Using Past Surveys of Attitudes to Predict Current U.S. Military Retention

Retaining qualified active duty members in the military is an essential mission for DoD. This research presents findings on the relationship between an active duty member’s plans to stay on active duty (as indicated on a survey) and the member's actual retention behavior in the U.S. military two and four years later. Retention plans, as measured on the DoD’s Status of Forces Surveys, have often been interpreted as an indicator of subsequent retention behavior, but the relationship between survey responses and actual retention behavior has not been verified using actual retention data. This study seeks to examine this relationship. Further, in cases in which a service member indicated high retention plans, but did not remain in the Military, it may be valuable to explore factors that have led to this change.

Survey data was drawn from 2012 and 2014. Members are asked to indicate how likely they would be to remain on active duty if they had to choose whether to stay or leave on a scale of 1 to 5. Administrative data was taken from the time the surveys were fielded and updated to 2016. From this administrative data, actual retention behavior was defined as the number of members who stayed on active duty over those who stayed plus any voluntary separation (i.e., refusal to reenlist) from active duty. Involuntary separations were not included in the analysis.

Recent transactional data of U.S. military separation codes was restructured among time dimensions and military rank criteria and compared against prior survey data measuring retention plans. Employing weighted logistic regression analyses, retention plans were used to predict a dichotomous outcome of actual retention behavior (i.e., “retained” or “left”). Moreover, predicted probabilities were used to show how actual retention behavior varies as members indicate higher and lower levels of plans to remain on active duty.

Analyses showed that an active duty member’s plans to stay on active duty had a positive relationship with actual retention behavior two years later and a stronger relationship four years later. The bivariate correlation between retention plans and actual retention behavior was 0.43 after two years and 0.52 after four years, indicating a fairly strong relationship. Results from logistic regression analyses found that with each 1-point increase in retention plans, active duty members’ probability of staying on active duty increases by a factor of 1.16 two years and 1.35 after four years.

Chief among the findings were that Marine Corps members and junior enlisted member were less likely than members in other Services and paygrades to remain in the Military after two and four years. However, the relationship between retention plans and actual retention behavior was stronger among these subpopulations (Marines, junior enlisted) than members in other Service and paygrades.

This research is part of a larger body of on-going research that seeks to implement data wrangling techniques to merge survey data with transactional administrative data, augmenting the use of survey items in predicting retention outcomes. Future research will focus on identifying factors related to a Service member indicating high retention plans but separating from the Military (i.e., those who, at one point, intended to stay, but separated 2-4 years later). Findings may support the Department of Defense in tailoring its policies and programs (i.e., promotional opportunities, family policy, etc.) to better support retention.