91
Mean Fortnightly Mothers' Income (after tax)	\$1380.99
Born In Australia	59%
Aboriginal and/or Torres Strait Islander	4%
Employed Full-time	50%
Married	63%
Living in Own House/Unit	50%
Current Partner is Father	90%
Have other Children	42%
Wanted to Become Pregnant	75%

Figure 1. Maternal anxiety and stress in pregnancy

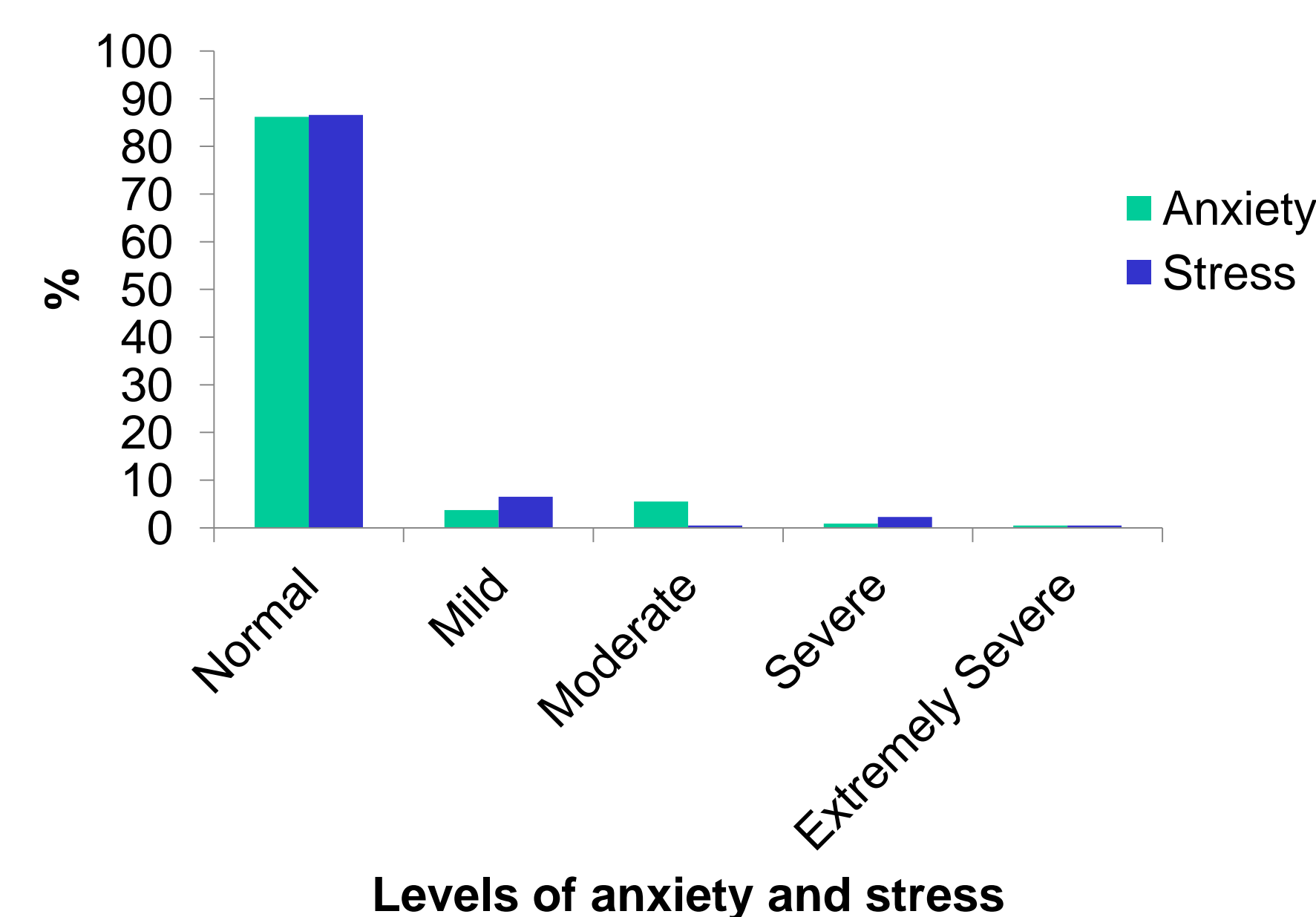
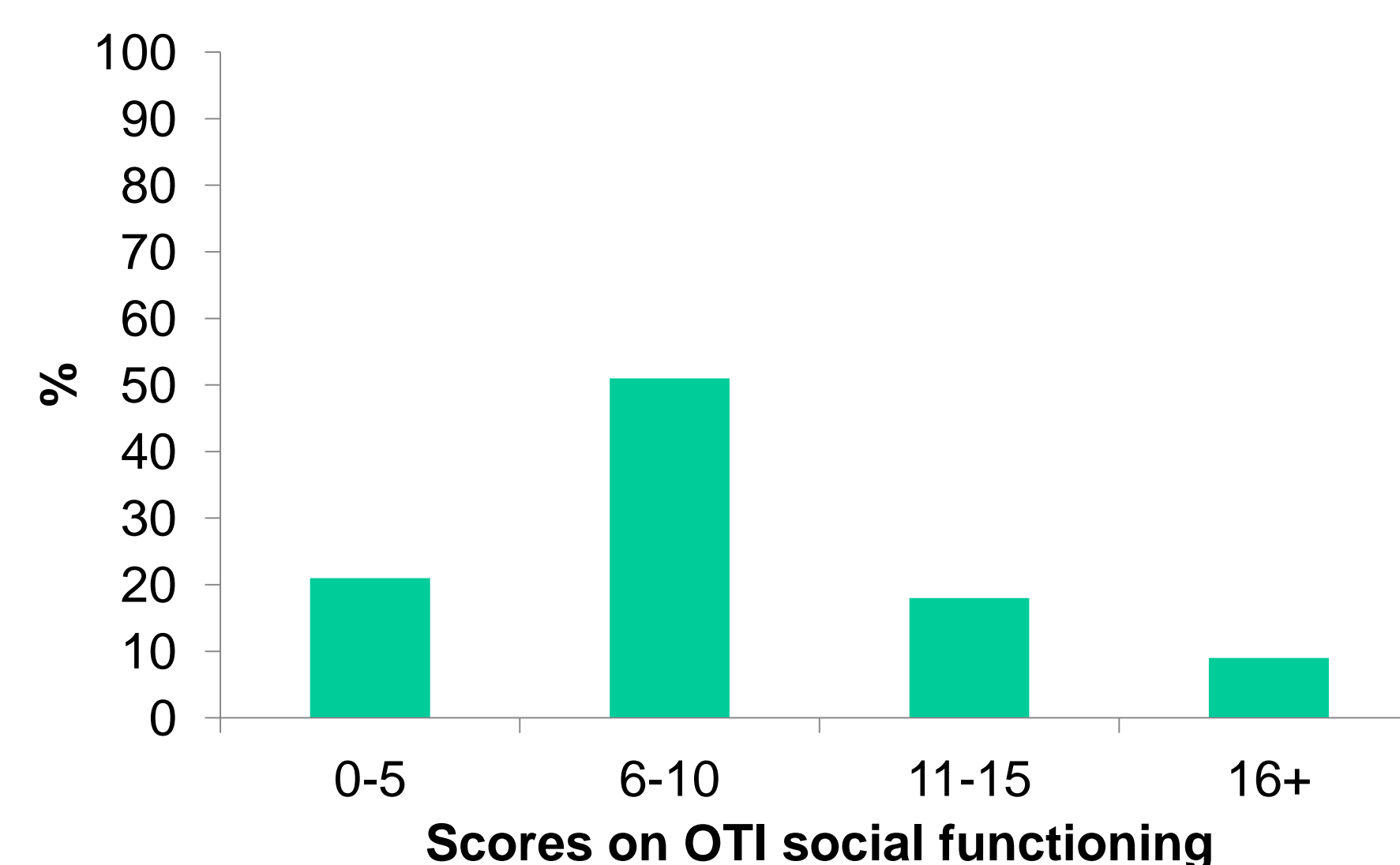


