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# A Quantitative and Qualitative Study of Lifestyle and Obesity in Asian Adolescents in New Zealand

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**Shirin Foroughian**

*A thesis submitted in fulfillment of the requirements for the degree of Doctor of  
Philosophy [Population Health], The University of Auckland, 2010.*

## **Abstract**

*Overweight and obesity in childhood is a major and growing public health concern with short and long term physical and psychological consequences. Historically obesity was seen as a non-Asian phenomenon, hence this research focused on looking at issues of overweight and obesity in twelve to eighteen year old Asians in New Zealand. Particular emphasis was given to investigating the nutritional and exercise behaviours of young New Zealand Asians, in order to suggest a health promotion approach to empower and improve the health of young people.*

*The research was based on both quantitative (structured individual interviews and anthropometry measurements with 821 students) and qualitative approaches (semi-structured interviews with 12 focus groups comprising 46 students) of South Asian, East Asian and European ethnicity who lived and attended high schools in South Auckland.*

*The findings suggest that being overweight is a concern faced by Asian adolescents at the same level as European adolescents. The results show no significant difference in mean body mass index or mean waist to height ratio amongst the three ethnic groups; and no difference in fat mass between South Asian and European adolescents when using same cut-off points for all ethnicities. Additionally, there are a number of other risk factors affecting the weight status of Asian adolescents including: missing breakfast or lunch; consumption of junk food such as chips, biscuits, chocolates and pies while at school or at home before dinner; purchasing food from school canteens or dairies; discrimination of traditional foods at school; high consumption of sugary drinks, fried and fast foods; having access to more food and more variety than in their traditional cultures; lack of exercise and opportunities to be active; and hours spent watching television or playing computer or electronic games. There are also a number of factors that play a protective role for all adolescents in maintaining a healthy weight including: having breakfast and lunch; bringing food from home; walking to school; and doing sports at school or being involved in an organised or team sport.*

*Empowering and culturally appropriate 'educational and physical activity interventions' for young people and their families are recommended; but to deal with the issue of obesity in Asian adolescents, family, school, community and government all have to play a role.*

## **Dedication**

To my loving and supportive parents

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# Table of Contents

<b>ABSTRACT</b>	<b>II</b>
<b>DEDICATION</b>	<b>III</b>
<b>ACKNOWLEDGEMENTS</b>	<b>IV</b>
<b>LIST OF FIGURES</b>	<b>IX</b>
<b>LIST OF TABLES</b>	<b>X</b>
<b>GLOSSARY</b>	<b>XI</b>
<b>CHAPTER 1. OVERVIEW</b>	<b>1</b>
1.1. AIMS OF THESIS	2
1.2. NEW ZEALAND'S ASIAN COMMUNITY	4
1.3. THE RESEARCHER'S BACKGROUND	5
1.4. THIS RESEARCH	5
1.5. THESIS STRUCTURE	6
<b>CHAPTER 2. BACKGROUND AND LITERATURE REVIEW</b>	<b>7</b>
2.1. ASIANS' BACKGROUNDS	8
2.2. CHILDHOOD OVERWEIGHT/OBESITY	14
2.2.1 AUSTRALASIAN STUDIES OF CHILDHOOD OBESITY	18
2.2.2 CAUSES OF CHILDHOOD OBESITY	21
2.3. ASIANS AND WEIGHT RELATED ISSUES	24
2.3.1 STUDIES OF ASIAN CHILDREN LIVING IN ASIAN COUNTRIES	26
2.3.2 STUDIES OF ASIAN CHILDREN LIVING IN WESTERN COUNTRIES	30
2.4. HEALTH PROMOTION THEORIES, MODELS AND EXAMPLES	42
<b>CHAPTER 3. METHODOLOGY</b>	<b>51</b>
3.1. THE PROJECT AND THE THESIS	52
3.1.1 THE OPIC PROJECT	52
3.1.2 THE THESIS	53
3.2. QUANTITATIVE METHODOLOGY	54
3.2.1 PRELIMINARIES	54
3.2.2 SAMPLING METHOD	55
3.2.3 STUDY POPULATION	55
3.2.4 DATA COLLECTION PROCEDURE	56
3.2.5 INTERVIEW GUIDELINE	56
3.2.6 INTERVIEW PROCEDURE	60

