

Active Duty Soldier Demographics

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Capstone Project

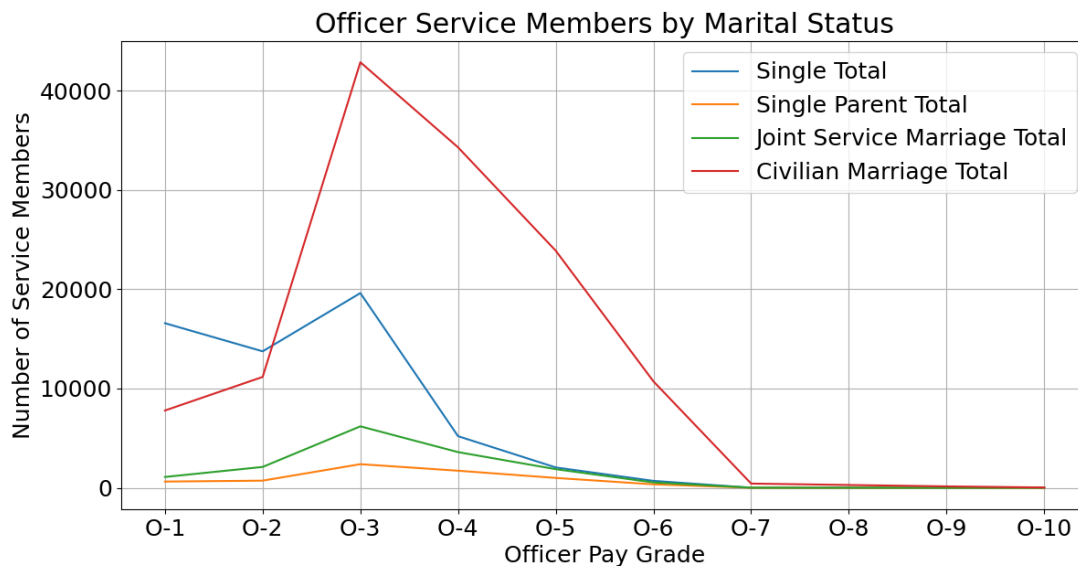
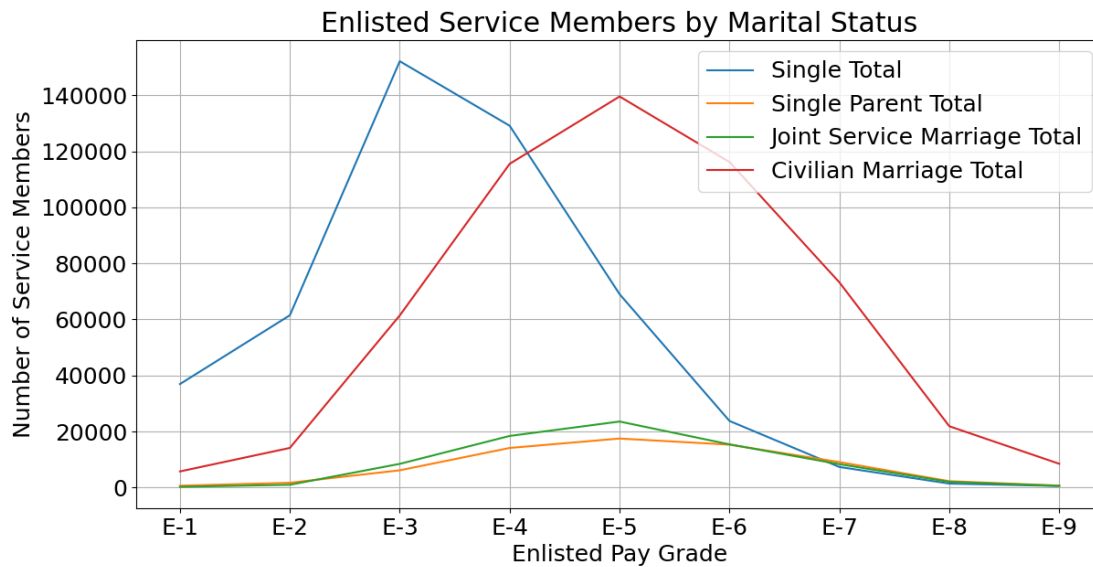
Question

As a leader of soldiers and in an Army that is shifting its focus on its people I believe it is important to know soldiers better to better help them. I would like to explore soldiers and their marital status and look for any trends of marital status at each rank. I also would like to look if soldiers are married to other service members, civilians or if they are single parents. This is important to know as leaders to better suit soldiers of each marital status. I would like to see which rank has the most married personnel.

Data

The data I used comes from the the department of defense and is from a 2010 report of all service members marital status. One column is categorical and 15 columns are numerical. Ranks of service members are seen on the first column and each row contains a pay grade ranging from E-1 to O-10. The pay grade column includes all enlisted, officer and warrant officer ranks. The rest of the columns are numerical. Those columns include single service members, single parents, joint service marriages and civilian marriages all split by gender and their respective totals.

	Pay Grade	Single Male	Single Female	Single Total	Single Parent Male	Single Parent Female	Single Parent Total	Joint Service Marriage Male	Joint Service Marriage Female	Joint Service Marriage Total	Civilian Married Male	Civilian Married Female	Civilian Married Total	Total Male	Total Female	Grand Total
0	E-1	31229	5717	36946	563	122	685	139	141	280	5060	719	5779	36991	6699	43690
1	E-2	53094	8388	61482	1457	275	1732	438	579	1017	12483	1682	14165	67472	10924	78396
2	E-3	131091	21019	152110	4264	1920	6184	3579	4902	8481	54795	6641	61436	193729	34482	228211
3	E-4	112710	16381	129091	9491	4662	14153	8661	9778	18439	105556	9961	115517	236418	40782	277200
4	E-5	57989	11021	69010	10937	6576	17513	12459	11117	23576	130944	8592	139536	212329	37306	249635
5	E-6	19125	4654	23779	10369	4962	15331	8474	6961	15435	110322	5827	116149	148290	22404	170694
6	E-7	5446	1913	7359	6530	2585	9115	5065	3291	8356	70001	3206	73207	87042	10995	98037
7	E-8	1009	438	1447	1786	513	2299	1423	651	2074	21079	820	21899	25297	2422	27719
8	E-9	381	202	583	579	144	723	458	150	608	8215	291	8506	9633	787	10420



Goals

- My minimum viable product is to demonstrate trends like which ranks have the most married personnel and whether officers are more likely to be married than enlisted soldiers and conduct hypothesis testing.
- After achieving my minimum viable product I would like to add more data like average age and race of service members in each rank.