

Analyzing pathways from childhood maltreatment to internalizing symptoms and disorders in children and adolescents (AMIS)

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THEORY

Introduction

Of the many health risks exhibited by maltreated individuals, one of the most consistent is a marked rise in risk for internalizing symptoms and disorders. Scott, Smith & Ellis (2010) documented that abuse or neglect reported to child protection services (CPS) amplifies the risk 5 to 10-fold for PTSD, 2 to 2.5-fold for mood disorders, and 2.5 to 3-fold for anxiety disorders in adulthood. Nevertheless, maltreated children are a heterogeneous group. While some develop psychiatric disorders or symptoms, others remain relatively resilient to the maltreatment experience. (Cicchetti, 2010). Importantly, we know very little from only a handful of findings about this heterogeneity in outcome and its origins in children.

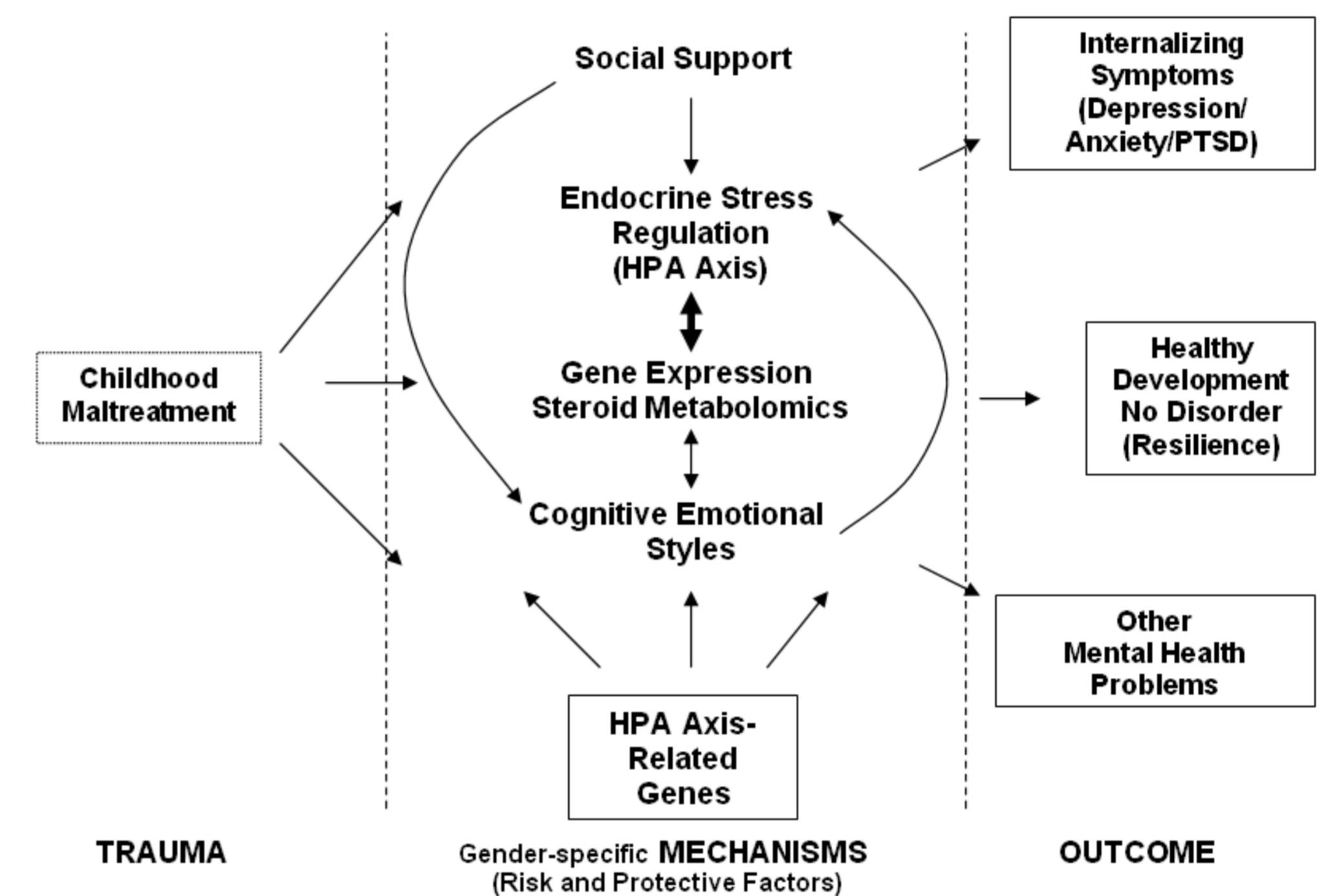
One theoretical explanation is provided by *Differential Susceptibility Theory* suggesting that individuals differ systematically in their susceptibility to environmental effects (Ellis & Boyce, 2011). Thus, genetic and neurobiological susceptibility to the environment modulates environmental influences (such as maltreatment) on developmental and life outcomes. Although some studies have already identified individual risk factors, there is a lack of multilevel research on how psychosocial, neurobiological, and genetic factors interact to modulate risk of internalizing symptoms in childhood subsequent to maltreatment.

