## **Table of Contents**

List of	Figures		ii
List of	Tables		iii
List of	<b>Pictures</b>		i۷
List of	Appendices		i۷
Abbrev	viations		iv
1	Introduction		1
2	Methods and	Materials	12
	2.1	Study area	13
	2.2	Study design	13
	2.3	Quantitative data collection	17
	2.4	Qualitative data collection	22
	2.5	Statistical analysis	27
	2.6	Ethical consideration	30
3	Results		31
	3.1	Compliance	31
	3.2	Demographic and Socioeconomic Characteristics	31
	3.3	Food production and livestock keeping	36
	3.4	Food security	39
	3.5	Food variety scores and dietary diversity	39
	3.6	Food choice and food frequency	44
	3.7	Anthropometric and biochemical data	47
	3.8	Sanitation and infectious disease	54
	3.9	Availability, accessibility and utilization of health care services	59
	3.10	Women's knowledge, awareness and practices regarding the importance of	64
		micronutrients in pregnancy and the outcome	
	Discussion		68
	4.1	Strategies to improve maternal health	68
	4.2	Consequences of maternal malnutrition	69
	4.3	Challenges to improve maternal nutrition	71
	4.4	Nutritional status of women in Malinzanga village and its relation to food	73
		insecurity and infections	
	4.5	Interaction of micronutrient deficiencies and infections	99
	4.6	Knowledge, awareness and perception of women on micronutrients and	101
		their importance to maternal health	
	4.7	Availability, accessibility and utilization of health care services	104
5	Conclusion a	nd Recommendations	114
	5.1	Conclusion	114
	5.2	Recommendations	116
Summ	ary		121
Zusammenfassung			125
Muhtasari			129
Refere	nces		133
Appendices			140
Ackno	wledgements		163
Declar	ation (Eidesst	attliche Erklärung)	165