

Age-dependent effects of breakfast skipping on Metabolic Syndrome related parameters

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Objective

- Higher prevalence of Metabolic Syndrome in Breakfast Skipper were studied. On the other hand, negative data were also obtained.
- To investigate, the hypothesis, we examined the relationship between breakfast skipping and biochemical and other life style activities.

Methods

- Men(n:6532) and women(n:6540) aged between 22 – 81 were included .
- Anthropometric (Height, Weight, Waist Circumference), blood pressure and Biochemical data(Blood glucose, cholesterol level, triglyceride, etc) were measured in our clinic between year 2013-2014.
- The subjects were classified according to age(20-29, 30-39,40-49,50-59, 60-), and breakfast taking .Life-style: Alcohol intake(6levels), smoking, Physical activity(1,2levels) were also asked by using questionnaire card.
- Chi-square analysis and t-test were applied to examine The Difference between **BC** and **BS**

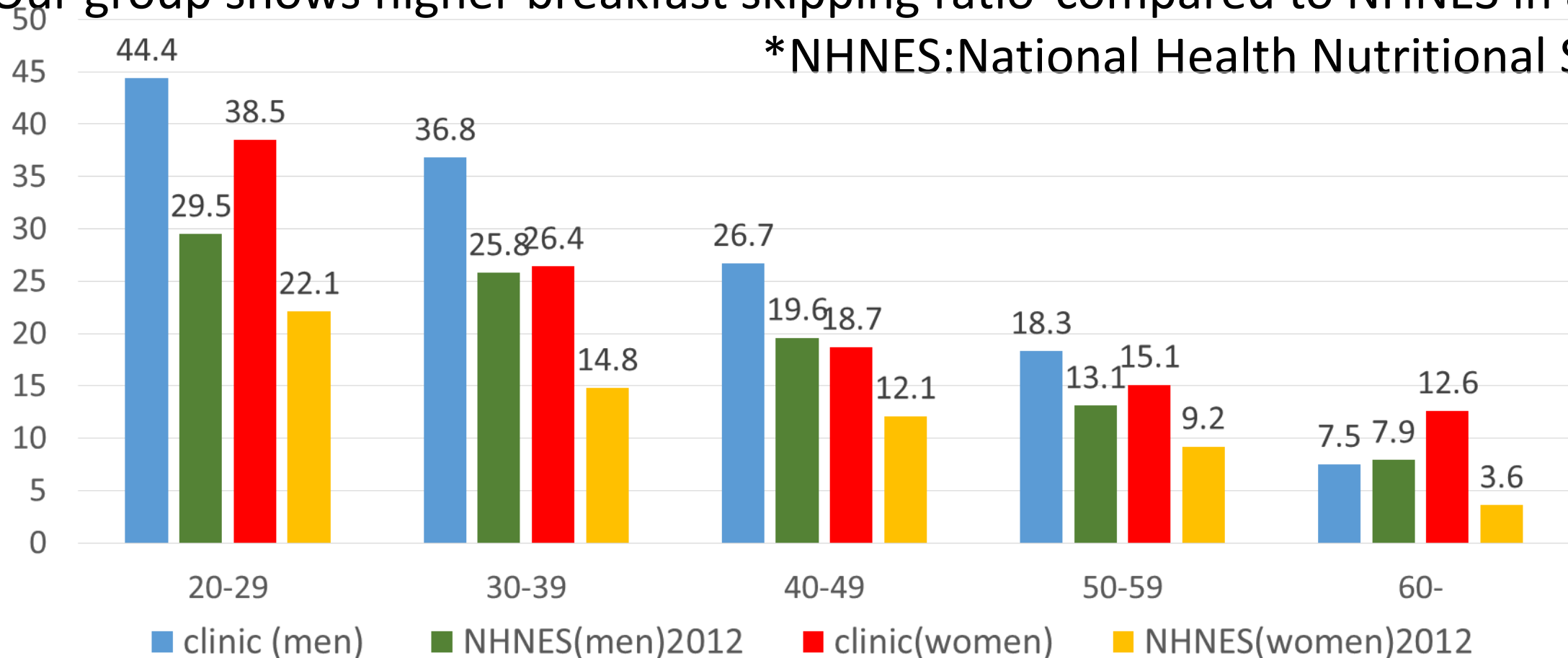
Results

Comparison of Sex- and Age-related Prevalence(%) of Breakfast Skippers between Our Clinic and NHNES

The younger takes less breakfast compared to the older people.

