

Contents

Contents	iv
List of Tables	vii
List of Figures	ix
List of abbreviations	xi
Acknowledgement	xiii
Summary	xiv
Muhtasari	xvii
Zusammenfassung	xxi
Chapter 1: INTRODUCTION	1
1.0 Multiparasitism	1
1.1 Geographical distribution of malaria and soil transmitted helminth (STH).....	1
1.1.1 Geographical distribution of malaria	1
1.1.2 Geographical distribution of soil transmitted helminth (STH).....	4
1.2 Burden of parasitic diseases	7
1.2.1 Burden of malaria and existing interventions.....	7
1.2.2 Burden of soil transmitted helminth (STH) and existing interventions	8
1.3 Possible modes of interactions between malaria and soil transmitted helminth (STH)	12
1.3.1 Direct interaction and resource competition	13
1.3.2 Immune mechanisms	14
Chapter 2: RATIONALE AND RESEARCH QUESTION	17
Chapter 3: GOAL AND OBJECTIVES	18
3.0 Goals	18
3.1 General objective	18
3.2 Specific objectives	18
CHAPTER 4: METHODOLOGY	19
4.1 Study area	19
4.2 Study population and design	20
4.3 Statistical methods.....	21
4.4 Ethical consideration.....	22

Chapter 5: Diagnostic accuracy of Kato-Katz, FLOTAC, Baermann, and PCR methods for the detection of light intensity hookworm and <i>Strongyloides stercoralis</i> infections in Tanzania.....	23
Abstract.....	24
Background.....	24
Materials and methods.....	26
Results.....	30
Discussion.....	40
Conclusion.....	42
Chapter 6: Enterobiasis and Strongyloidiasis and associated co-infections and morbidity markers in infants, preschool and school aged children from rural coastal Tanzania: a cross sectional study.....	43
Abstract.....	44
Background.....	45
Materials and methods.....	46
Results.....	51
Discussion.....	65
Conclusion.....	68
Chapter 7: Distribution and risk factors for <i>Plasmodium</i> and helminth co-infections: a cross sectional survey among children in Bagamoyo district, coastal region of Tanzania.....	69
Abstract.....	70
Background.....	72
Materials and methods.....	73
Results.....	76
Discussion.....	85
Conclusion.....	88
Chapter 8: The impact of soil transmitted helminth on malaria clinical presentation and treatment outcome: A case control study among children in Bagamoyo district, coastal region of Tanzania.....	89
Abstract.....	90
Background.....	91
Materials and methods.....	92
Results.....	95
Discussion.....	104
Conclusion.....	105

Chapter 9: GENERAL DISCUSSION, CONCLUSION AND RECOMMENDATIONS	107
9.1 General discussion	107
9.1.1 <i>Plasmodium</i> and soil transmitted helminth co-infection among children	111
9.1.2 Novel contribution of the thesis	113
9.1.3 Challenges and opportunities for integrated control program in Tanzania	115
9.2 Conclusions	116
9.3 Recommendations	116
9.3.1 What can be directly translated into public health policy	116
9.3.2 Research needed in future	117
Reference	118
CURRICULUM VITAE	134