<b>3.2.7 DATA ANALYSIS</b>	<b>61</b>
<b>3.3. QUALITATIVE METHODOLOGY</b>	<b>64</b>
<b>3.3.1 PRELIMINARIES</b>	<b>64</b>
<b>3.3.2 SAMPLING METHOD</b>	<b>66</b>
<b>3.3.3 STUDY POPULATION</b>	<b>68</b>
<b>3.3.4 DATA COLLECTION PROCEDURE</b>	<b>69</b>
<b>3.3.5 INTERVIEW GUIDELINE</b>	<b>69</b>
<b>3.3.6 INTERVIEW PROCEDURE</b>	<b>73</b>
<b>3.3.7 DATA ANALYSIS</b>	<b>75</b>
<b>CHAPTER 4. QUANTITATIVE RESULTS</b>	<b>79</b>
<hr/>	
<b>4.1. DEMOGRAPHIC VARIABLES</b>	<b>80</b>
<b>4.2. ANTHROPOMETRY</b>	<b>82</b>
<b>4.3. NUTRITION</b>	<b>86</b>
<b>4.3.1 FOOD PATTERNS: BREAKFAST &amp; SCHOOL MEALS</b>	<b>86</b>
<b>4.3.2 FOOD PATTERNS: AFTER SCHOOL MEALS</b>	<b>88</b>
<b>4.3.3 FOOD PATTERNS: FRUIT, VEGETABLES, SUGARY DRINKS AND TAKEAWAYS</b>	<b>91</b>
<b>4.4. ACTIVITY PATTERNS</b>	<b>94</b>
<b>4.4.1 PHYSICAL ACTIVITY</b>	<b>94</b>
<b>4.4.2 TV PATTERNS</b>	<b>97</b>
<b>4.4.3 GAMES PATTERNS</b>	<b>100</b>
<b>4.5. ENVIRONMENT</b>	<b>102</b>
<b>4.5.1 FAMILY ENVIRONMENT</b>	<b>102</b>
<b>4.5.2 SCHOOL ENVIRONMENT</b>	<b>107</b>
<b>4.5.3 NEIGHBOURHOOD ENVIRONMENT</b>	<b>110</b>
<b>4.6. KNOWLEDGE</b>	<b>112</b>
<b>4.7. OPINIONS OF BODY WEIGHT AND SHAPE</b>	<b>114</b>
<b>4.8. SUMMARY</b>	<b>118</b>
<b>CHAPTER 5. QUALITATIVE RESULTS</b>	<b>120</b>
<hr/>	
<b>5.1. DEMOGRAPHIC VARIABLES</b>	<b>121</b>
<b>5.2. INTERVIEW GUIDELINE</b>	<b>122</b>
<b>5.3. FOOD PATTERNS</b>	<b>124</b>
<b>5.3.1 FAVOURITE FOODS AND DRINKS</b>	<b>125</b>
<b>5.3.2 SCHOOL FOOD</b>	<b>127</b>
<b>5.3.3 AFTER SCHOOL FOOD</b>	<b>130</b>
<b>5.3.4 TRADITIONAL DIET</b>	<b>133</b>
<b>5.4. ACTIVITY PATTERNS</b>	<b>135</b>
<b>5.4.1 LEISURE ACTIVITIES</b>	<b>135</b>
<b>5.4.2 PHYSICAL ACTIVITIES</b>	<b>137</b>
<b>5.4.3 CULTURAL BARRIERS TO PHYSICAL/RECREATIONAL ACTIVITIES</b>	<b>140</b>
<b>5.5. INFLUENCING FACTORS</b>	<b>142</b>
<b>5.5.1 ENVIRONMENTAL INFLUENCES</b>	<b>142</b>
<b>5.5.2 FAMILY INFLUENCES</b>	<b>145</b>
<b>5.5.3 FOOD AND MOOD</b>	<b>147</b>
<b>5.6. KNOWLEDGE AND EXPERIENCE</b>	<b>149</b>
<b>5.6.1 KNOWLEDGE OF HEALTHY FOOD</b>	<b>150</b>