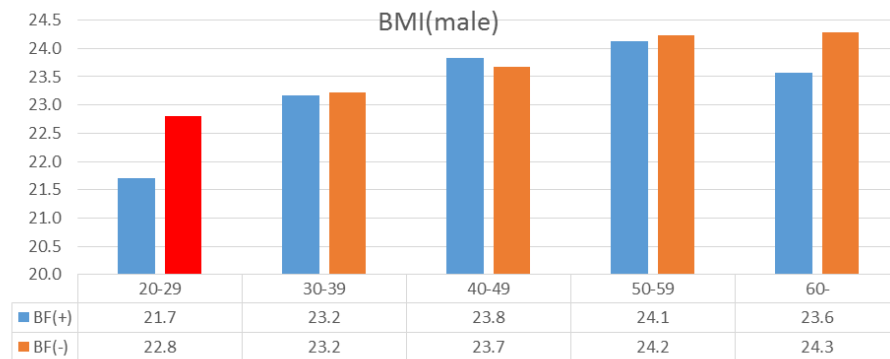
Our group shows higher breakfast skipping ratio compared to NHNES in all Age.

*NHNES:National Health Nutritional Survey

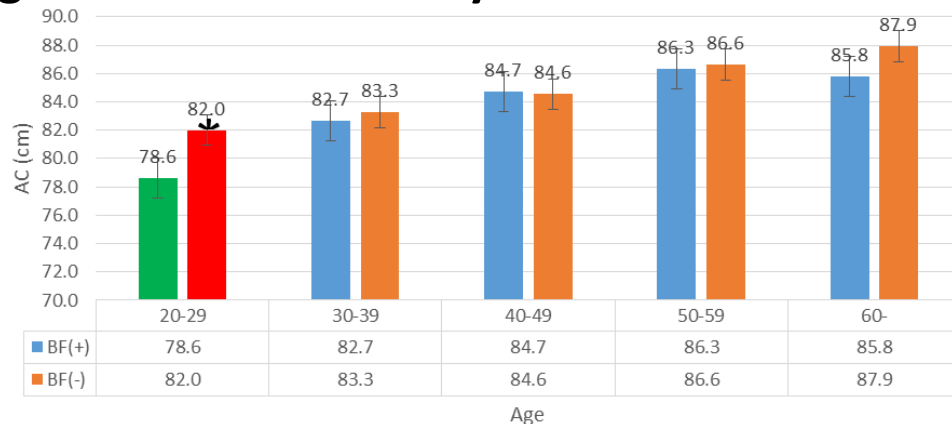


Obesity: BMI , Waist Circumference

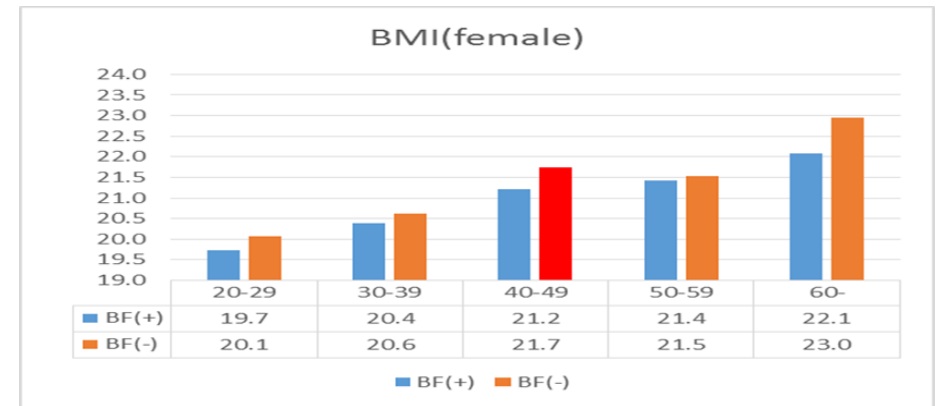
- Male : B-Skipper showed higher BMI value in ages between 20-29yrs



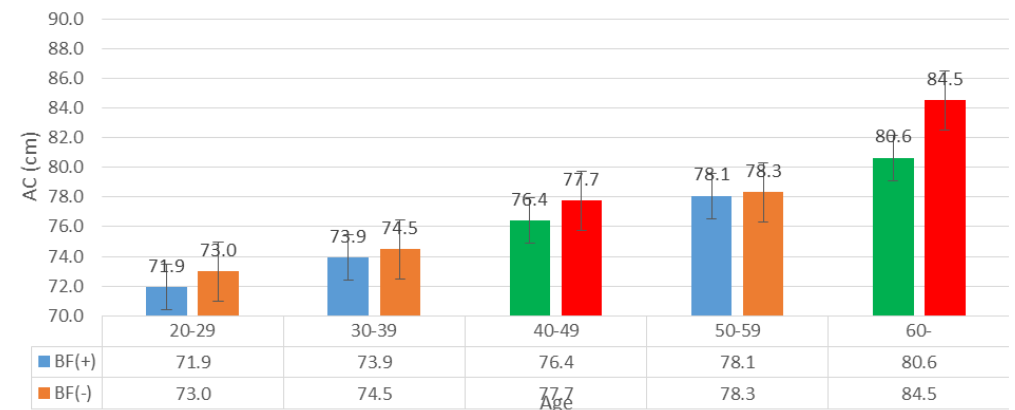
Male: WC showed higher value in B-Skippers in ages between 20-29 yrs.



