Secondary school students engage in behaviors like use of alcohol, tobacco and other drugs that compromise their health and future potentials. However, these behaviors are preventable. The current study was designed to establish the prevalence of single and concurrent use of these drugs among students of Kiambu and Nairobi Counties of Kenya. Multi-stage, stratified proportionate, systematic and simple random sampling and purposive methods were used to select participating counties (n=2), district (n=8) schools (n=71) and students (n=1389). However, 1088 students were included at analysis as some were eliminated due to inconsistent responses and non-responses. Self administered questionnaire was used to collect data on demographics and alcohol, tobacco and other drug behaviors. Frequency, percentages, ChiSquare and logistic regression were used to analyze data. Alcohol was the most used drug (23.5%) followed by khat, cigarette, smokeless tobacco and bhang in that order. Of the current alcohol drinkers, 47.6, 33.1, 28.7 and 26.6% had also used khat, bhang, smokeless tobacco and cigarettes respectively. From logistic regressions analyses, alcohol drinkers than abstainers were 6.198 times (95% C.I: 4.146-9.266) more likely to be khat users whereas cigarette smokers than non-smokers were 15.264 times (95% C.I: 8.170-28.519) more likely to use smokeless tobacco. These results provide empirical evidences for a comprehensive prevention and intervention programs that target multiple risk behaviors to promote global health among secondary school students.