CONTENTS V

CONTENTS

A	ACKNOWLEDGEMENTS						
A	ABSTRACT FIGURES AND TABLES						
\mathbf{F}							
1.	Intro	oductio	on	1			
P	ART	I	THEORETICAL BACKGROUND	5			
2.	Stre	SS		5			
	2.1	Histor	ry of the stress concept	5			
	2.2	Lazar	rus transaction theory of stress	7			
	2.3	Physic	ology of the stress system	10			
		2.3.1	Stress response of the hypothalamic pituitary adrenal (HPA) axis	11			
		2.3.2	The autonomic nervous system (ANS)	14			
	2.4	Cortis	sol and alpha-amylase – Indicators of stress	17			
		2.4.1	Cortisol – Methodological issues	17			
		2.4.2	Alpha-amylase – Methodological issues	20			
3.	Physiological stress reactivity during pregnancy						
	3.1	The H	IPA axis during pregnancy	26			
		3.1.1	Basal stress hormones of the HPA axis during pregnancy	26			
		3.1.2	Interactions of placenta, maternal and fetal HPA axis	28			
		3.1.3	Stress reactivity of the prenatal maternal HPA axis –				
			laboratory studies	29			
		3.1.4	The relation of self-report stress to the prenatal maternal HPA axis	31			
	3.2	The A	NS during pregnancy	32			
		3.2.1	Basal physiology of the ANS during pregnancy	32			
		3.2.2	Stress reactivity of the ANS during pregnancy – laboratory studies	34			
		3.2.3	Self-report stress, anxiety and changes of the maternal ANS	36			
	3.3	Metho	odological limitations of research on physiological stress reactivity is	n			
		pregn	ancy	37			

VI CONTENTS

	Dysre	· · · · · · · · · · · · · · · · · · ·				
	3.4.1	Dysregulations of the HPA axis, the ANS and pregnancy				
		complications	39			
	3.4.2	Prenatal stress, HPA axis and fetal programming	40			
3.5	Concl	usions	41			
Psychosocial resources and pregnancy						
4.1	Socia	l support and pregnancy	43			
	4.1.1	Definition and research on social support	43			
	4.1.2	Effects of social support on stress and health during pregnancy	44			
4.2	Self-e	fficacy and pregnancy	47			
	4.2.1	Definition and research on self-efficacy	47			
	4.2.2	Effects of self-efficacy on stress and health during pregnancy	49			
4.3	Daily	uplifts and pregnancy	50			
	4.3.1	Definition and research on daily uplifts	50			
	4.3.2	Effects of daily uplifts and hassles on stress and health during				
		pregnancy	50			
PART II EMPIRICAL STUDIES						
Neu	ıroende	ocrine and autonomic stress reactivity and recovery in human				
		ocrine and autonomic stress reactivity and recovery in human	53			
preg	roendo gnancy <i>Introd</i>		53 53			
preg 5.1	gnancy	luction				
preg 5.1	gnancy Introd Metho	luction ods	53			
preg 5.1	gnancy Introd Metho 5.2.1	duction ods Study participants	53 57			
preg 5.1	Introd Metho 5.2.1 5.2.2	duction ods Study participants Study design	53 57 57			
preg 5.1	Introd Metho 5.2.1 5.2.2 5.2.3	duction ods Study participants	53 57 57 58			
preg 5.1	Introd Metho 5.2.1 5.2.2 5.2.3 5.2.4	duction ods Study participants Study design Outcome measures Assays	53 57 57 58 60			
preg 5.1 5.2	Introd Metho 5.2.1 5.2.2 5.2.3 5.2.4	Assays Data analysis	53 57 57 58 60 61			
preg 5.1 5.2	Introd Metho 5.2.1 5.2.2 5.2.3 5.2.4 5.2.5	Assays Data analysis	53 57 57 58 60 61 62			
preg 5.1 5.2	Introd Metho 5.2.1 5.2.2 5.2.3 5.2.4 5.2.5 Result 5.3.1	Study participants Study design Outcome measures Assays Data analysis	53 57 57 58 60 61 62 63			
preg 5.1 5.2	Introd Metho 5.2.1 5.2.2 5.2.3 5.2.4 5.2.5 Result 5.3.1 5.3.2	Study participants Study design Outcome measures Assays Data analysis ts Sample characteristics	53 57 57 58 60 61 62 63 63			
preg 5.1 5.2	Introd Metho 5.2.1 5.2.2 5.2.3 5.2.4 5.2.5 Result 5.3.1 5.3.2 5.3.3	Study participants Study design Outcome measures Assays Data analysis ts Sample characteristics Psychological stress response	53 57 57 58 60 61 62 63 63 64			
preg 5.1 5.2	Introd Metho 5.2.1 5.2.2 5.2.3 5.2.4 5.2.5 Result 5.3.1 5.3.2 5.3.3 5.3.4	Study participants Study design Outcome measures Assays Data analysis Sample characteristics Psychological stress response Cortisol stress response	53 57 57 58 60 61 62 63 63 64 65			
	Psy. 4.1 4.2 4.3	3.5 Concl. Psychosoc 4.1 Social 4.1.1 4.1.2 4.2 Self-e, 4.2.1 4.2.2 4.3 Daily 4.3.1 4.3.2	3.4.2 Prenatal stress, HPA axis and fetal programming 3.5 Conclusions Psychosocial resources and pregnancy 4.1 Social support and pregnancy 4.1.1 Definition and research on social support 4.1.2 Effects of social support on stress and health during pregnancy 4.2 Self-efficacy and pregnancy 4.2.1 Definition and research on self-efficacy 4.2.2 Effects of self-efficacy on stress and health during pregnancy 4.3 Daily uplifts and pregnancy 4.3.1 Definition and research on daily uplifts 4.3.2 Effects of daily uplifts and hassles on stress and health during pregnancy			

6.	Stress-buffering effects of psychosocial resources on physiological and							
	psychological stress response in pregnant women 79							
	6.1	6.1 Introduction						
	6.2 Methods							
		6.2.1	Study participants	83				
		6.2.2	Outcome measures	83				
		6.2.3	Statistics	85				
	6.3	Results		86				
		6.3.1	Sample characteristics	86				
		6.3.2	Inter- and intra-correlations of independent and dependent variables	86				
		6.3.3	Psychological stress response	87				
		6.3.4	Physiological stress response	87				
		6.3.5	Effects of psychosocial resources on physiological stress response	89				
		6.3.6	Effects of psychosocial resources on psychological stress response	90				
	6.4	Discussion		93				
P	ART	III	GENERAL DISCUSSION	99				
7.	Sun	nmary	of the results	99				
	7.1 Introduction							
	7.2 Neuroendocrine and autonomic stress reactivity and recovery in human							
	pregnancy							
	7.3 Stress buffering effects of psychosocial resources on physiological and							
		psych	ological stress response in pregnant women	101				
8.	ogical considerations and limitations	103						
9.	9. Discussion of the results							
10.Clinical relevance and outlook								
R	References 1							