- Female : B-Skipper showed higher BMI value in ages between 40-49yrs



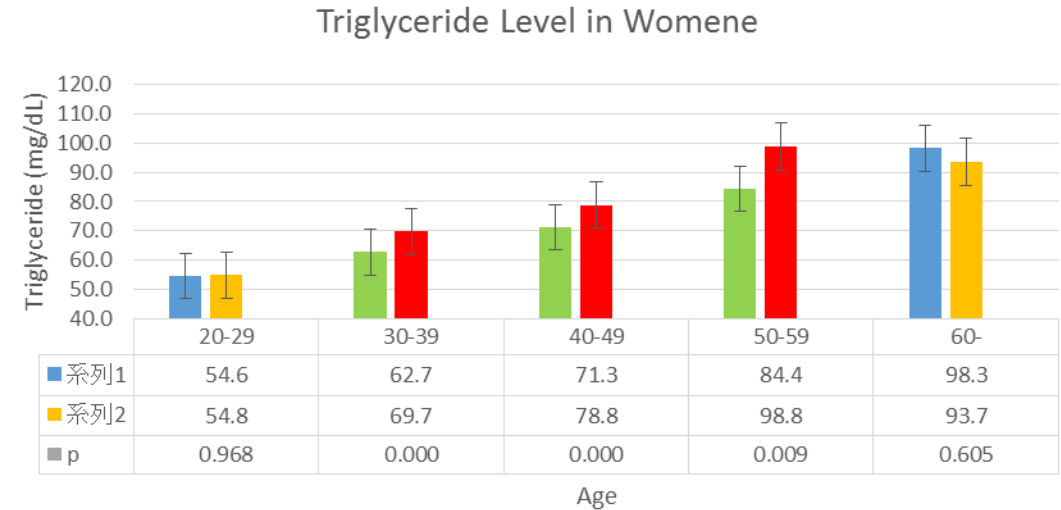
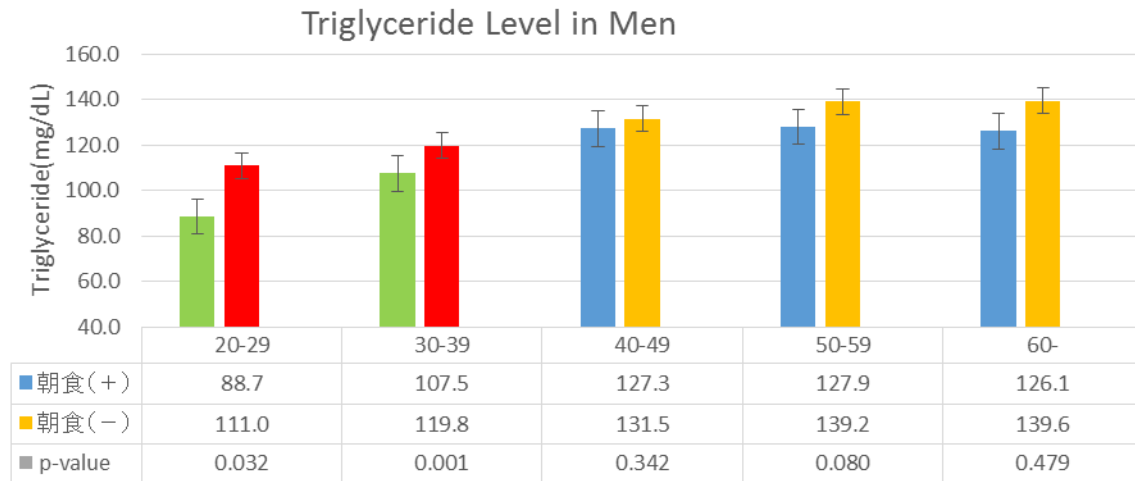
Female: WC showed higher value in B-Slippers in ages between 40-49 and more than 60 yrs.



