

Gut Microbiota Profile in Obese and Non-Obese Minangkabau Adolescent Girls

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Minangkabau ethnic people have particular dietary patterns with higher fat intake as compared to other ethnic groups in Indonesia. Fifty one teenager girls (aged 12- 15 years) were recruited from four regencies in West Sumatera and divided into two groups: obese (n= 26) and non-obese (n=25), and their stools were assessed by NGS for the profile of gut micro biota. In obese teenagers, Firmicutes and Firmicutes/Bacteroides ratio tended to be higher, Prevotella (Bacteroidetes) and Mitsuokella (Firmicutes) were significantly higher, (p=0.049) and (p=0.048), respectively, while Proteobacteria was significantly lower (p=0.045) as compared to non obese teenager girls, with Enterobacteriaceae and Klebsiella as predominant bacteria.

Prevotella was the predominant genera in Bacteroidetes phylum, whereas Ruminococceae and Feacallibacterium were the most dominant genera in Firmicutes phylum.

Keywords: Gut micro biota, NGS, obese, non obese, teenager girls, Minangkabau ethnic