Table 2. Frequency of alcohol and substance use in pregnancy

Substance (n=200)	Trimester 1	Trimester 2	Trimester 3
Caffeine	80%	82%	84%
Alcohol	44%	35%	35%
Tobacco	13%	5%	5%
Illicit Drugs	3%	2%	3%

Figure 2. OTI social functioning score distribution



*Higher scores = more dysfunctional social functioning (Total possible score of 48)

Table 3. Relationship between maternal anxiety and stress, alcohol use, tobacco use, social functioning and spouse abuse

	Anxiety	Stress
Alcohol	-.025	.069
Tobacco	-.033	-.055
OTI-SFS	.333**	.281**
ISA-P	.425**	.424**
ISA-NP	.428**	.438**

**p < 0.01

Table 4. ISA clinical significance

	ISA Physical	ISA Non-Physical
Clinically Significant (severe)	4.64%	2.70%
Mean Score	1.60	3.68
Median	0.00	0.55
Range	36.58	57.11

*Higher scores=higher levels of spouse abuse (Total possible score of 100)

Discussion

Alcohol and Substance Use

•44% of mothers reported alcohol use during pregnancy. The proportion of mothers consuming alcohol between their first and second trimester declined.

•84% and 13% of mothers reported caffeine and tobacco intake respectively at some point in their pregnancy. Caffeine use was slightly higher in the third trimester. Tobacco intake decreased from the first to the second trimester.

•The use of illicit drugs was low in the sample, with 3% of mothers reporting use of any illicit substance during pregnancy.

•Alcohol and substance use was not significantly related to anxiety and stress, however, this may be due to the low levels of reported substance use and high levels of reported psychosocial functioning.

Maternal Anxiety and Stress

•16% of mothers reported higher than normal levels of anxiety and stress during pregnancy

Social Functioning

•Low levels of problematic social functioning were reported in the sample.

•In this sample lower social functioning was related to higher levels of anxiety and stress.

Spouse Abuse

•5% of mothers reported serious physical abuse and 3% reported serious non-physical abuse.

•Higher levels of physical and non-physical abuse were correlated with higher levels of anxiety and stress.

Conclusion

•Almost half the sample reported some alcohol use during pregnancy.

•Social functioning and spouse abuse are factors that correlate with maternal anxiety and stress. This finding was consistent with previous literature, however alcohol and substance use in this sample were not related. This may be due to constraints in sample size and the homogeneity of the sample.

•These results demonstrate the need for further research using larger sample sizes and a more diverse study population. The Triple B study is currently ongoing and further in depth analyses will be conducted once the cohort has been finalised.

•Findings indicate that psychosocial factors need to be examined further during pregnancy to gain a broader understanding of these relationships and how they impact family functioning.

•Improved understanding of antenatal anxiety and stress will inform public health policy and guide interventions aimed at prevention, screening and postnatal support.

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