Triglyceride , Fasting Blood Glucose(FBG)

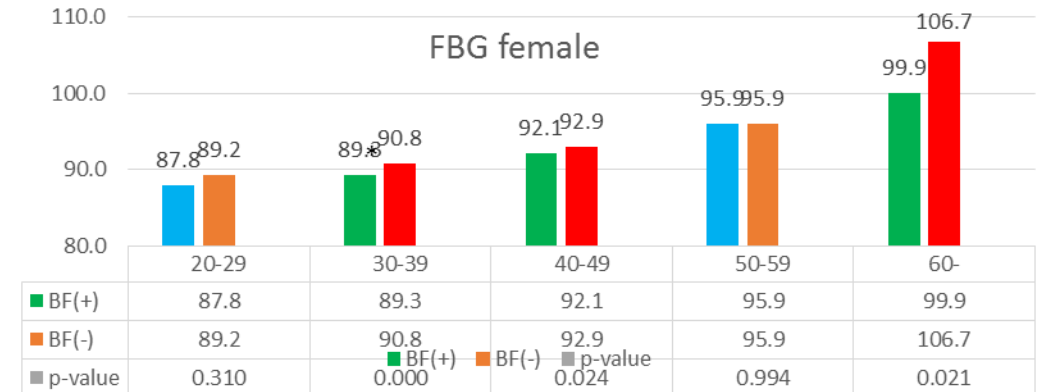
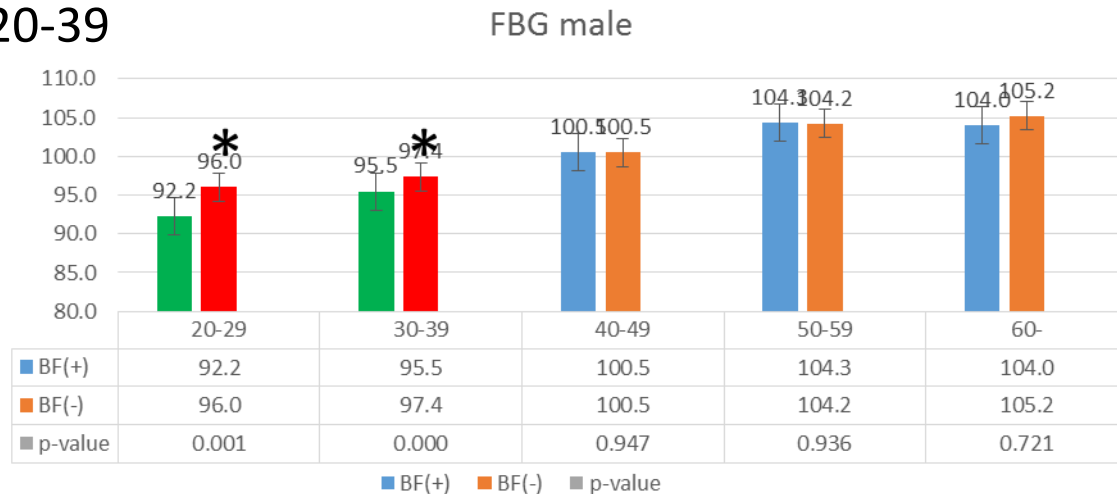
Male: B-Skipper showed higher TG value in age between 20-39

Female: B-Skipper showed higher TG value in age between 30 -59



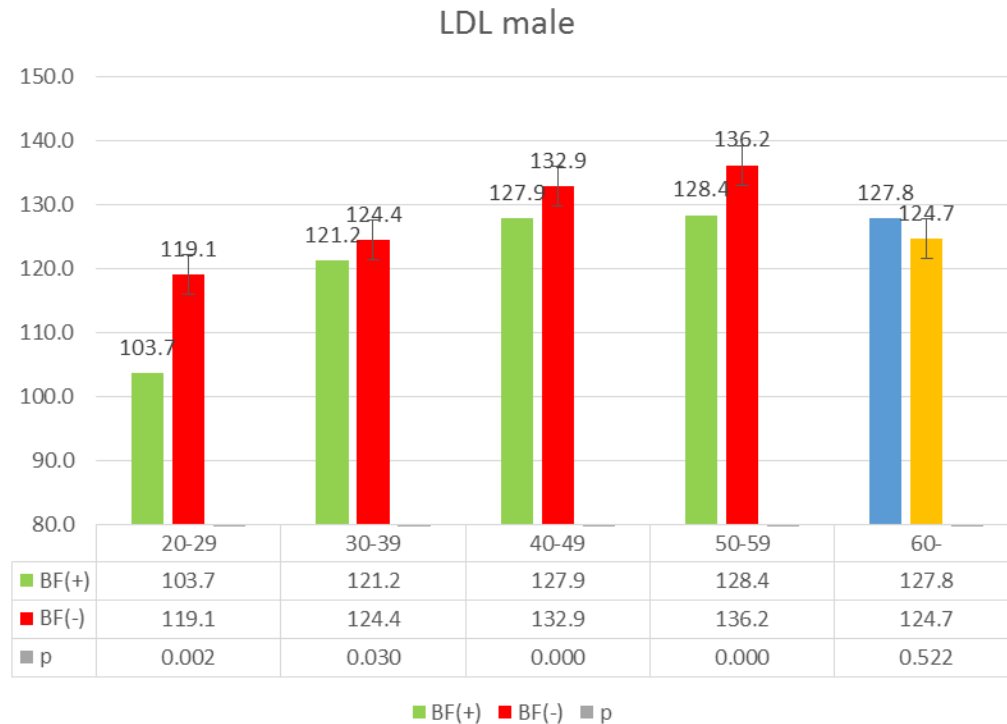
Male: B-Skipper showed higher FBG value in age 20-39

