Background: The success in learning medicine needs a great effort. Time management skills including planning in advance, prioritizing work, test preparation and following schedules are regarded as the essential skills for medical students to cope with an overloaded curriculum and working hour in patient wards. We hypothesized that the high grade point average (GPAs) students during 6 year ≥ 3.00 have time management skills better than students with GPAs lower than 3.00.

Objective: To explore time management skills between the high GPAs group at 3.00 or higher and the low GPAs group at less than 3.00.

Methods: One hundred and forty-one final year medical students in Khon Kaen Medical School were asked by the questionnaires on the graduate day in academic year 2006.

Results: The questionnaire return rate was 80.14% (113 in 141). The study showed that female medical students significantly received the GPAs higher than males, 59.7 and 32 % respectively (p=0.006). Time spending for exercise, studying in dormitory, planning time in advance, prioritizing work, test preparation, and note-taking were not significantly different between the two groups.

Conclusions: The female medical students had academic performance better than the males. Time management skill was almost no difference observed between high and low GPAs students. Other factors influencing academic performance need to be explored.
Introduction
The success in learning medicine needs a great effort. The academic abilities including intelligence, test competence and generic skills including emotional intelligence, coping with stress, communication, and time management are needed for the medical students to cope with the overloaded curriculum and hard work. The grade point average (GPA) is commonly used as an indicator of success in study. The GPA equal to 3 or higher is used to indicate good academic performance. The skill in time management is frequently counted as one of essential factors leading to a success in study, and career path\textsuperscript{1-3}. It allows more time for study, relax, or exercise. The planning in advance, prioritizing work, preparation for examination in advance and following the time-table or schedules is the core of time management skills that help the medical students to manage their works. We hypothesized that the students who had cumulative GPAs equal to or higher than 3.00 have time management skills better than students with GPAs lower than 3.00.

Objective
To compare time management skills in final year medical students whose GPA is equal or higher than 3.00 with those who earned GPAs lower than 3.00.

Methods
This cross sectional descriptive study was conducted on the graduate day of the academic year 2006. One hundred and forty-one final year medical students in Khon Kaen Medical School were asked to fill the questionnaires. The chi square test was used to analyze the differences in categorical values. The result of $P < 0.05$ was regarded as statistically significant.

Results
The questionnaire return rate was 80.14\% (113 in 141). Fifty-five percents were female students. The study showed that female medical students significantly earned higher GPAs than males, 59.7 and 32 \% respectively, $p = 0.006$, (figure 1). The time spending for reading or study in dormitory was no statistically different between high and low GPAs students, $p = 0.999$, (figure 2). And neither was the time spending for daily exercise, $p=0.087$, (figure 3) but if we analyzed the frequency per week comparing between less than three time a week and equal to or more than three time a week, we found that the low GPA students exercised more than the high GPAs students, $p = 0.032$, (figure 4). The most favorite activity of both groups of medical students was sleeping when they had free time and there was no significant difference in both groups, (figure 5). Planning in advance, prioritizing work, preparation for examination, which were the indicators of time management skills were not significantly different between two groups, $p = 0.892$, $p = 0.726$, $p = 0.267$, (figure 6, 7, 9) respectively. But note-taking skills were at the borderline of statistically different in the high GPAs group when comparing between “often and always take note” with “no and seldom take note” during study, $p = 0.05$, (figure 8). The self-assessment about difficulty in learning in clinical years was no statistically different in both groups, $p= 0.867$, (figure 10).
Figure 1  Sex and GPA

Figure 2  Time spending for reading in each day

Figure 3  Time spending for exercise in each day

Figure 4  Frequency of exercise per week

Figure 5  Activity during leisure

Figure 6  Planning in advance

Figure 7  Setting priority of work

Figure 8  Note-taking habit

Figure 9  Technique and time preparing for examination

Figure 10  Self-assessment of difficulty in learning during clinical year
Discussion

The study showed that female medical students had academic performance better than males. There still be inconsistent data about sex and the academic achievement in medical students, some studies showed that the male students were better, some studies revealed the opposite results4-6.

Time allocation for study or reading in each day and time spending for exercise were very low in both groups. The reasons may be explained that they spent most of their time taking care of the patients in the ward. The students may be too tired to do some more study in the dormitory or do some exercise. Half of students did not have any hobby in leisure time. Sleeping was the most common activity for the student to relax for both groups of medical students when they had free time. These could reflect the overloaded curriculum by teachers or curriculum developers and ineffectiveness in time management of the students.

Our study failed to show the significant difference in time management skill including planning in advance, prioritizing work, preparation for the examination in advance and following the time-table or schedules between the high and low GPAs students which is contrasted to Sansgiryûs study in pharmacy students whose high GPAs students had better time management skills7.

For note-taking skill, there was a borderline statistical difference in high GPAs group when comparing between “often and always took note” with “no and seldom took note” during study. This skill was the combination between academic and non-academic skills. The students had to read through the subjects and try to understand the concept or core content and then wrote down in the short summary in their own words then they could review the messages in a short time during the preparation for examinations.

There was small number of our medical students who prepared for test or examination in advance in both groups which is contrasted to Sansgiryûs study in pharmacy students7. The reasons behind the scene in our context should be explored.

Self-assessment about the difficulty in learning medicine in clinical years was no statistically different between two groups of students. The accuracy of self-assessment was still debated. Edward et al 8 found that the better performing medical students tend to underestimate their performance; poorer performing medical students tend to overestimate their performance. Davis et al 9 conducted a systematic review to explore the accuracy of self assessment in physician and found that physicians have a limited ability to accurately self-assess. Self-assessment is an essential skill for students to evaluate themselves. Mis-perception of ours own ability leads to the lack of opportunity to improve ourselves.

Conclusions

Female medical students had academic performance better than male. Time management skill mostly was not different between high and low GPAs students. Other factors influencing academic performance need to be explored in depth.

References