<b>5.6.2 SOURCE OF KNOWLEDGE OF HEALTHY FOOD</b>	<b>151</b>
<b>5.6.3 KNOWLEDGE OF HEART HEALTH</b>	<b>153</b>
<b>5.6.4 SOURCE OF KNOWLEDGE OF HEART HEALTH</b>	<b>155</b>
<b>5.7. RECOMMENDATIONS FOR PREVENTION PROGRAMMES</b>	<b>156</b>
<b>5.7.1 PREVENTION PROGRAMMES</b>	<b>157</b>
<b>5.7.2 PARTICIPATION IN PREVENTION PROGRAMMES</b>	<b>162</b>
<b>5.8. SUMMARY OF MAIN THEMES AND COMMON THEMES</b>	<b>167</b>
<b>5.8.1 COMMON THEME 1: RISK FACTORS</b>	<b>174</b>
<b>5.8.2 COMMON THEME 2: PROTECTIVE FACTORS</b>	<b>174</b>
<b>5.8.3 COMMON THEME 3: RECOMMENDATIONS FOR PREVENTION PROGRAMMES</b>	<b>175</b>
<b>CHAPTER 6. DISCUSSION</b>	<b>176</b>
<hr/>	
<b>6.1. RESULTS DISCUSSION</b>	<b>177</b>
<b>6.1.1 ANTHROPOMETRIC MEASUREMENTS</b>	<b>177</b>
<b>6.1.2 FOOD PATTERNS</b>	<b>180</b>
<b>6.1.3 ACTIVITY PATTERNS</b>	<b>184</b>
<b>6.1.4 INFLUENCING FACTORS</b>	<b>187</b>
<b>6.1.5 KNOWLEDGE</b>	<b>189</b>
<b>6.1.6 OPINIONS ABOUT BODY WEIGHT &amp; SHAPE</b>	<b>190</b>
<b>6.1.7 RECOMMENDATIONS FOR PREVENTION PROGRAMMES</b>	<b>191</b>
<b>6.2. SUMMARY IN TERMS OF COMMON THEMES</b>	<b>192</b>
<b>6.2.1 OVERWEIGHT/OBESITY IN ASIAN ADOLESCENTS</b>	<b>193</b>
<b>6.2.2 RISK FACTORS</b>	<b>193</b>
<b>6.2.3 PROTECTIVE FACTORS</b>	<b>193</b>
<b>6.2.4 RECOMMENDATIONS FOR PREVENTION PROGRAMMES</b>	<b>194</b>
<b>6.3. A HEALTH PROMOTION APPROACH</b>	<b>194</b>
<b>6.3.1 GENERAL FRAMEWORK</b>	<b>195</b>
<b>6.3.2 DEVELOPING A HEALTH PROMOTION APPROACH FOR YOUNG ASIANS IN NEW ZEALAND</b>	<b>197</b>
<b>6.4. LIMITATIONS OF THE STUDY</b>	<b>204</b>
<b>6.4.1 STUDY DESIGN</b>	<b>204</b>
<b>6.4.1.1. A CROSS-SECTIONAL SURVEY</b>	<b>204</b>
<b>6.4.1.2. SAMPLE SIZE</b>	<b>204</b>
<b>6.4.1.3. CLUSTERED SAMPLING</b>	<b>204</b>
<b>6.4.2 VALIDITY OF THE STUDY</b>	<b>205</b>
<b>6.4.2.1. EXTERNAL VALIDITY</b>	<b>205</b>
<b>6.4.2.2. INTERNAL VALIDITY</b>	<b>205</b>
<b>6.4.3 ANALYSIS</b>	<b>206</b>
<b>6.5. RELATING FINDINGS TO ORIGINAL OBJECTIVES OF THIS RESEARCH</b>	<b>207</b>
<b>6.5.1 OBJECTIVE ONE: TO DETERMINE IF OVERWEIGHT/OBESITY IS A PROBLEM IN NEW ZEALAND ASIAN ADOLESCENTS</b>	<b>207</b>
<b>6.5.2 OBJECTIVE TWO: TO IDENTIFY YOUNG NEW ZEALAND ASIAN'S NUTRITIONAL AND EXERCISE BEHAVIOURS AND TO UNDERSTAND THE FACTORS INFLUENCING THESE BEHAVIOURS</b>	<b>207</b>
<b>6.5.3 OBJECTIVE THREE: TO INVESTIGATE YOUNG NEW ZEALAND ASIAN'S UNDERSTANDING AND KNOWLEDGE OF HEART HEALTH</b>	<b>208</b>
<b>6.5.4 OBJECTIVE FOUR: TO SUGGEST A HEALTH PROMOTION/COMMUNITY DEVELOPMENT MODEL TO EMPOWER AND IMPROVE THE HEALTH OF YOUNG NEW ZEALAND ASIANS</b>	<b>209</b>