Female : B-skipper showed higher FBG value in age 30-49 and more than 60 yrs.

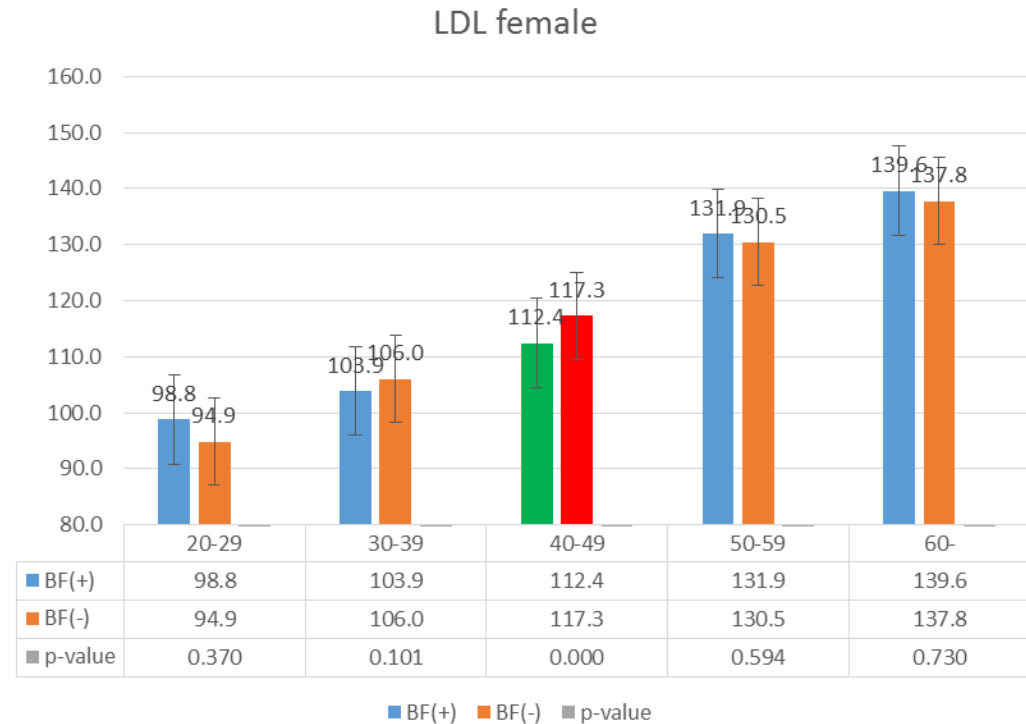


LDL-cholesterol

- Male: B-skipper showed higher LDL-cholesterol in age between 20-59yrs.



- Female: B-skipper showed higher LDL-cholesterol value in age 40-49 yrs.



Association with night dinner, physical activity, and smoking



$P < 0.05$



women $P < 0.05$



$P < 0.05$



$P = 0.00448$

Conclusion

- Daily breakfast skipping (BS) in our clinic shows higher value than National Nutritional Survey in Japan.
- Depending on Sex and Age, BMI, Abdominal Circumference, triglyceride, and blood glucose level showed higher value in subjects skipping breakfast. HDL-cholesterol level showed lower value in breakfast skipping group.
- The breakfast skipping has some relation to night-time eating and less exercise level and showed strong risk for Metabolic abnormalities inducing Metabolic Syndrome.
- We should take the “when to eat” into account in nutritional assessment, education and health promotion.