**Career Fair and Campus Event Applicant In-House Interview Rate (2016-2018)**

Chi-Squared Test for Independence

This statistical test aims to determine if there is any association between the variables of interest. In this example, we are looking at the proportion of candidates that Reached an In-House Interview (or beyond) between 2 years of interest. If the p-value is less than 0.05, then there is a statistically significant relationship between the years and number of candidates reaching an in-house interview (or beyond). In other words, statistical significance entails that in-house interview progression rate was different between the 2 years compared.

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| --- | --- | --- | --- |
| Year of Application | Did Not Reach In-House Interview | Reached In-House Interview | In-House Interview Rate |
| 2016 | 349 | 95 | 27.2% |
| 2017 | 325 | 91 | 28.0% |

Chi2 value= 0.0077

p-value= 0.93

Degrees of freedom= 1

When comparing the number of candidates reaching an in-house interview between 2016 and 2017, there does not seem to be a statistically significant relationship because the p-value is greater than 0.05. In other words, there was no significant difference in the rate at which candidates progressed to the In-House Interview between 2016 and 2017.

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| --- | --- | --- | --- |
| Year of Application | Did Not Reach In-House Interview | Reached In-House Interview | In-House Interview Rate |
| 2017 | 325 | 91 | 28.0% |
| 2018 | 669 | 137 | 20.5% |

Chi2 value= 3.99

p-value= 0.046

Degrees of freedom= 1

When comparing the number of candidates reaching an in-house interview between 2017 and 2018, there **does** seem to be a statistically significant relationship because the p-value is less than 0.05. In other words, there was a significant difference in the rate at which candidates progressed to the In-House Interview between 2017 and 2018.

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| --- | --- | --- | --- |
| Year of Application | Did Not Reach In-House Interview | Reached In-House Interview | In-House Interview Rate |
| 2016 | 349 | 95 | 27.2% |
| 2018 | 669 | 137 | 20.5% |

Chi2 value= 3.38

p-value= 0.066

Degrees of freedom= 1

When comparing the number of candidates reaching an in-house interview between 2016 and 2018, there does not seem to be a statistically significant relationship because the p-value is greater than 0.05. In other words, there was no significant difference in the rate at which candidates progressed to the In-House Interview between 2016 and 2018.

Conclusion & Takeaways

Based on the pair-wise chi-squared tests of independence, it appears that the In-House Interview Rate in 2018 was significantly different from the rate in 2017, and to a lesser degree, from the rate in 2016. When comparing the percentages, it appears that the 2018 rate was subjectively much lower than the prior 2 years.

Potential areas to follow up could be to determine the reason for this apparent decrease in In-House Interview rate for candidates in 2018. This could be due to a stricter application process implemented during 2018, or potentially larger, market-level growth that spurred a higher In-House Interview rates in 2016 and 2017. Additionally, because this population is focused on Career Fairs and Campus Events only, the difference in In-House Interview rates could be related to the level at which those Career Fairs and Campus Events were promoted.

Ultimately, the results of these chi-squared comparisons simply illuminate an area of further exploration and do not entail that the difference in years is the cause of the perceived difference in In-House Interview rate.