AIMS

Aims of the study

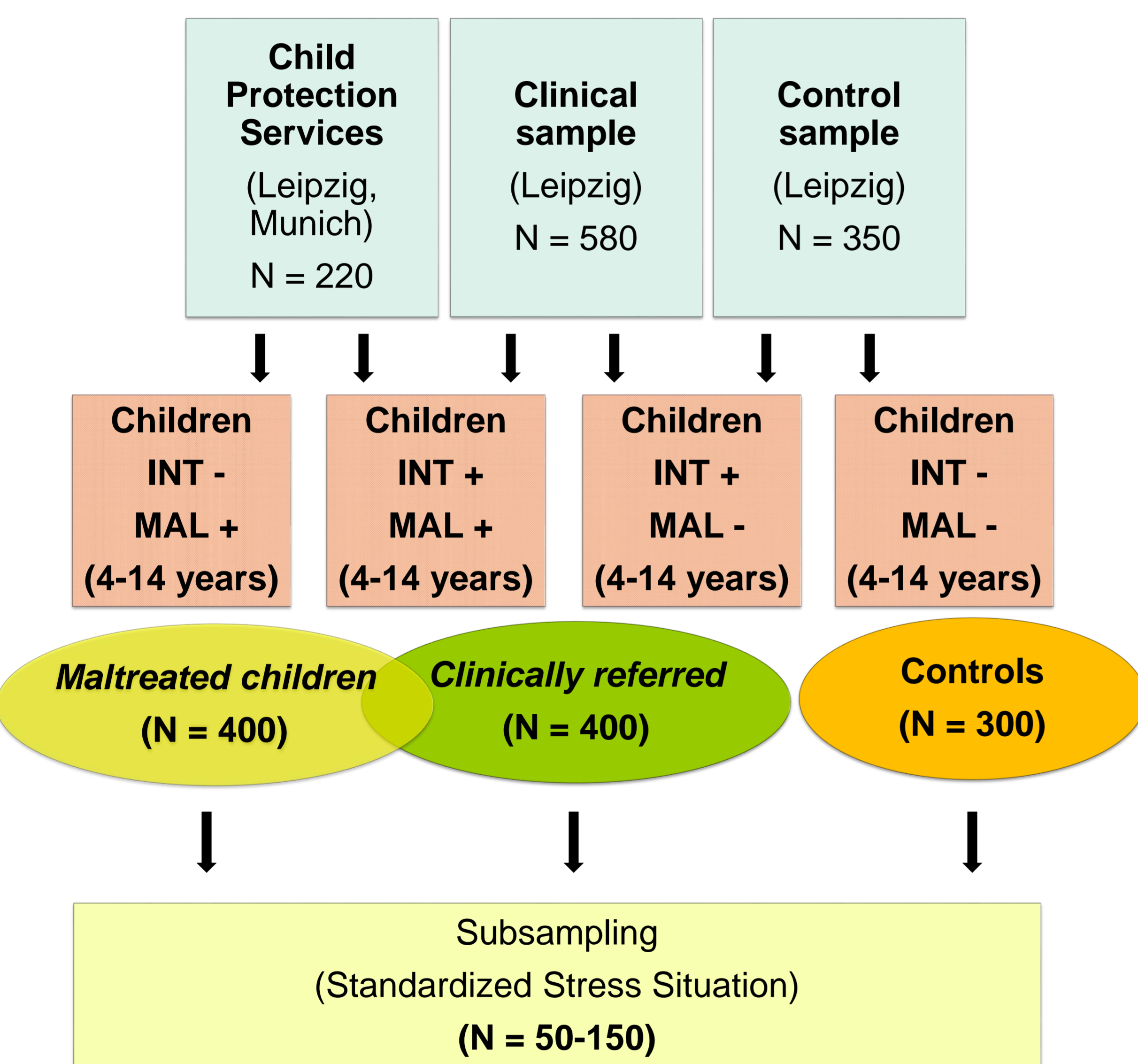
In this study we aim to

- implement a multi-method, multi-informant approach to assess maltreatment, psychopathology, cognitive-emotional styles and social-relational patterns, using age appropriate, reliable and valid interview, self-, parent and teacher-report measures
- describe and quantify different patterns/clusters of children with maltreatment experiences and/or psychopathological symptoms (internalizing, externalizing, absence of symptoms)
- identify factors that predict the risk of developing a disorder, especially internalizing symptoms
- evaluate the interaction of these factors, especially the mediating role of the biological stress system and the roles of gender and genetic variants in stress-response related genes as moderators of the associations between maltreatment experiences and internalizing symptoms
- explore possible etiopathological mechanisms in terms of altered steroid metabolism or epigenetic modification which lead from adverse maltreating environment to the emergence of psychopathological (especially internalizing) symptoms and disorders.



DESIGN

Sample



Notes:
INT Internalizing disorder - absent
MAL Maltreatment experience + present

Measures*

Variable	Measures	Informants
Internalizing symptoms and disorders		
Symptoms dimensional/categorical	Child Behavior Checklist (CBCL); Strengths and Difficulties Questionnaire (SDQ); Center for Epidemiological Studies Depression Scale for Children (CES-DC) Preschool Age Psychiatric Assessment (PAPA) or Schedule for Affective Disorders and Schizophrenia for School-Age Children (K-SADS-PL)	parent teacher child
Characteristics of maltreatment experiences		
Severity, subtypes, timing, perpetrator of maltreatment experience	Maltreatment Classification System (MCS; standardized evaluation of CPS records) Maternal Maltreatment Classification Interview (MMCI; based on MCS) Parent-Child Conflict Tactics Scale (CTS-PC) Multidimensional Neglectful Behavior Scale (MNBS-CR)	CPS parent child
Social relationships		
Social Supports, Family environment	Arizona Social Support Interview Schedule (ASSIS) Family Adversity Index (FAI) Alabama Parenting Questionnaire (APQ)	parent child
