

# Genetic and Environmental risk factors of Schizophrenia and Autism

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# Abstract



# Declaration



# Acknowledgements





# Abbreviations

**ASD** Autism Spectrum Disorder. 3

**SCZ** Schizophrenia. 3



# Contents

<b>Abstract</b>	<b>i</b>
<b>Declaration</b>	<b>iii</b>
<b>Acknowledgments</b>	<b>v</b>
<b>Abbreviations</b>	<b>vii</b>
<b>Contents</b>	<b>ix</b>
<b>Introduction</b>	<b>1</b>
<b>1 Literature Review</b>	<b>3</b>
<b>2 Heritability Estimation - Quantitative Trait</b>	<b>5</b>
2.1 Polygenic Traits . . . . .	5
2.2 Oligogenic traits . . . . .	5
2.3 Rare Variants . . . . .	5
2.4 Extreme Phenotype Selection . . . . .	5
<b>3 Case Control Studies</b>	<b>7</b>
3.1 Polygenic Traits . . . . .	7
3.2 Oligogenic traits . . . . .	7
3.3 Rare Variants . . . . .	7
<b>4 Risk Prediction</b>	<b>9</b>
4.1 Correcting for Linkage Disequilibrium . . . . .	9



# Introduction



# Chapter 1

## Literature Review

Heritability and Risk Prediction in Schizophrenia and Autism Schizophrenia (SCZ) is a terrible psychiatric

Topic	Content
Heritability Estimation	Quantitative Trait Polygenic Traits Oligogenic Traits Mendelian Traits? Rare Variants Extreme Phenotype Selection
Heritability estimation	Case Control Studies WTCCC PGC Schizophrenia Autism
Developmental network	Schizophrenia Autism Combine WGCNA + SHREK Compare and contrast schizophrenia and autism
Risk Prediction	Linkage disequilibrium Things that I have proposed Shrinkage Tweetie

disorders, so is Autism Spectrum Disorder (ASD)





## Chapter 2

# Heritability Estimation - Quantitative Trait

### 2.1 Polygenic Traits

### 2.2 Oligogenic traits

### 2.3 Rare Variants

### 2.4 Extreme Phenotype Selection



## Chapter 3

# Case Control Studies

### 3.1 Polygenic Traits

### 3.2 Oligogenic traits

### 3.3 Rare Variants



## Chapter 4

# Risk Prediction

### 4.1 Correcting for Linkage Disequilibrium



# Appendix