People's attitudes toward risk is an important factor which could influence their economic behaviors. In the field of health economics, attitudes toward risk are likely to affect the purchase of health insurance, the use of preventive medical care, and the propensity to engage in behaviors that either increase or decrease mortality risk. Such behaviors mainly include smoking, drinking, exercising, diet, sexual practices, and physical examining. However, few analysis used Asian data since Asian people are thought to be more sensitive to the magnitude of potential losses and less mitigated by the probability of positive outcomes. By using an intercepted data from Japanese-version of Health and Retirement Survey by National Institute of Population and Social Security Research, with 559 male and 560 female respondents in 4 year waves, this research analyzed the relationship between risk attitude and risky health behaviors among middle-aged and elderly population, including smoking, drinking and physical exercise. The question in respect to risk attitude is designed as follows: How high the possibility of precipitation would be then you bring an umbrella with you when you are going out? The respondents are asked to write down the exact possibility or they can choose another option saying they are the kind of people who carry an umbrella all the time whatever the weather is. In this research, if the answer is above 50 percent, then these people are treated as risk preference. This means that only if the possibility of precipitation is above 50 percent or even more then they would bring an umbrella. Age is excluded from the analysis because risk propensity decreases with aging. Significant results have been found mainly between risk preference and smoking. Men who are risk lover are more likely to smoke more cigarettes by 0.533 percentage points than who are not, while risk-taking women tend to smoke more cigarettes by 0.101 percentage point than who are not. Lung cancer which mainly caused by smoking, is one of the m