Control variables		
Verbal ability, Intelligence	Peabody Picture Vocabulary Test (PPVT-R) Coloured Progressive Matrices (CPM)	child
Neurobiological/ endocrinological level		
Long-term stress exposure, Stress response regulation	cortisol in hair (hair sample) saliva cortisol (in standardized stress situation)	child
Genetic level		
Risk variants of susceptibility genes	DNA using saliva (Oragene DNA Self Collection Kit) or blood samples	child
Mechanisms		
Methylation	Blood sample	child
Steroid metabolomics	Blood sample (standardized stress situation)	child

* Only a selection of measures in AMIS

PRACTICAL CONSEQUENCES

Practical consequences

In Germany, many local and national projects strive to prevent and treat individual and social problems engendered by childhood maltreatment. A limiting factor is that the majority of these efforts suffer from a lack of empirical support and coordination. The results of this project will provide an evidence base for practice guidelines applicable to all practical fields of child protection. We will create a handbook of empirically supported standard procedures for cases of child maltreatment which can be used in the fields of social work/child protection as well in the medical fields. This handbook will comprise the following guidelines:

- Empirically supported assessment procedures of maltreated children (standardized screening assessments of maltreatment characteristics, social support patterns, cognitive-emotional styles, stress regulation, early psychopathological symptoms etc.)
- Risk management with respect to impairing mental health problems
- Standardized documentation (also as data base for future research)
- Planning of intervention

Thus, we are expecting our project results to have the following health and clinical impact:

- improve the interdisciplinary collaboration between the community Child Protective Services and the medical institutions (pediatric hospitals, child psychiatric departments etc.) in order to establish common standards in dealing with maltreated children and their families
- lay the basis for improved diagnostic standards which can be applied to the fields of social work/child protection as well as clinical medicine.