Prisoners are a group of people who have lost of independence during fostered in penitentiary. One of the missing independence is fostered independence during sexual intercourse with the opposite sex. Staying with homogeneous society for a long time can lead to certain behavioral changes, one of which changes in sexual behavior. Prison has an important role in protecting deviant behavior related to sexuality. This study aims to prove whether time served significantly influence changes in sexual orientation compared to other variables, namely religion, age, education level, type of crime, the old crime, history of sexual orientation (homosexual and heterosexual), and engaged in homosexual behavior. The study was conducted for a sample of 287 from a population of 1119 with a cross-sectional method. The entire sample are men. The study was conducted at the Correctional Institution Class I Surabaya. Statistical test results using multiple logistic regression method (α = 5%) indicated that only environmental conditions influenced sexual orientation change with a significance value of 0.008. The prevalence in this study is only 2.8% so it can be concluded that environment didn’t give any significant effect to the changes in sexual orientation.

**Keywords**: prisoners, time served, changes in sexual orientation