<b>CHAPTER 7. CONCLUSION</b>	<b>211</b>
<b>7.1. THE RESEARCH</b>	<b>212</b>
<b>7.2. FUTURE DIRECTIONS</b>	<b>214</b>
<b>7.3. RESEARCH OUTPUTS OF THESIS</b>	<b>215</b>
<b>APPENDICES</b>	<b>217</b>
<b>APPENDIX ONE: SEARCH HISTORY FOR ‘OBESITY IN ASIAN ADOLESCENTS’</b>	<b>218</b>
<b>APPENDIX TWO: PARTICIPANT INFORMATION SHEET FOR STUDENTS AGED 16 YEARS AND OLDER</b>	<b>219</b>
<b>APPENDIX THREE: CONSENT FORM FOR STUDENTS AGED 16 YEARS AND OLDER</b>	<b>221</b>
<b>APPENDIX FOUR: PARTICIPANT INFORMATION SHEET FOR STUDENTS AGED LESS THAN 16 YEARS</b>	<b>222</b>
<b>APPENDIX FIVE: PARTICIPANT INFORMATION SHEET FOR PARENTS OF STUDENTS AGED LESS THAN 16 YEARS</b>	<b>224</b>
<b>APPENDIX SIX: CONSENT FORM FOR STUDENTS AGED LESS THAN 16 YEARS AND PARENTS</b>	<b>226</b>
<b>APPENDIX SEVEN: OPIC BASELINE QUESTIONNAIRE</b>	<b>227</b>
<b>APPENDIX EIGHT: LIVING FOR LIFE QUESTIONNAIRE</b>	<b>236</b>
<b>APPENDIX NINE: CODING SYSTEM FOR 'OTHER' ETHNICITY</b>	<b>250</b>
<b>APPENDIX TEN: SAS CODES</b>	<b>251</b>
<b>APPENDIX ELEVEN: GUIDELINES FOR FOCUS GROUPS</b>	<b>254</b>
<b>APPENDIX TWELVE: PARTICIPANT INFORMATION SHEET FOR STUDENTS</b>	<b>256</b>
<b>APPENDIX THIRTEEN: CONSENT FORM FOR STUDENTS AGED 16 YEARS OR ABOVE</b>	<b>258</b>
<b>APPENDIX FOURTEEN: CONSENT FORM FOR STUDENTS AGED LESS THAN 16 YEARS</b>	<b>259</b>
<b>APPENDIX FIFTEEN: PARTICIPANT INFORMATION SHEET FOR PARENTS OF STUDENTS AGED LESS THAN 16 YEARS</b>	<b>260</b>
<b>APPENDIX SIXTEEN: CONSENT FORM FOR PARENTS OF STUDENTS AGED LESS THAN 16 YEARS</b>	<b>262</b>
<b>APPENDIX SEVENTEEN: GATHERING OF DEMOGRAPHICS</b>	<b>263</b>
<b>REFERENCES</b>	<b>264</b>

## List of Figures

<b>FIGURE 2.1.</b>	<b>MAP OF ASIA AND AUSTRALASIA (FROM GOOGLE EARTH)</b>	<b>8</b>
<b>FIGURE 2.2.</b>	<b>MAP OF CHINA (FROM THE CULTURAL PROFILES PROJECT)</b>	<b>10</b>
<b>FIGURE 2.3.</b>	<b>MAP OF INDIA (FROM THE CULTURAL PROFILES PROJECT)</b>	<b>12</b>
<b>FIGURE 6.1.</b>	<b>DETERMINANTS OF WEIGHT STATUS IN YOUNG ASIANS</b>	<b>208</b>
<b>FIGURE 6.2.</b>	<b>RECOMMENDATIONS FOR PREVENTION PROGRAMMES</b>	<b>210</b>

