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Epidemiological and pathophysiological aspects of abdominal pain predominant functional gastrointestinal disorders in children and adolescents: a Sri Lankan perspective

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Epidemiological and pathophysiological aspects of abdominal pain predominant functional gastrointestinal disorders in children and adolescents:
A Sri Lankan perspective

EPIDEMIOLOGICAL AND PATHOPHYSIOLOGICAL
ASPECTS OF ABDOMINAL PAIN PREDOMINANT
FUNCTIONAL GASTROINTESTINAL DISORDERS IN
CHILDREN AND ADOLESCENTS:
A SRI LANKAN PERSPECTIVE

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**Epidemiological and pathophysiological aspects of
abdominal pain predominant functional gastrointestinal
disorders in children and adolescents:
a Sri Lankan perspective**

ACADEMISCH PROEFSCHRIFT

ter verkrijging van de graad van doctor
aan de Universiteit van Amsterdam
op gezag van de Rector Magnificus
prof. dr. D.C. van den Boom
ten overstaan van een door het College voor Promoties ingestelde commissie,
in het openbaar te verdedigen in de Agnietenkapel
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geboren te Meegahakiwula, Badulla, Sri Lanka

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OUTLINE OF THE THESIS

Recurrent abdominal pain is a common worldwide symptom seen in children and adolescents. It has a significant impact on quality of life of the affected children and their family members and a severe burden on the already stretched healthcare systems around the world. Many organic diseases can present as abdominal pain, but the majority of affected children have abdominal pain predominant functional gastrointestinal disorders (AP-FGIDs) such as irritable bowel syndrome, functional dyspepsia and functional abdominal pain.

This thesis has attempted to explore some epidemiological and pathophysiological aspects of AP-FGIDs in Sri Lankan children and adolescents.

Part I - Introduction to abdominal pain predominant functional gastrointestinal disorders

Chapter I of this thesis gives a detailed account of the global prevalence and international perspective of pediatric functional gastrointestinal disorders. **Chapter 2** discusses the underlying pathophysiological mechanisms of AP-FGIDs and proposes an up-to-date evidence-based management plan.

Part II - Epidemiology and risk factors of abdominal pain predominant functional gastrointestinal disorders

This part of the thesis consists of 5 chapters. **Chapter 3** shows the results of an island-wide epidemiological survey conducted in Sri Lankan children ages 10 to 16 years to assess the prevalence and clinical profile of AP-FGIDs, and its association with emotional stress. In **chapter 4**, the epidemiology and symptom characteristics of different subtypes of irritable bowel syndrome is discussed in detail, which is the commonest type of AP-FGID seen in Sri Lankan children. **Chapter 5** is a systematic review and meta-analysis of the epidemiology of irritable bowel syndrome in Asian children and adolescents. Exposure to child abuse is widely considered as a predisposing factor to abdominal pain. Results of a study conducted in 13 to 18 year old Sri Lankan students, to assess the association between AP-FGIDs and exposure to physical, emotional and sexual abuse, is given in the **chapter 6**. **Chapter 7** describes the

impact of AP-FGIDs on the physical, social, emotional and school related quality of life in teenagers and the factors determining their healthcare consultation.

Part III - Abdominal pain predominant functional gastrointestinal disorders and gastric motility

Up to now, there is no exact pathophysiological mechanism to describe the abdominal pain present in children with AP-FGIDs. Abnormalities of gastrointestinal motility has been suggested as one of the possible underlying pathophysiological mechanisms. This part of the thesis shows the abnormalities of gastric motility in all 4 main types of AP-FGIDs in Sri Lankan children, namely functional abdominal pain (**chapter 8**), irritable bowel syndrome (**chapter 9**), functional dyspepsia (**chapter 10**) and abdominal migraine (**chapter 11**).

Part IV - Summary, conclusions and future perspectives

This section gives a summary of the important findings of this thesis, main conclusions drawn and some future perspectives on functional gastrointestinal disorders in children.