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# CHI SQUARE TEST

## GOODNESS OF FIT AND INDEPENDENCE OF ATTRIBUTES

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LAB Experiment 6



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BIMAL PARAJULI  
20BDS0405

## Chi-Square Test .

### Goodness of Fit and Independence of Attributes.

- 1). The below table gives the distribution of students according to family type and anxiety level .

Family Type	Anxiety Level .		
	Low	Normal	High
Joint family	35	42	61
Nuclear family	48	51	68

### R-Code and Interpretation

```
>data <- matrix(c(35,42,61,48,51,68), nbl = 3, byrow = T)
```

```
>data
```

```
      [,1] [,2] [,3]  
[1,] 35  42  61  
[2,] 48  51  68
```

```
>chisq.test(data).
```

Pearson's Chi-squared test .

```
data: data
```

```
x-squared = 0.53441, df = 2, p-value = 0.7655.
```

Here P value (0.7655) > 0.05 . Hence, there is no evidence to reject the Null hypothesis . So, we consider the anxiety level and family type as independent .

```

>
> # Chi Square Test
> data <- matrix(c(35, 43, 61, 48, 51, 68), ncol = 3, byrow = T)
> data
      [,1] [,2] [,3]
[1,]   35   43   61
[2,]   48   51   68
> chisq.test(data)

      Pearson's Chi-squared test

data:  data
X-squared = 0.53926, df = 2, p-value = 0.7637

> #Here, P value (0.7637) > 0.05. Hence, there is no evidence to reject the null hypothesis . So, we consider
  the anxiety level and family type as independent
> |

```