## List of Tables

<b>TABLE 1.1.</b>	<b>ASIAN POPULATION IN NEW ZEALAND</b>	<b>4</b>
<b>TABLE 2.1.</b>	<b>CHILDHOOD OVERWEIGHT AND OBESITY PERCENTAGE IN ASIA</b>	<b>25</b>
<b>TABLE 2.2.</b>	<b>SUMMARY OF STUDIES OF OBESITY RISK FACTORS IN ASIAN CHILDREN LIVING IN WESTERN COUNTRIES</b>	<b>38</b>
<b>TABLE 3.1.</b>	<b>SUMMARY OF LIFESTYLE INFORMATION COLLECTED ON THE PDA</b>	<b>57</b>
<b>TABLE 3.2.</b>	<b>SUMMARY OF QUESTIONS COLLECTED ON THE PAPER QUESTIONNAIRE</b>	<b>58</b>
<b>TABLE 3.3.</b>	<b>STRUCTURE OF FOCUS GROUPS</b>	<b>67</b>
<b>TABLE 4.1.</b>	<b>DEMOGRAPHICS – ETHNIC COMPARISONS OF PARTICIPANTS IN THE OPIC STUDY</b>	<b>81</b>
<b>TABLE 4.2.1.</b>	<b>MEAN LEVELS OF ANTHROPOMETRY VARIABLES, FOR ETHNIC GROUPS, ADJUSTED FOR AGE AND GENDER</b>	<b>84</b>
<b>TABLE 4.2.2.</b>	<b>WEIGHT STATUS BY ETHNIC GROUP</b>	<b>85</b>
<b>TABLE 4.3.1.</b>	<b>BREAKFAST AND SCHOOL MEALS – BY ETHNIC GROUP</b>	<b>87</b>
<b>TABLE 4.3.2.</b>	<b>AFTER SCHOOL MEALS – BY ETHNIC GROUP</b>	<b>90</b>
<b>TABLE 4.3.3.</b>	<b>FOOD HABITS – BY ETHNIC GROUP</b>	<b>92</b>
<b>TABLE 4.4.1.</b>	<b>ACTIVITY PATTERNS – BY ETHNIC GROUP</b>	<b>96</b>
<b>TABLE 4.4.2.</b>	<b>TV PATTERNS – BY ETHNIC GROUP</b>	<b>98</b>
<b>TABLE 4.4.3.</b>	<b>GAMES PATTERNS – BY ETHNIC GROUP</b>	<b>101</b>
<b>TABLE 4.5.1.</b>	<b>FAMILY ENVIRONMENT – ETHNIC GROUP COMPARISON</b>	<b>105</b>
<b>TABLE 4.5.2.</b>	<b>SCHOOL ENVIRONMENT – ETHNIC GROUP COMPARISON</b>	<b>108</b>
<b>TABLE 4.5.3.</b>	<b>NEIGHBOURHOOD ENVIRONMENT – ETHNIC GROUP COMPARISON</b>	<b>111</b>
<b>TABLE 4.6.</b>	<b>KNOWLEDGE – BY ETHNIC GROUP</b>	<b>114</b>
<b>TABLE 4.7.</b>	<b>OPINIONS OF BODY WEIGHT AND SHAPE – BY ETHNIC GROUP</b>	<b>117</b>
<b>TABLE 4.8.</b>	<b>OVERWEIGHT/OBESITY PROTECTIVE AND/OR RISK FACTORS – ETHNIC GROUP COMPARISON</b>	<b>119</b>
<b>TABLE 5.1.</b>	<b>DEMOGRAPHICS OF FOCUS GROUPS</b>	<b>122</b>
<b>TABLE 5.2.</b>	<b>STRUCTURE OF THE INTERVIEW GUIDELINE</b>	<b>123</b>
<b>TABLE 5.3.</b>	<b>THEMES ACROSS ALL ETHNIC GROUPS AND ETHNIC DIFFERENCES: FOOD PATTERNS</b>	<b>168</b>
<b>TABLE 5.4.</b>	<b>THEMES ACROSS ALL ETHNIC GROUPS AND ETHNIC DIFFERENCES: ACTIVITY PATTERNS</b>	<b>170</b>
<b>TABLE 5.5.</b>	<b>THEMES ACROSS ALL ETHNIC GROUPS AND ETHNIC DIFFERENCES: INFLUENCING FACTORS</b>	<b>171</b>
<b>TABLE 5.6.</b>	<b>THEMES ACROSS ALL ETHNIC GROUPS AND ETHNIC DIFFERENCES: KNOWLEDGE AND EXPERIENCE</b>	<b>172</b>
<b>TABLE 5.7.</b>	<b>THEMES ACROSS ALL ETHNIC GROUPS AND ETHNIC DIFFERENCES: RECOMMENDATIONS FOR PREVENTION PROGRAMMES</b>	<b>173</b>
<b>TABLE 6.1.</b>	<b>THE PEOPLE SYSTEM</b>	<b>196</b>

## Glossary

<b>%BF</b>	<b>PERCENTAGE BODY FAT</b>
<b>A</b>	<b>AGE (Y)</b>
<b>AQoL</b>	<b>ASSESSMENT OF QUALITY OF LIFE</b>
<b>BIA</b>	<b>BIOELECTRICAL IMPEDANCE ANALYSIS</b>
<b>BMI</b>	<b>BODY MASS INDEX</b>
<b>CF</b>	<b>CONSENT FORM</b>
<b>CMDHB</b>	<b>COUNTIES MANUKAU DISTRICT HEALTH BOARD</b>
<b>CVD</b>	<b>CARDIOVASCULAR DISEASE</b>
<b>DBP</b>	<b>DIASTOLIC BLOOD PRESSURE</b>
<b>DOHAD</b>	<b>DEVELOPMENTAL ORIGINS OF HEALTH AND DISEASE</b>
<b>DVD</b>	<b>DIGITAL VIDEO DISC</b>
<b>E</b>	<b>ETHNICITY</b>
<b>FOAD</b>	<b>FOETAL ORIGINS OF ADULT DISEASE</b>
<b>FFM</b>	<b>FAT FREE MASS</b>
<b>FM</b>	<b>FAT MASS</b>
<b>H</b>	<b>HEIGHT (CM)</b>
<b>HDLC</b>	<b>HIGH DENSITY LIPOPROTEIN CHOLESTEROL</b>
<b>HEHA</b>	<b>HEALTHY EATING HEALTHY ACTION</b>
<b>IOTF</b>	<b>INTERNATIONAL OBESITY TASK FORCE</b>
<b>LBD</b>	<b>LET'S BEAT DIABETES</b>
<b>LTSA</b>	<b>LAND TRANSPORT SAFETY AUTHORITY</b>
<b>MOH</b>	<b>MINISTRY OF HEALTH</b>
<b>NCNS</b>	<b>NATIONAL CHILDREN'S NUTRITION SURVEY</b>
<b>NHMRC</b>	<b>NATIONAL HEALTH AND MEDICAL RESEARCH COUNCIL</b>
<b>NZHS</b>	<b>NEW ZEALAND HEALTH SURVEY</b>
<b>OPIC</b>	<b>OBESITY PREVENTION IN COMMUNITIES</b>
<b>P</b>	<b>P-VALUE</b>
<b>PA</b>	<b>PHYSICAL ACTIVITY</b>
<b>PDA</b>	<b>PERSONAL DIGITAL ASSISTANT</b>
<b>PedsQoL</b>	<b>PAEDIATRIC QUALITY OF LIFE</b>
<b>PEOPLE</b>	<b>PLANNING AND EVALUATION OF PEOPLE-LED ENDEAVOURS</b>
<b>PIS</b>	<b>PARTICIPANT INFORMATION SHEET</b>
<b>R</b>	<b>RESISTANCE</b>
<b>SAS</b>	<b>STATISTICAL ANALYSIS SYSTEM</b>
<b>SBP</b>	<b>SYSTOLIC BLOOD PRESSURE</b>
<b>SE</b>	<b>STANDARD ERROR</b>
<b>SES</b>	<b>SOCIOECONOMIC STATUS</b>
<b>SPARC</b>	<b>SPORT AND RECREATION NEW ZEALAND</b>
<b>TBCA</b>	<b>TANITA BODY COMPOSITION ANALYSER</b>
<b>TBW</b>	<b>TOTAL BODY WATER</b>
<b>TG</b>	<b>TRIGLYCERIDE</b>
<b>TV</b>	<b>TELEVISION</b>
<b>W</b>	<b>WEIGHT (KG)</b>
<b>WC</b>	<b>WAIST CIRCUMFERENCE</b>
<b>WHO</b>	<b>WORLD HEALTH ORGANIZATION</b>
<b>WHR</b>	<b>WAIST TO HEIGHT RATIO</b>
<b>Z</b>	<b>IMPEDANCE (<math>\Omega</math>)</b>