

# Organ Donation and Transplant

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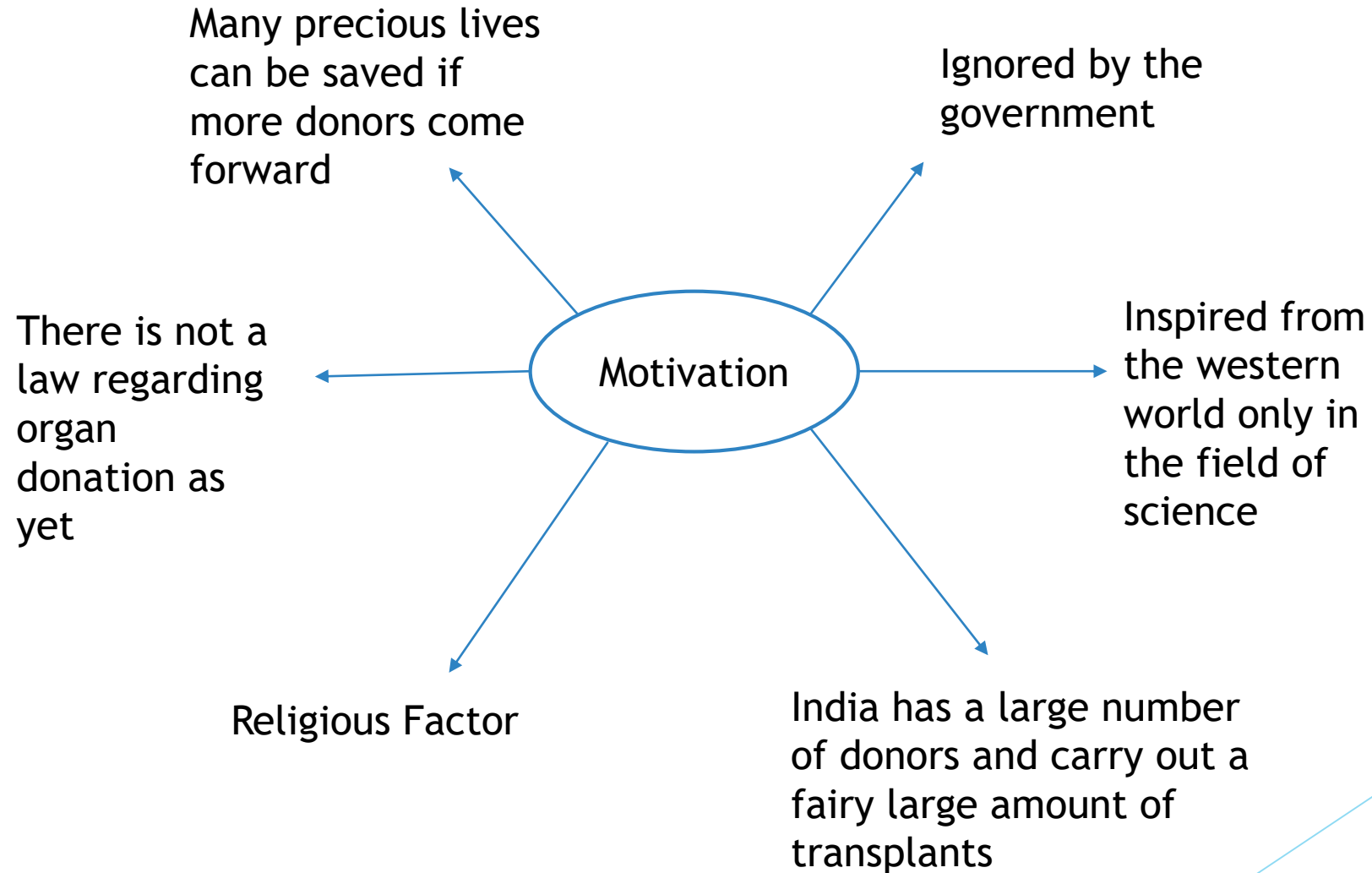
Nouman Nadeem (BSCS-15034)

Shahrez Aziz Amer (BSCS-15047)

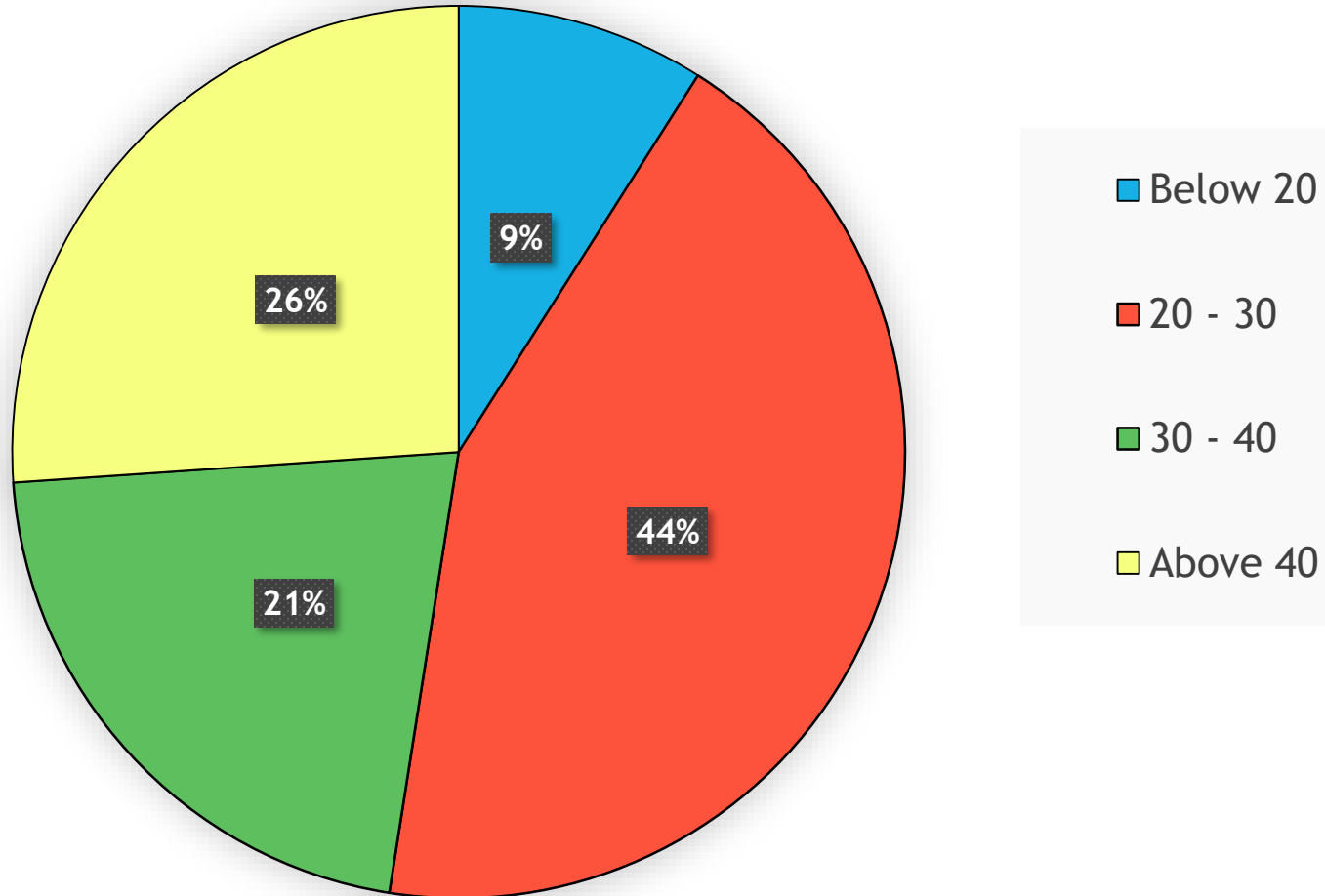
Hamza Akram (BSCS-15053)

Mahrukh Naveed (BSCS-15062)

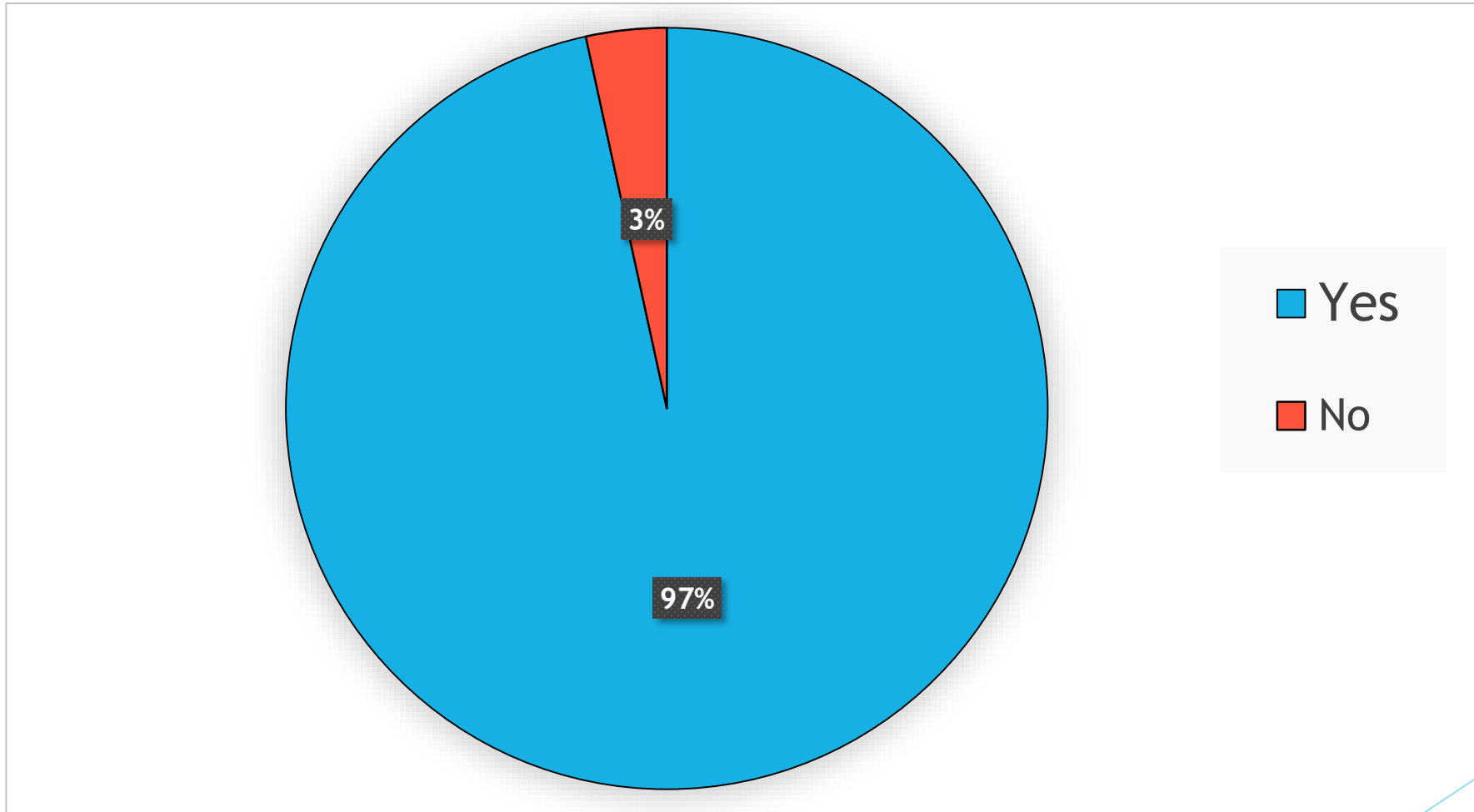
# Motivation



# 1. What is your age?



## 2. Are you aware that organs can be donated?



## 2. Are you aware that organs can be donated?

Success: Yes

Confidence Interval:

$$0.9460 < p < 0.9857$$

Testing:

**Claim:** 97% of the population is aware that organs can be donated.

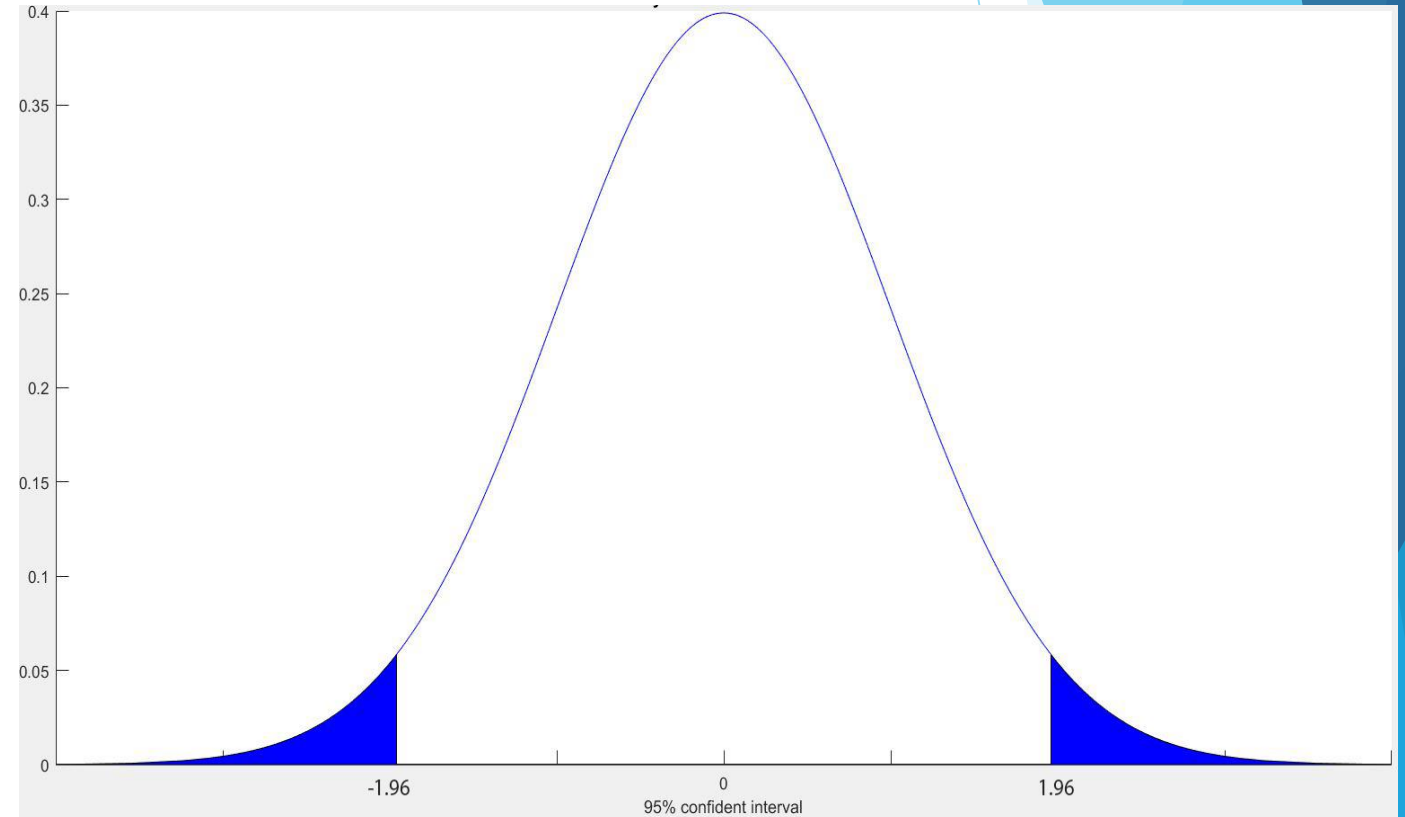
$$H_0: p = 0.97$$

$$H_1: p \neq 0.97$$

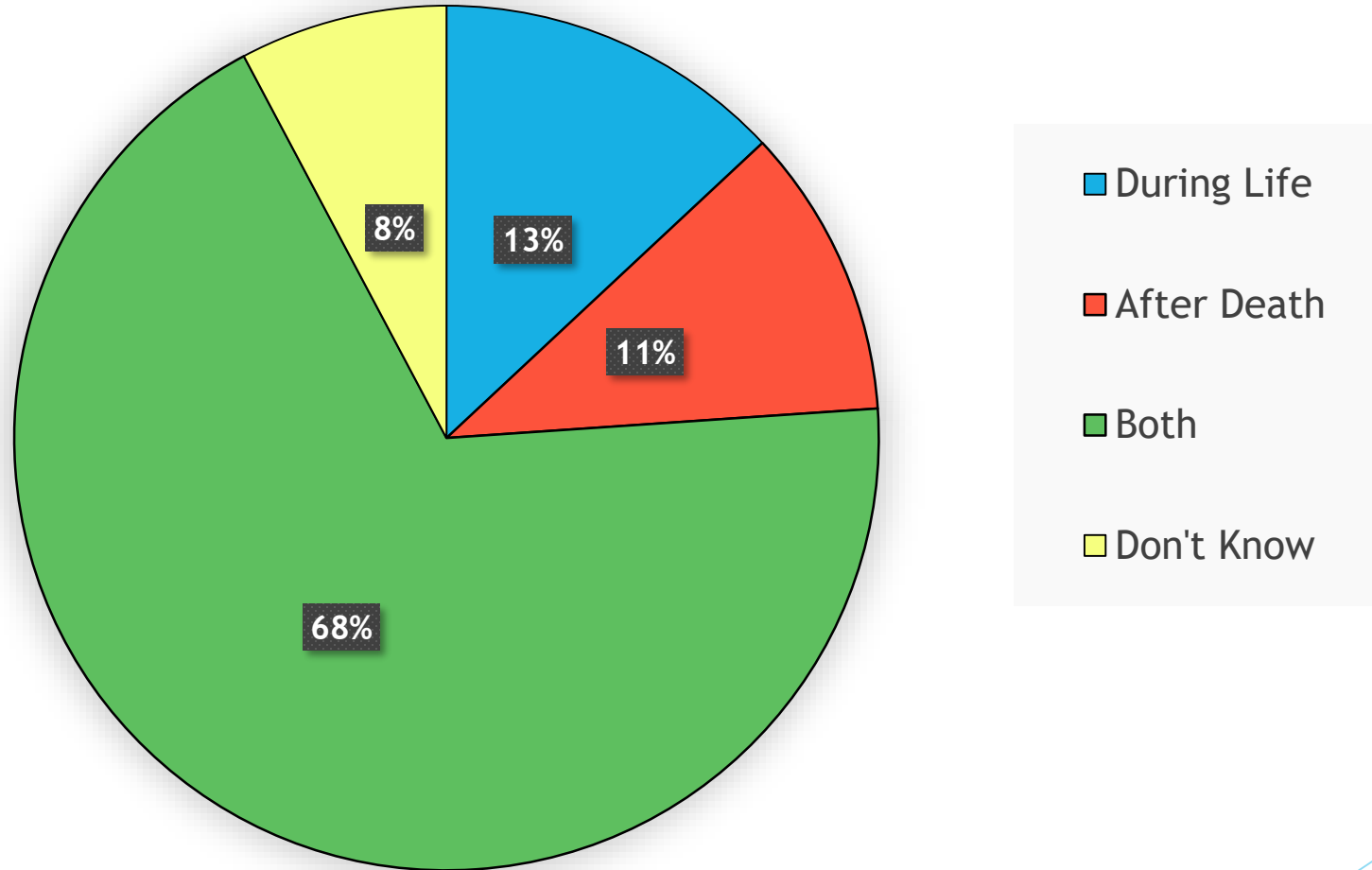
$$Z_{cal} = -0.4418$$

$$Z_{tab} = 1.96$$

Since  $Z_{cal}$  is not in the rejection area we accept  $H_0$



### 3. When can organs be donated?



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Success: Both

Confidence Interval:

$$0.6324 < p < 0.7340$$

Testing:

**Claim:** 68% of the population thinks that organs can be donated both during and after life

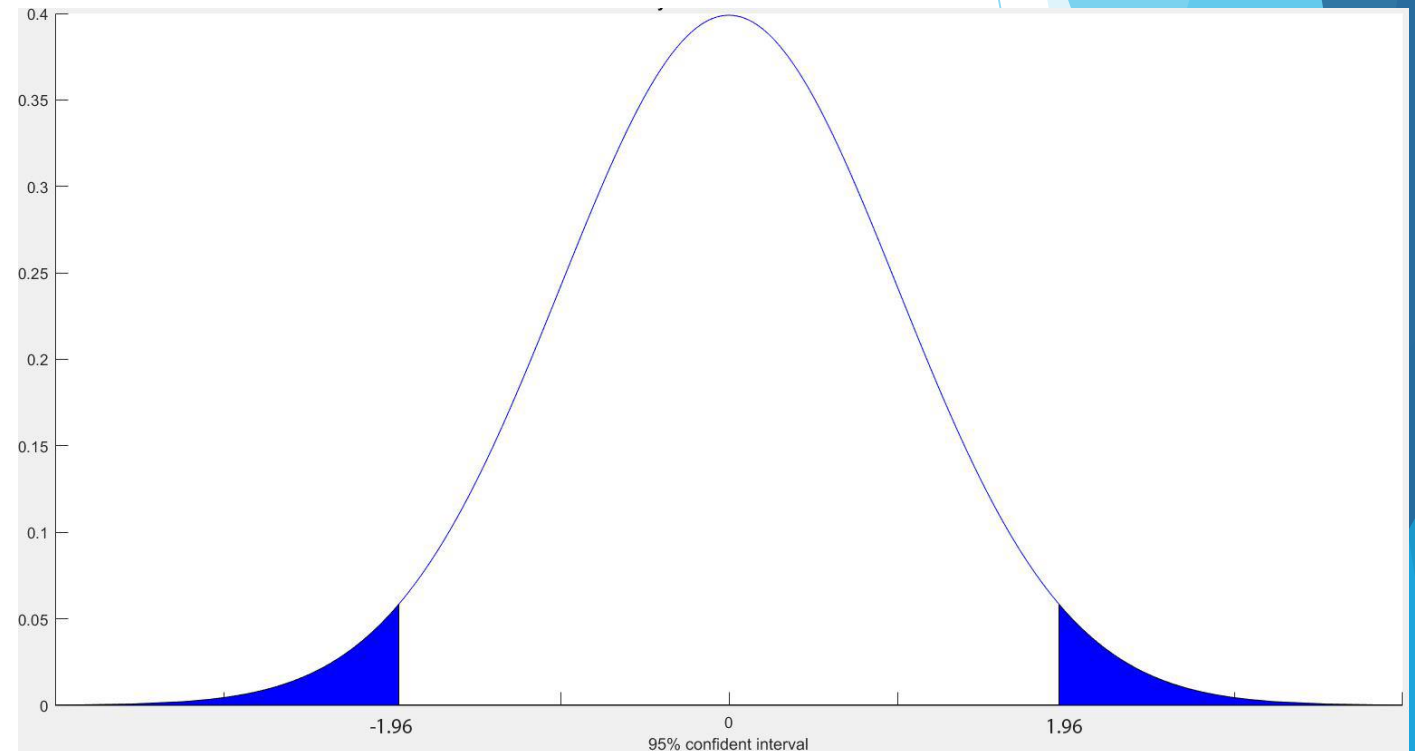
$$H_0: p = 0.68$$

$$H_1: p \neq 0.68$$

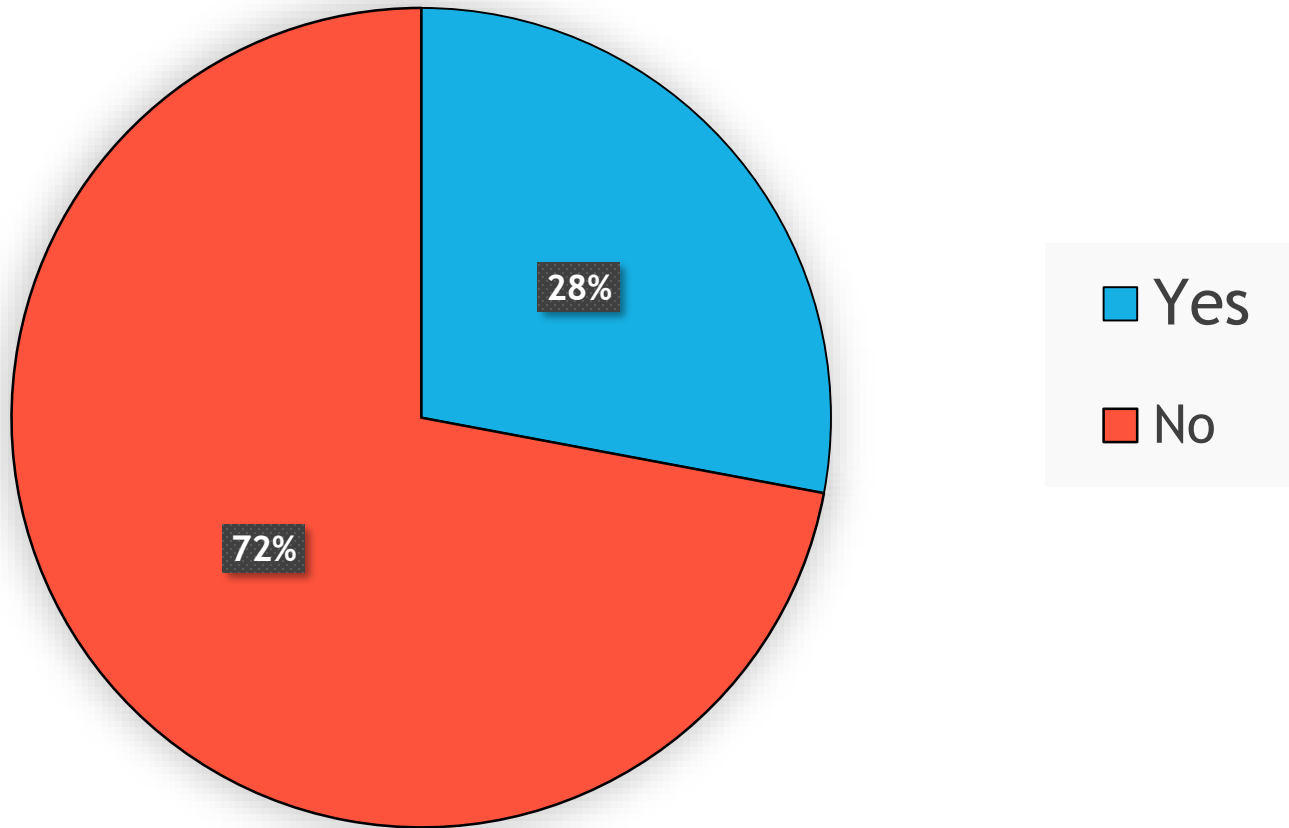
$$Z_{cal} = 0.1242$$

$$Z_{tab} = 1.96$$

Since  $Z_{cal}$  is not in the rejection area we accept  $H_0$



4. Do you know the rules and regulations for the donation and transplantation of human organs?





## 4. Do you know the rules and regulations for the donation and transplantation of human organs?

Success: No

Confidence Interval:

$$0.2305 < p < 0.3285$$

Testing:

**Claim:** At least 70% of the population does not know the rules and regulations.

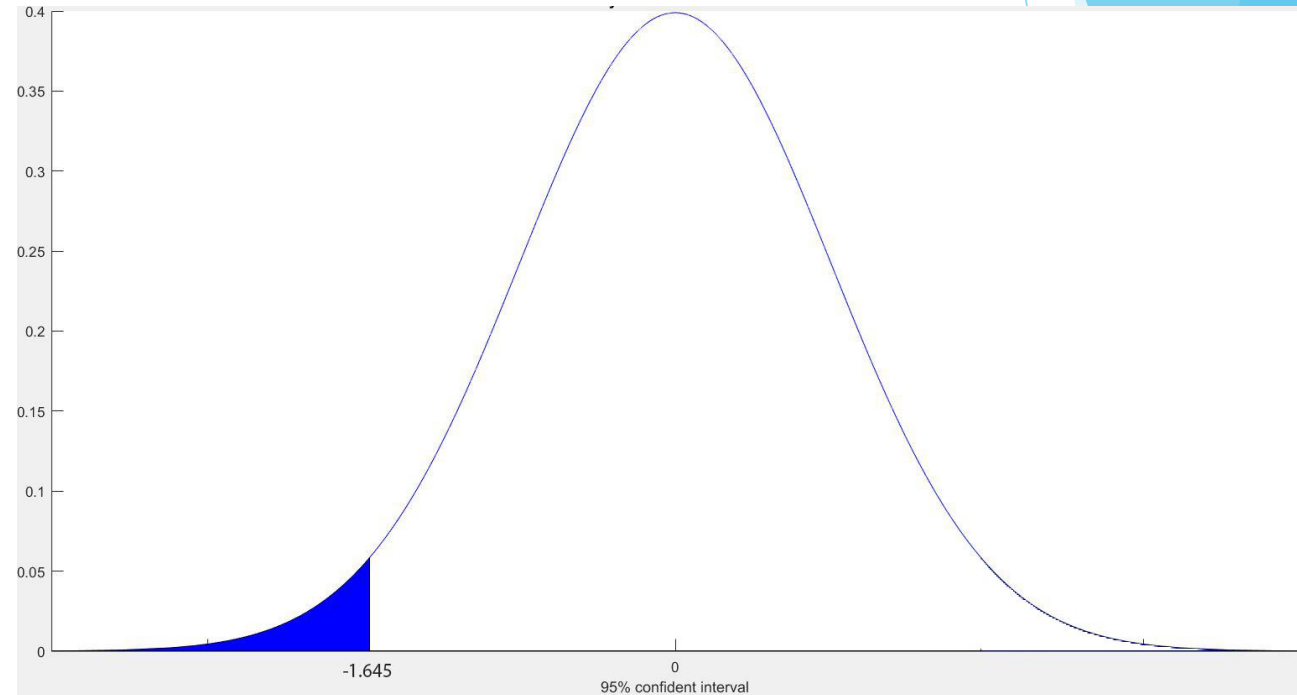
$$H_0: p = 0.70$$

$$H_1: p < 0.70$$

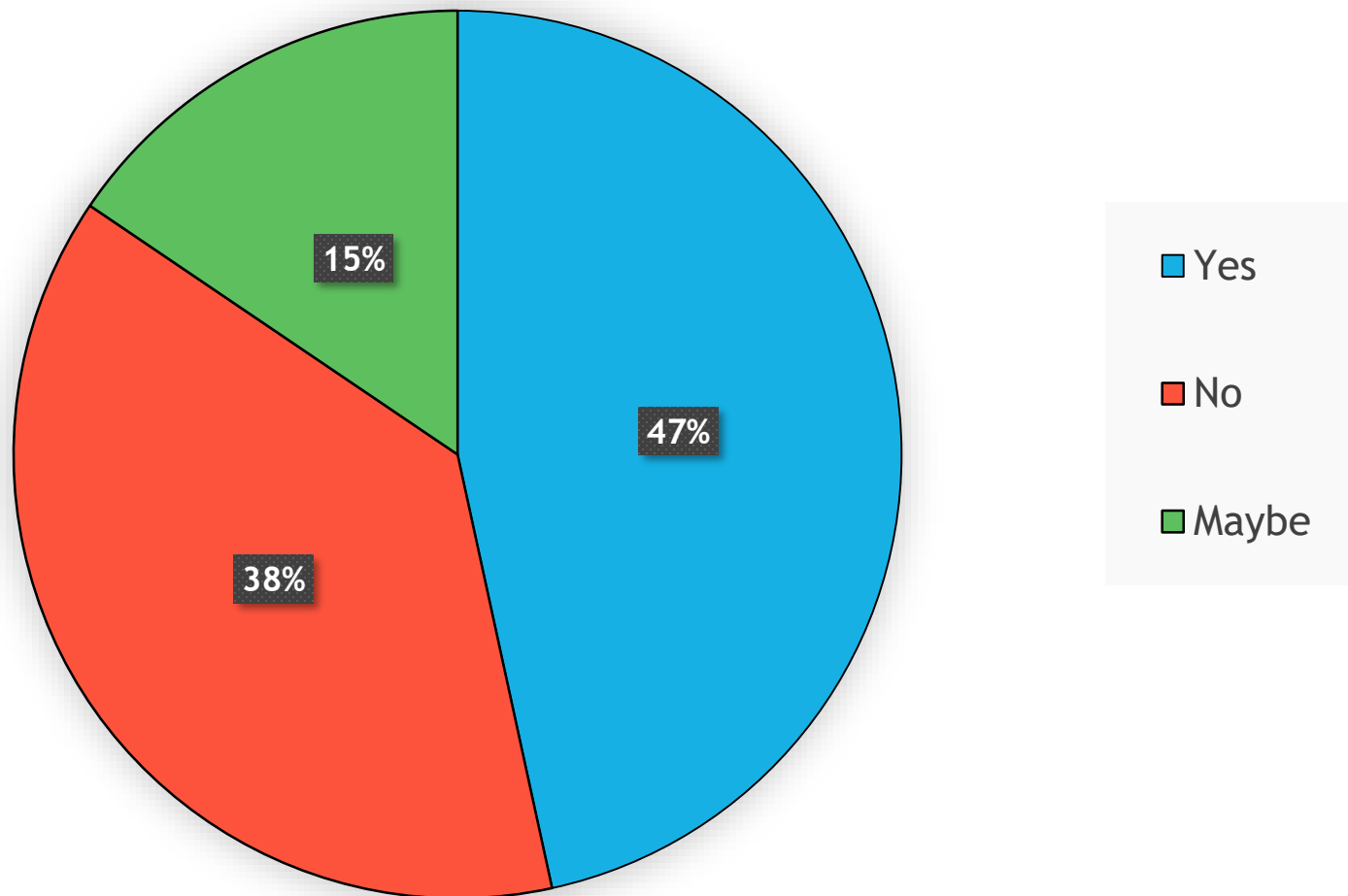
$$Z_{cal} = 0.8026$$

$$Z_{tab} = -1.645$$

Since  $Z_{cal}$  is not in the rejection area we accept  $H_0$



## 5. Do you have a relative who suffered organ failure?



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Success: Yes

Confidence Interval:

$$0.4114 < p < 0.5203$$

Testing:

**Claim:** 47% of the population has a relative that suffered organ failure.

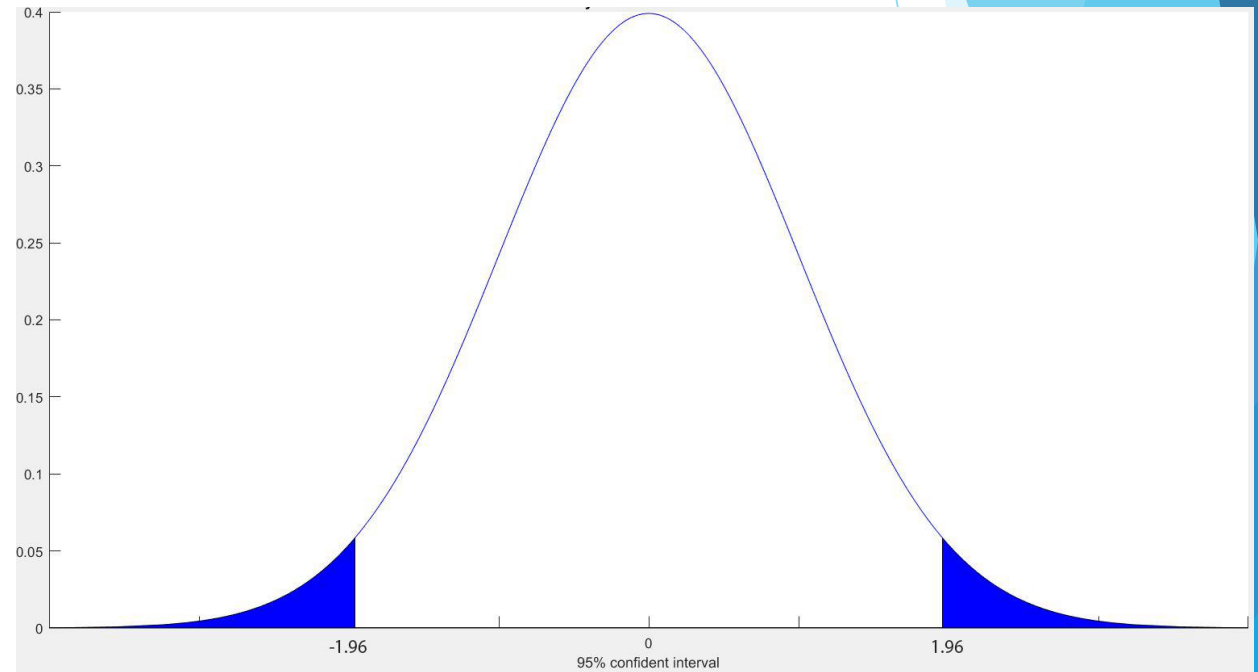
$$H_0: p = 0.47$$

$$H_1: p \neq 0.47$$

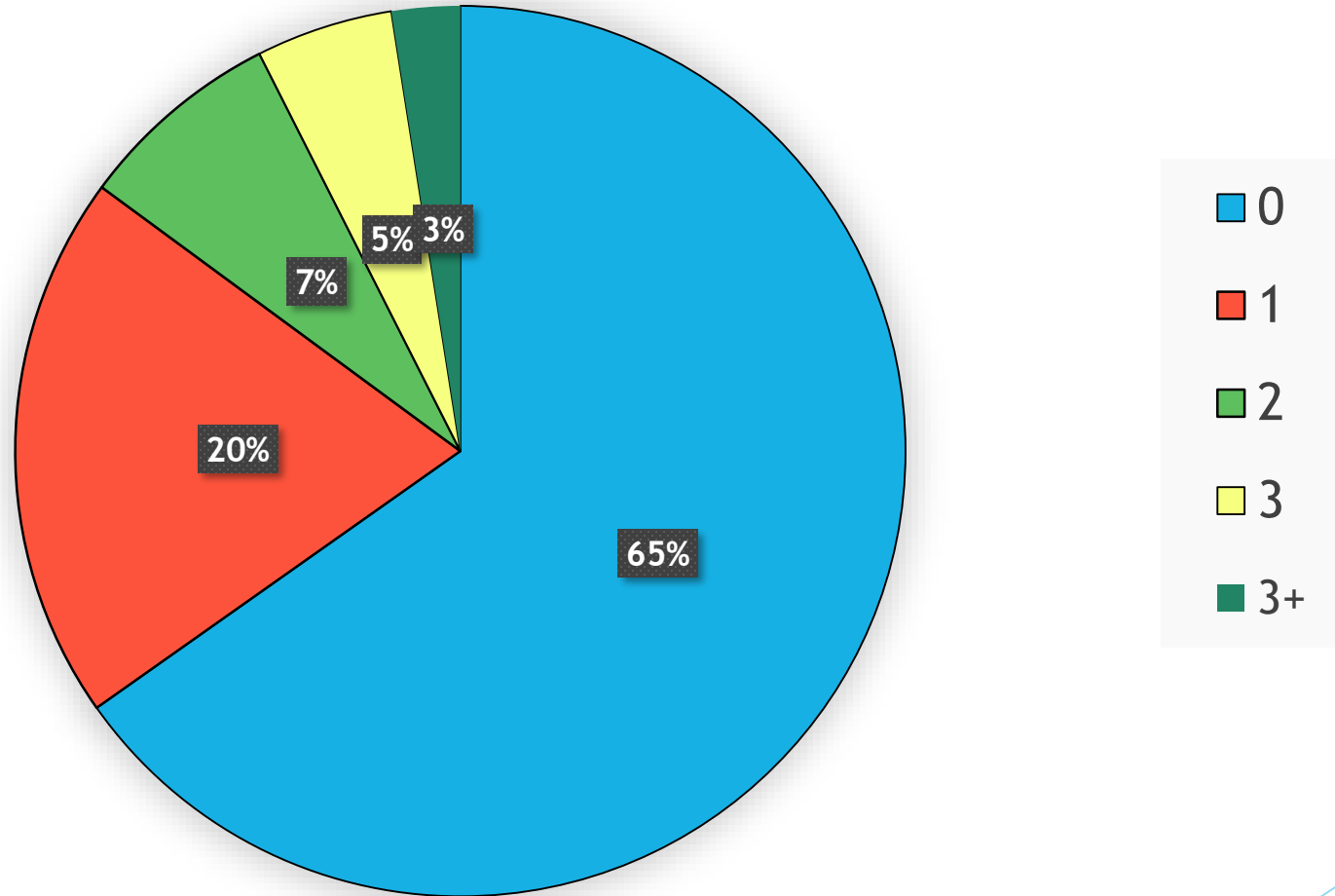
$$Z_{cal} = -0.1496$$

$$Z_{tab} = 1.96$$

Since  $Z_{cal}$  is not in the rejection area we accept  $H_0$



## 6. How many people do you know who donated one of their organ?



## 6. How many people do you know who donated one of their organ?

Success: 0

Confidence Interval:

$$0.6002 < p < 0.7042$$

Testing:

**Claim:** 65% of the population doesn't know someone who donated their organ

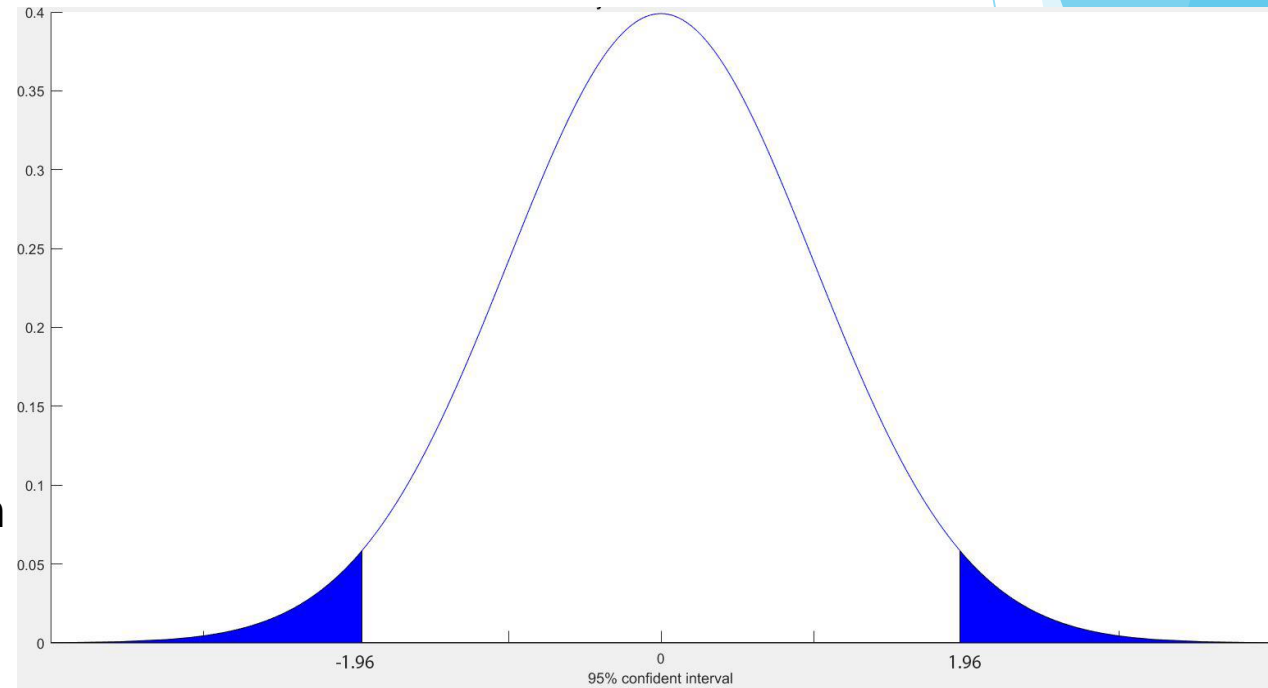
$$H_0: p = 0.65$$

$$H_1: p \neq 0.65$$

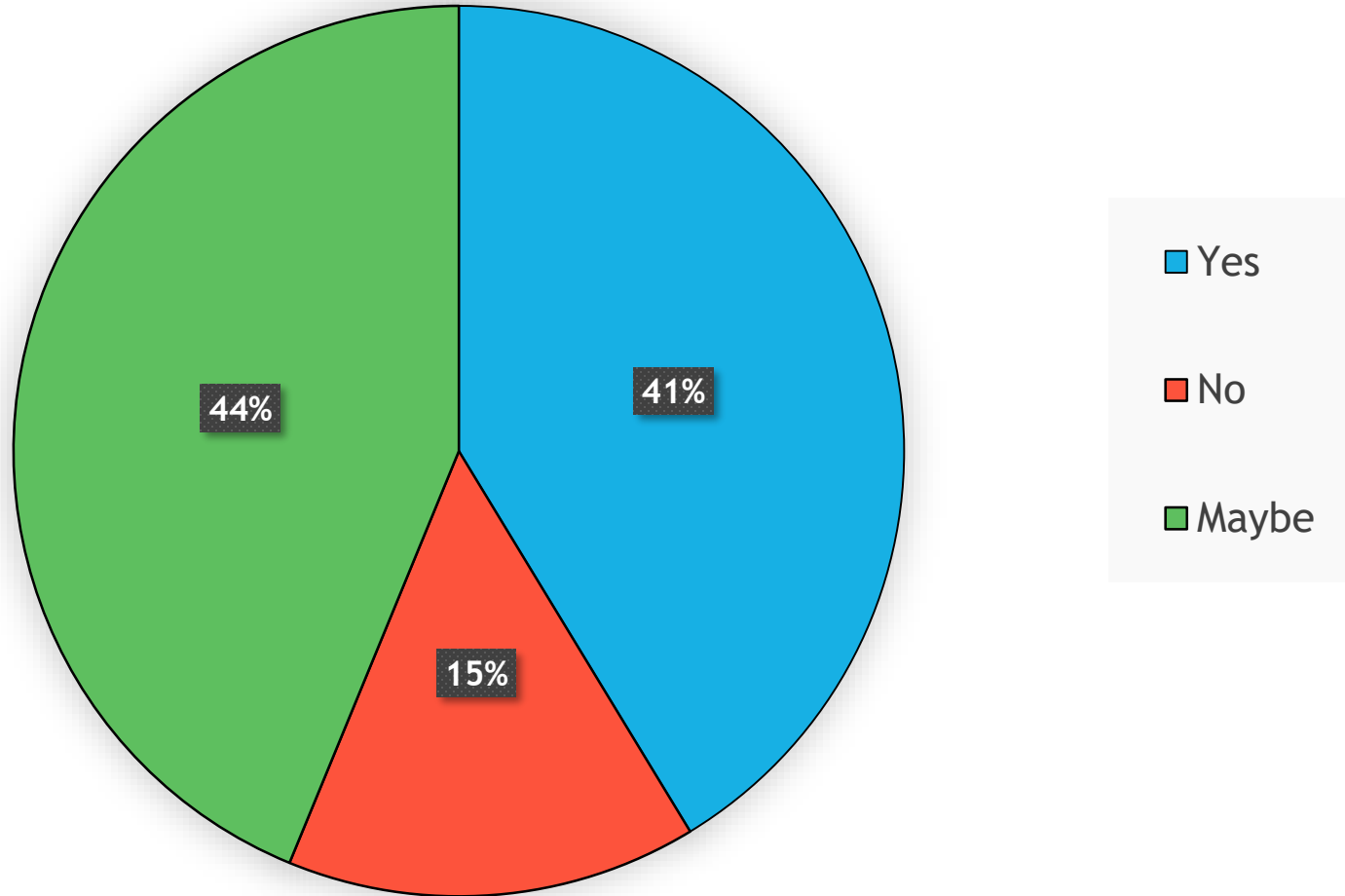
$$Z_{cal} = 0.0810$$

$$Z_{tab} = 1.96$$

Since  $Z_{cal}$  is not in the rejection area we accept  $H_0$



7. Would you be willing to donate one of your organs to an organ donation service immediately after your death?



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Success: Yes

Confidence Interval:

$$0.3593 < p < 0.4668$$

Testing:

**Claim:** 41% of the population is willing to donate their organs

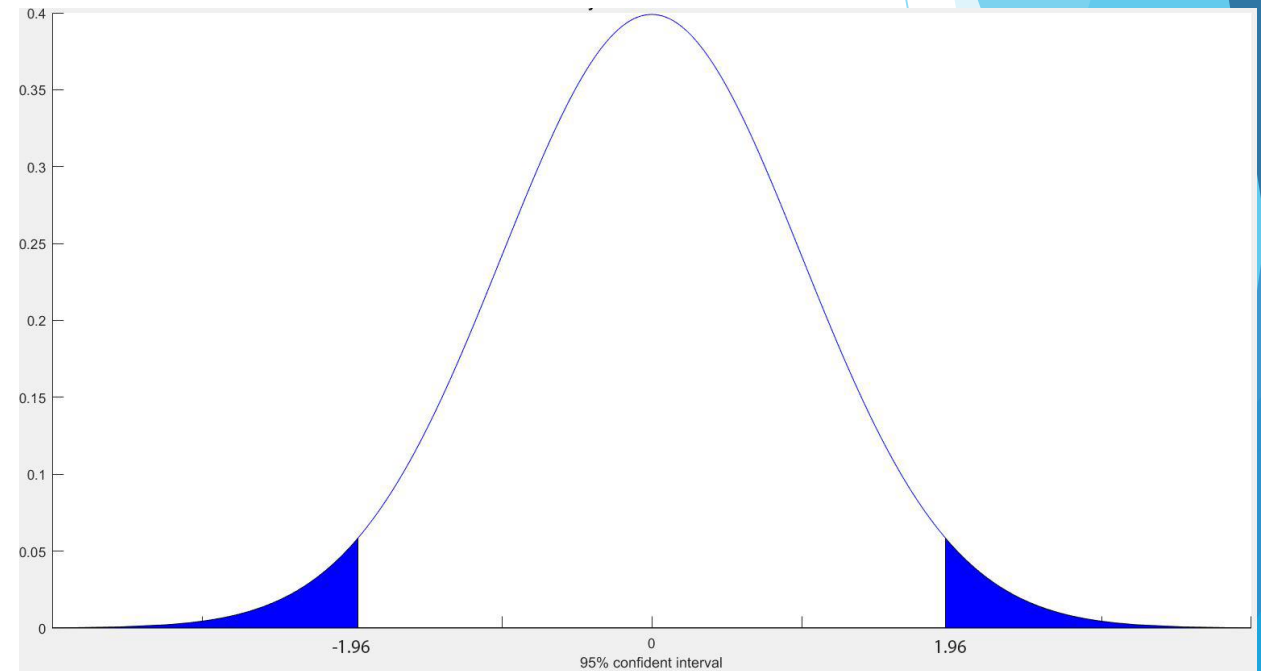
$$H_0: p = 0.41$$

$$H_1: p \neq 0.41$$

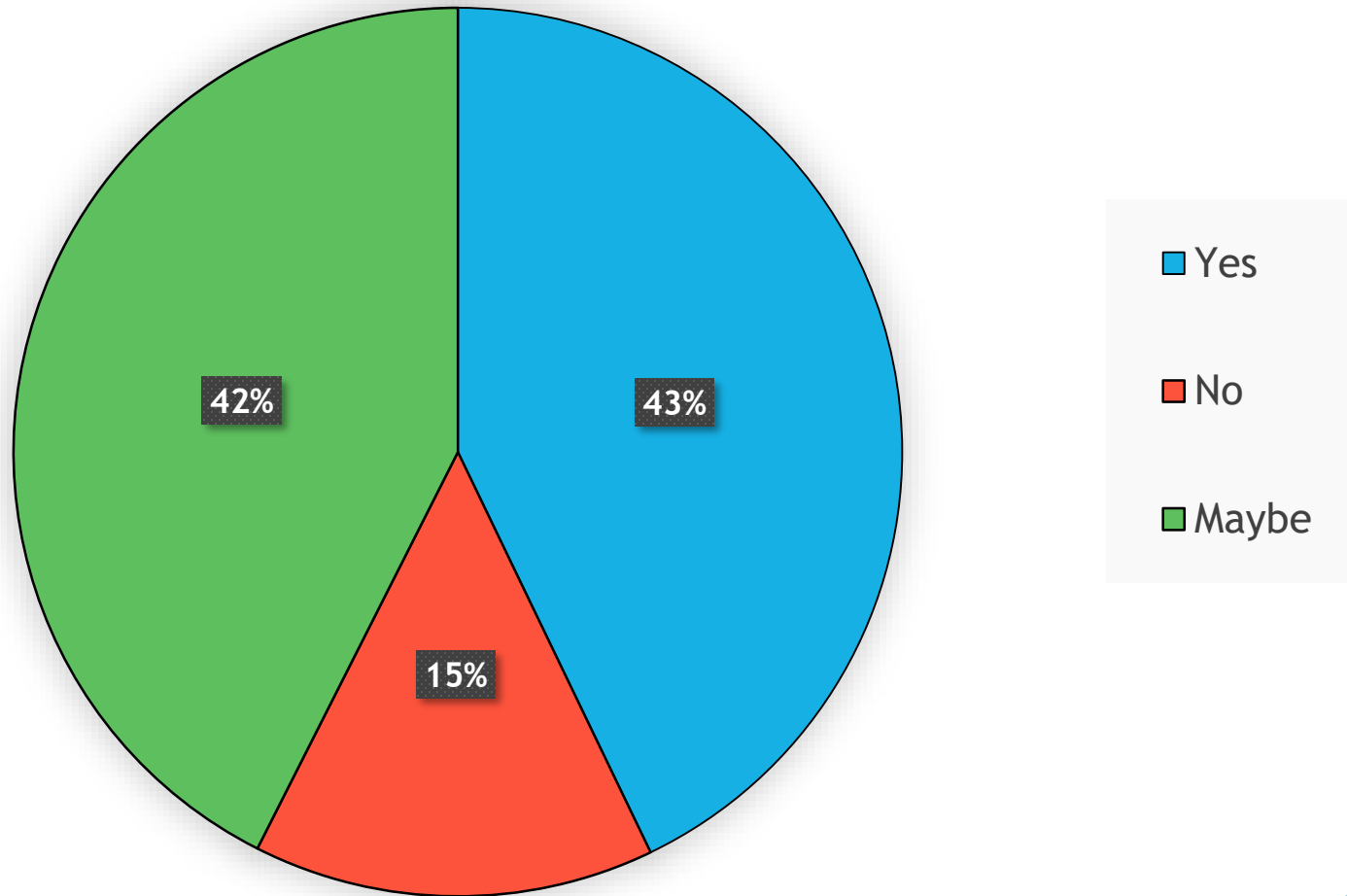
$$Z_{cal} = 0.1110$$

$$Z_{tab} = 1.96$$

Since  $Z_{cal}$  is not in the rejection area we accept  $H_0$



8. If you were asked in a hospital to donate an organ from a deceased close family member, would you?





8. If you were asked in a hospital to donate an organ from a deceased close family member, would you?

Success: Yes

Confidence Interval:

$$0.3745 < p < 0.4826$$

Testing:

**Claim:** At least 40% of the population will be willing to donate organs from a deceased relative

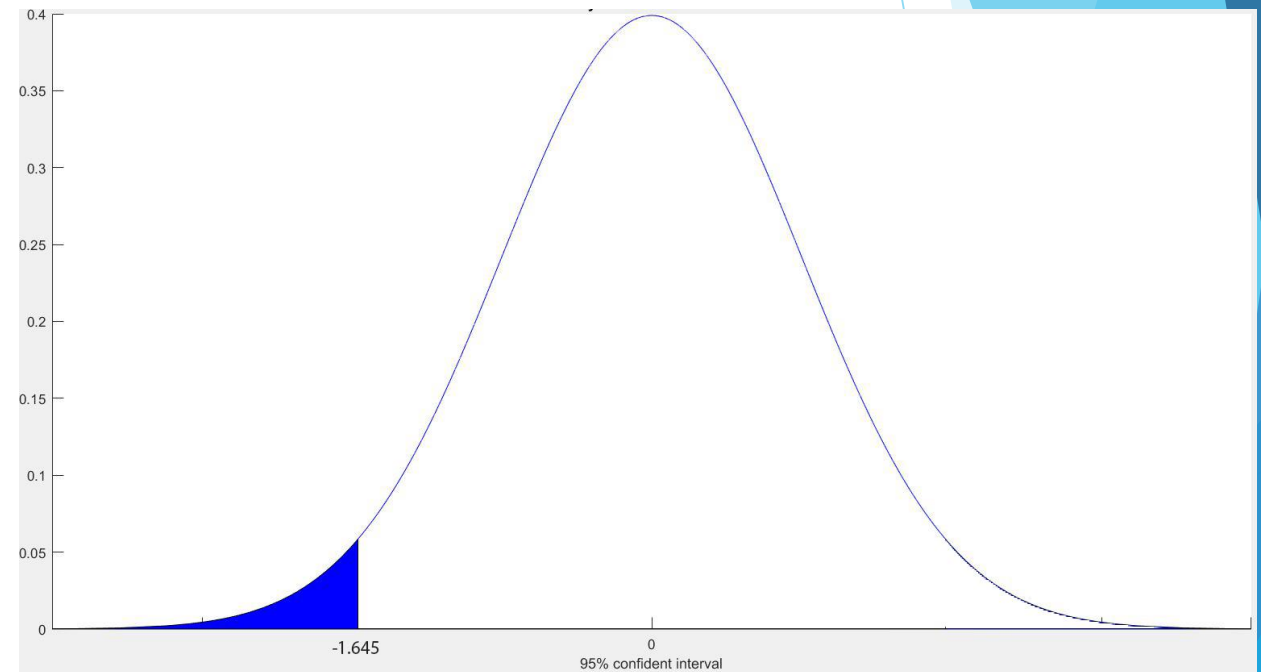
$$H_0: p = 0.4$$

$$H_1: p < 0.4$$

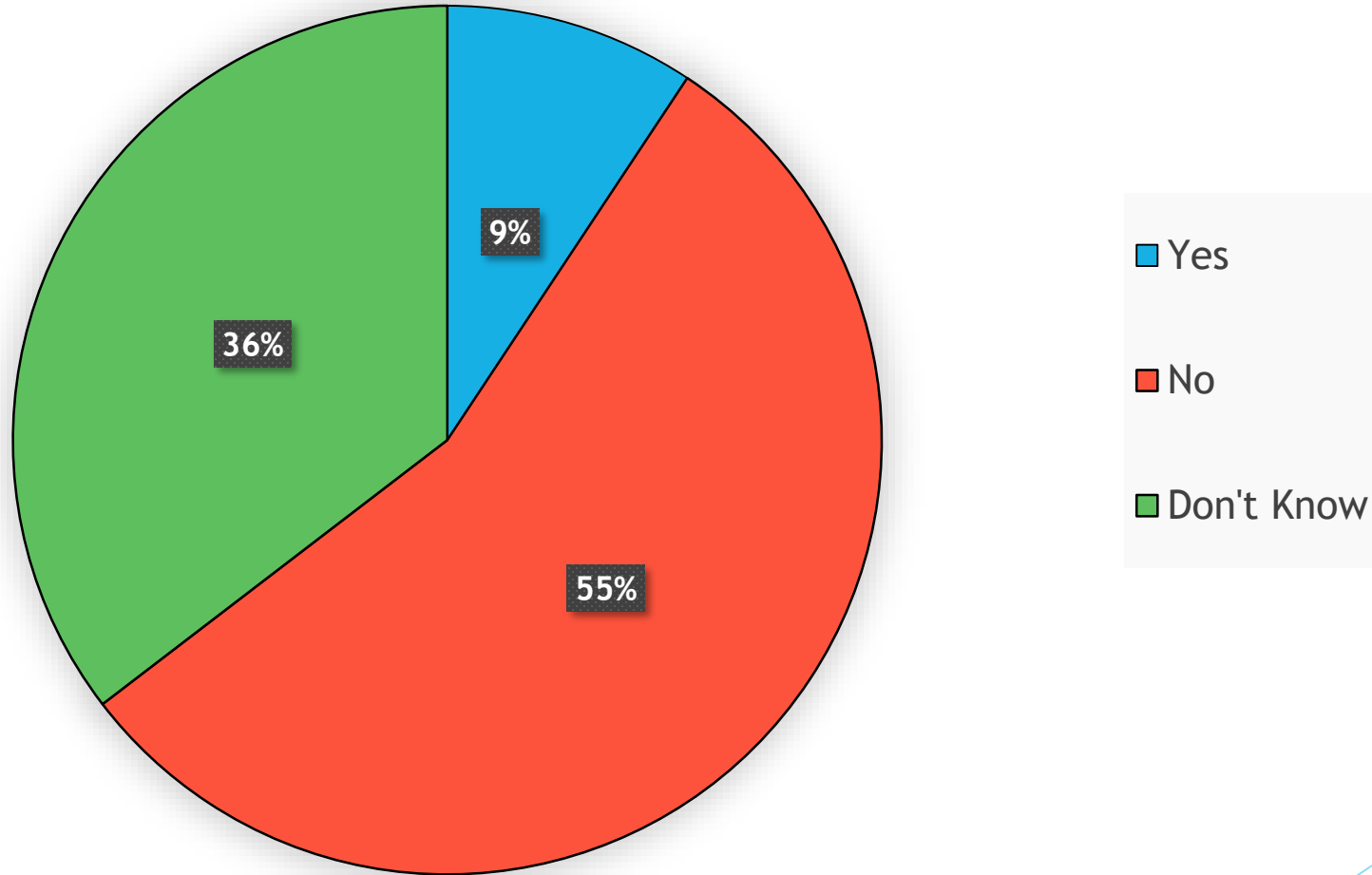
$$Z_{cal} = 1.0465$$

$$Z_{tab} = -1.645$$

Since  $Z_{cal}$  is not in the rejection area we accept  $H_0$



9. Do you think donation of organs upon death is against your religion?



## 9. Do you think donation of organs upon death is against your religion?

Success: No

Confidence Interval:

$$0.9460 < p < 0.9857$$

Testing:

**Claim:** At most 10% of the population thinks that donating organs is against their religion

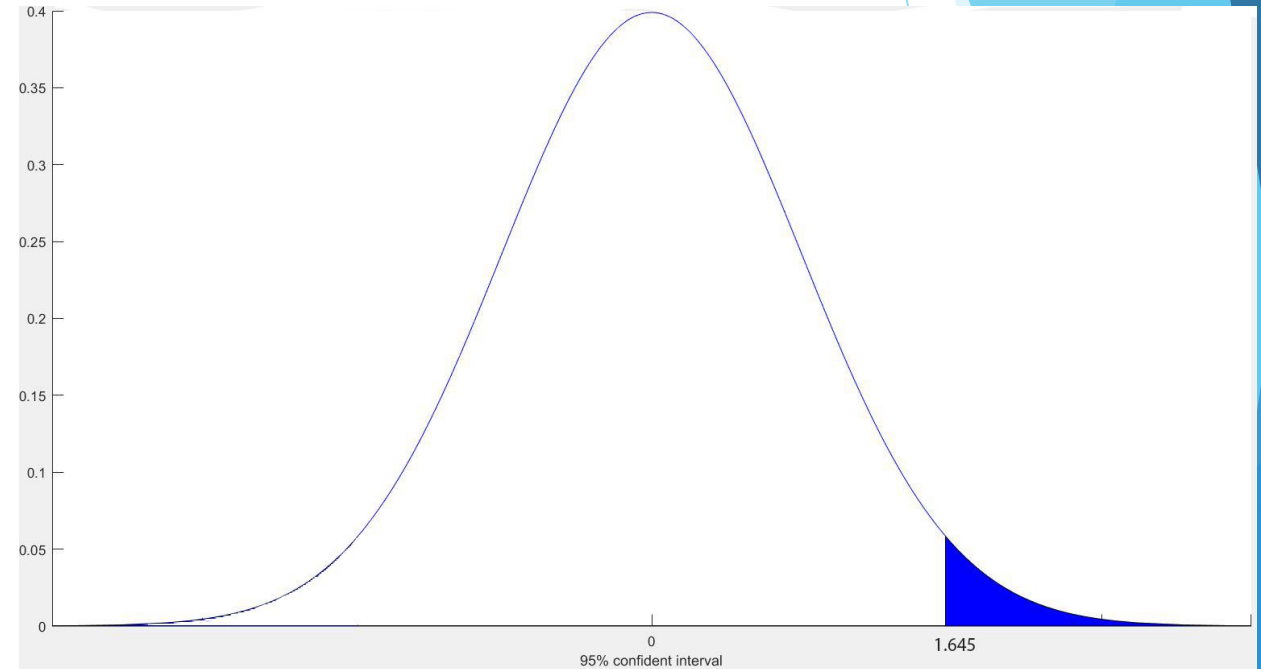
$$H_0: p = 0.1$$

$$H_1: p > 0.1$$

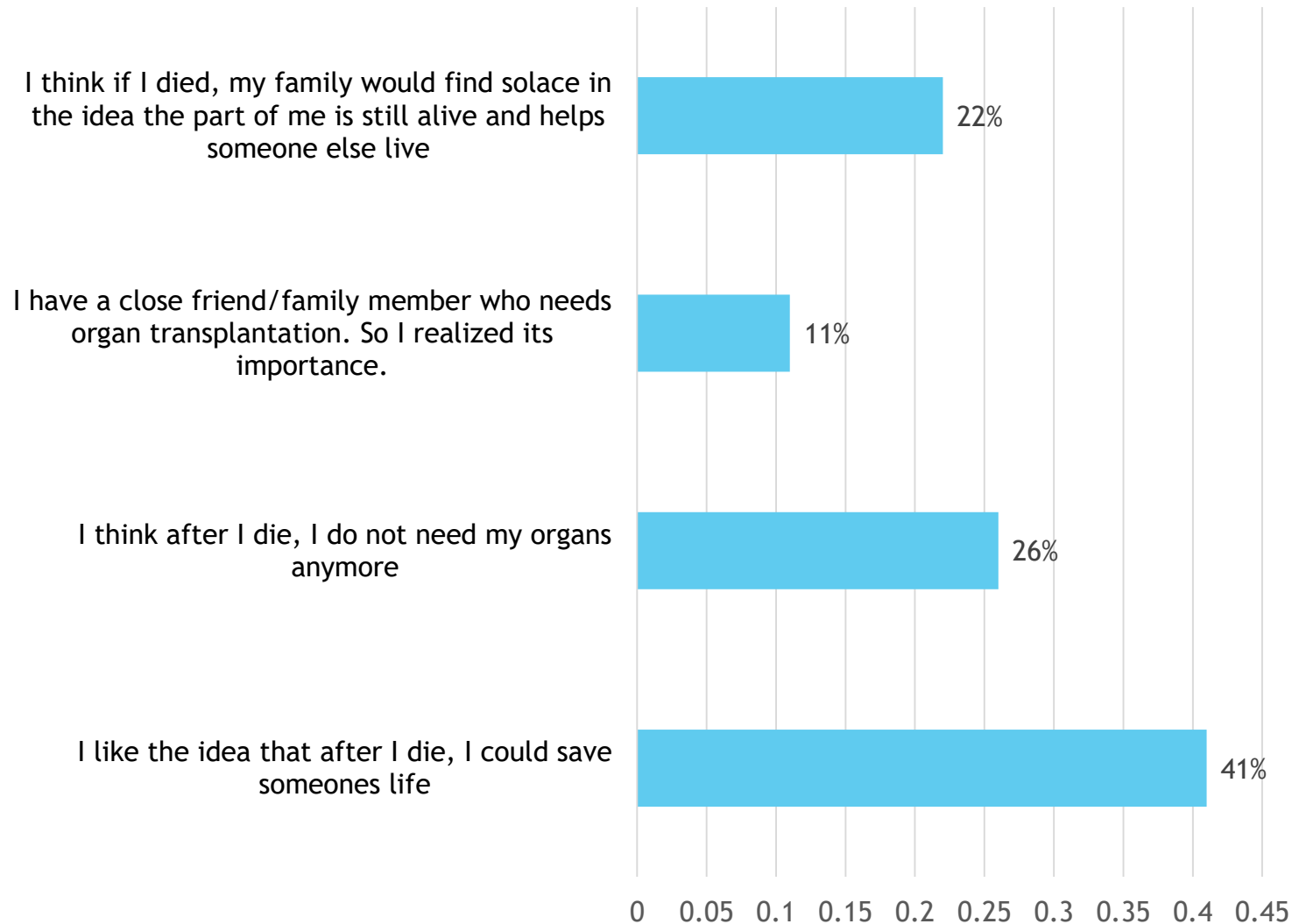
$$Z_{cal} = -0.4087$$

$$Z_{tab} = 1.645$$

Since  $Z_{cal}$  is not in the rejection area we accept  $H_0$



## 10. If you are willing to be an organ donor, what are your reasons?



## 10. If you are willing to be an organ donor, what are your reasons?

Success: I like the idea .....

Confidence Interval:

$$0.3518 < p < 0.4611$$

Testing:

**Claim:** 41% percent of the population is willing to donate because they like the idea of saving someone's life

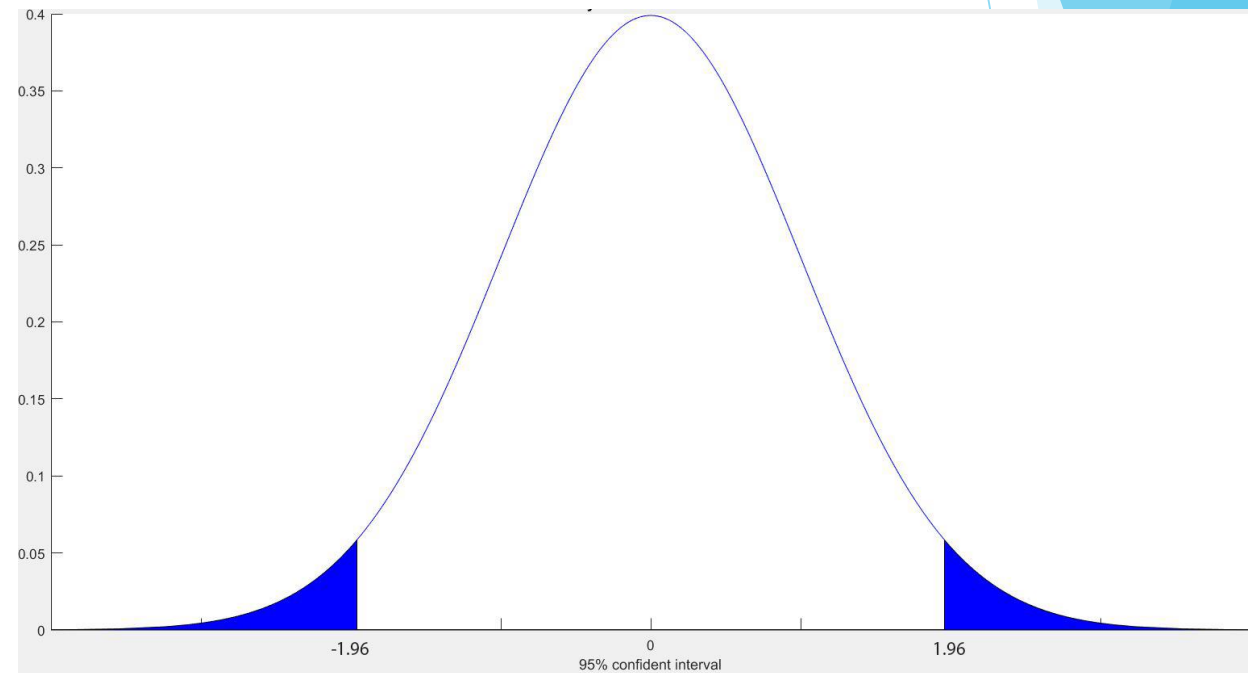
$$H_0: p = 0.41$$

$$H_1: p \neq 0.41$$

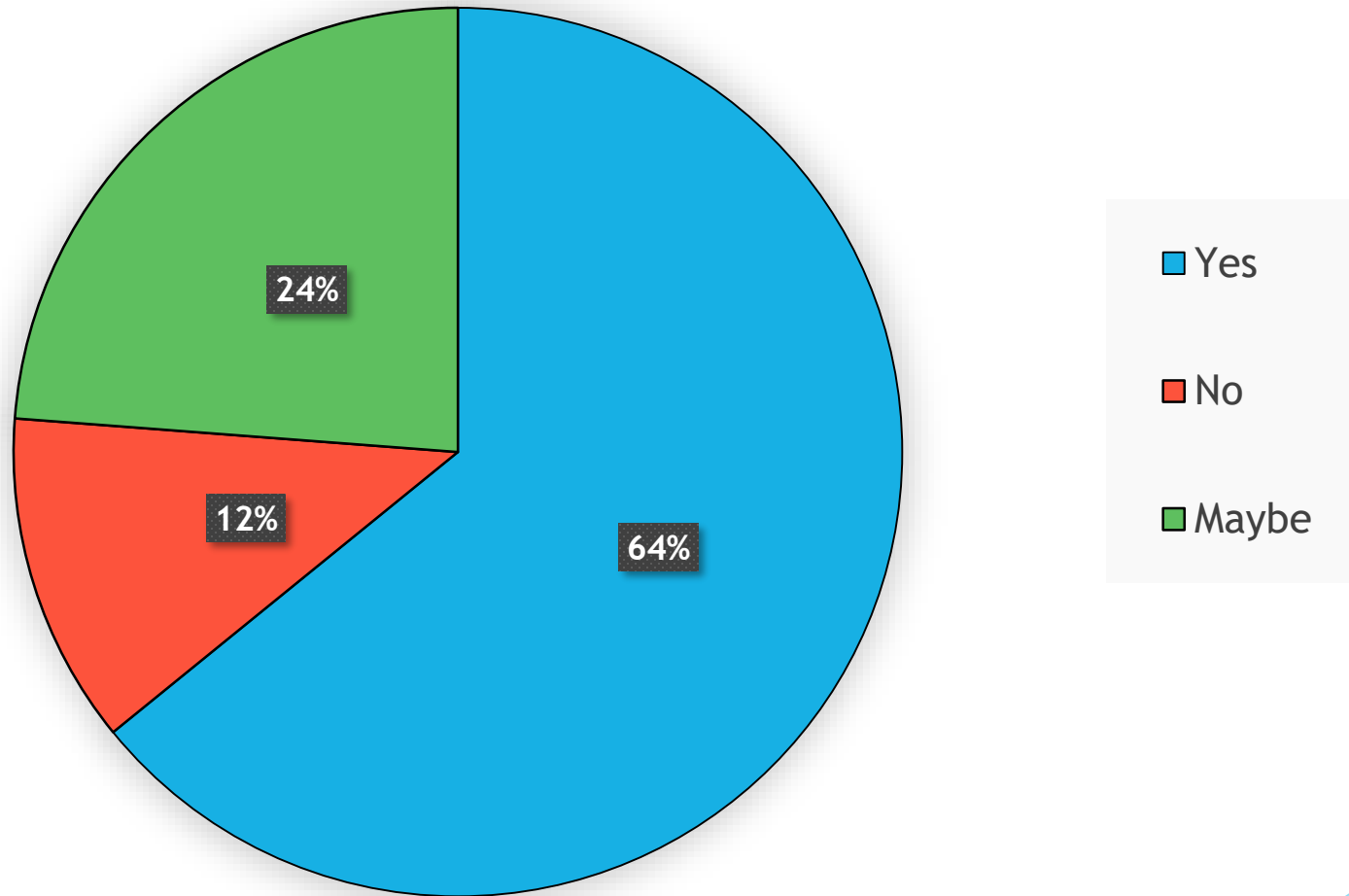
$$Z_{cal} = -0.1270$$

$$Z_{tab} = 1.96$$

Since  $Z_{cal}$  is not in the rejection area we accept  $H_0$



11. If you or your loved one needs a transplant and you have the opportunity to buy an organ from a living donor, will you buy it?



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Success: Yes

Confidence Interval:

$$0.5862 < p < 0.6967$$

Testing:

**Claim:** At least 60% of the population is willing to buy an organ

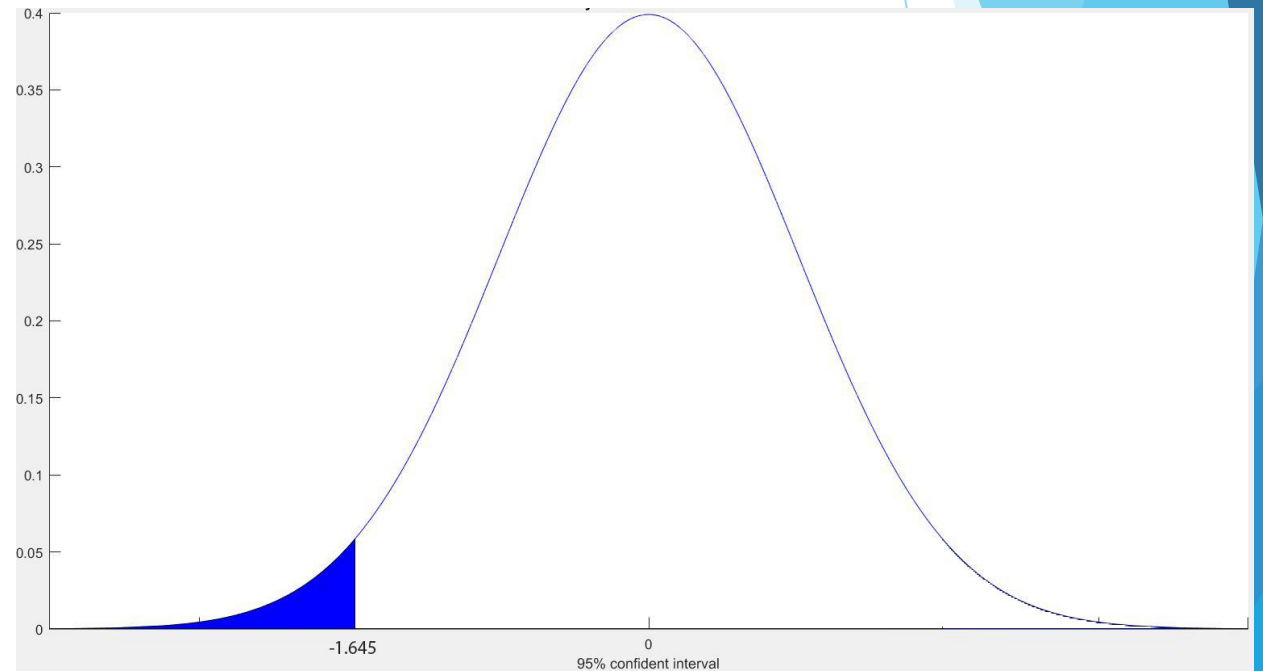
$$H_0: p = 0.6$$

$$H_1: p < 0.6$$

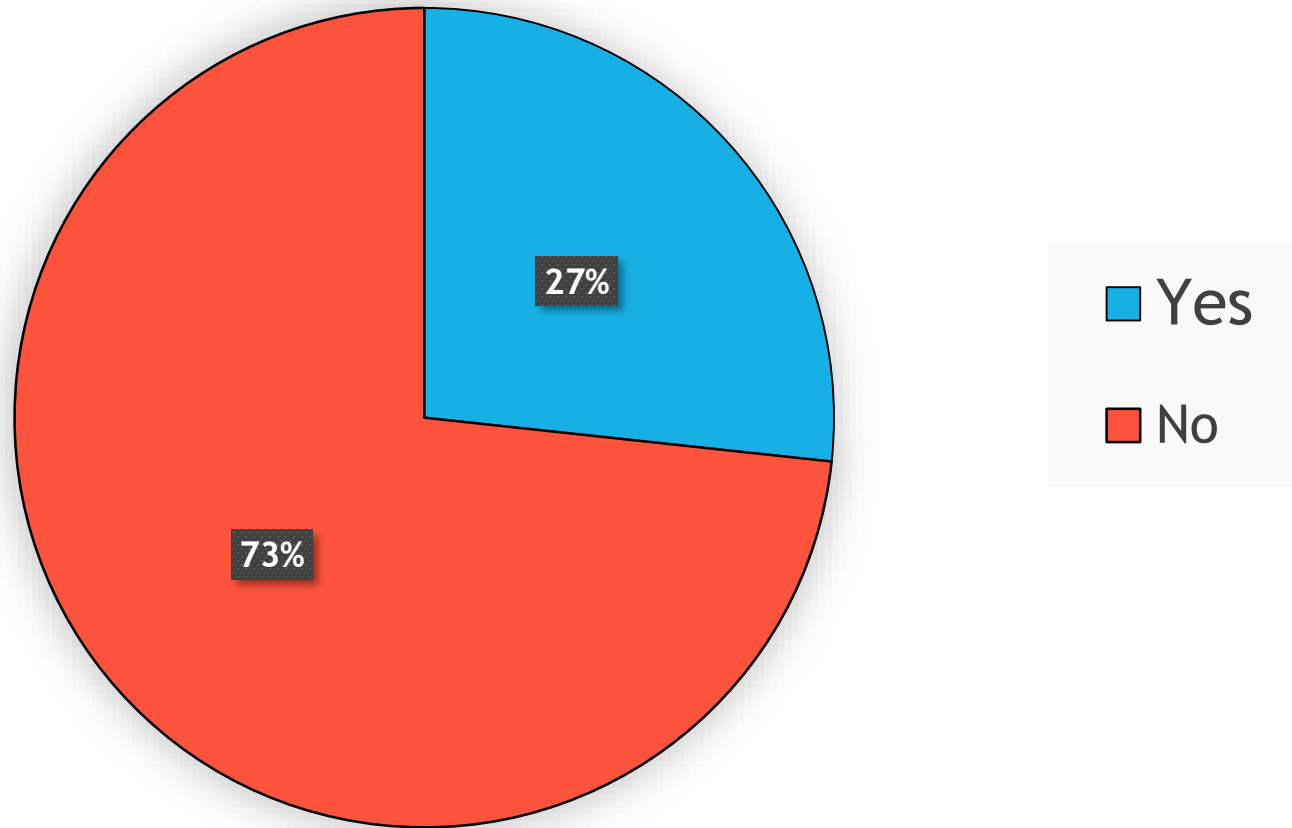
$$Z_{cal} = 1.4383$$

$$Z_{tab} = -1.645$$

Since  $Z_{cal}$  is not in the rejection area we accept  $H_0$



12. Do you think the sale of human organs should be legalized?





## 12. Do you think the sale of human organs should be legalized?

Success: No

Confidence Interval:

$$0.6846 < p < 0.7812$$

Testing:

**Claim:** At least 70% of the population thinks that the sale of human organs should not be legalized.

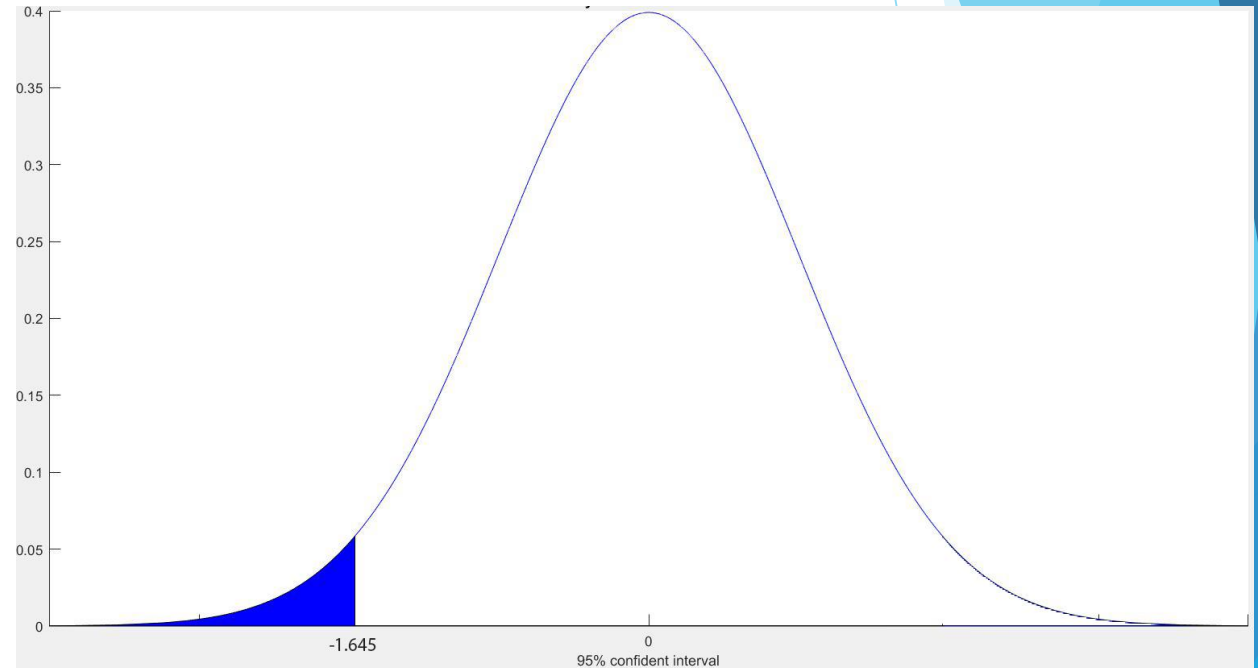
$$H_0: p = 0.70$$

$$H_1: p < 0.70$$

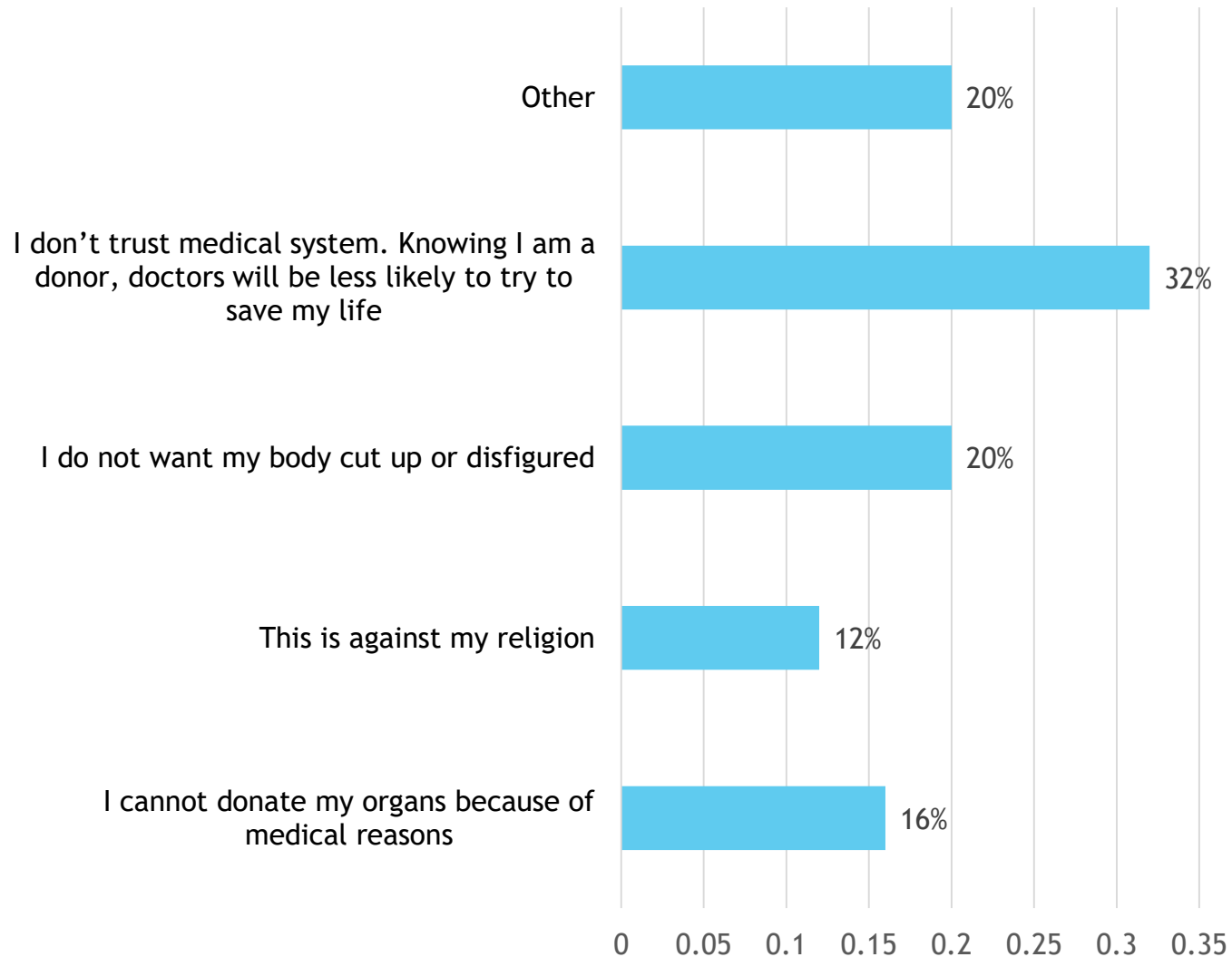
$$Z_{cal} = 1.289$$

$$Z_{tab} = -1.645$$

Since  $Z_{cal}$  is not in the rejection area we accept  $H_0$



### 13. Are there any particular reason(s) that make you less likely to donate your organs or family member's organs upon death?



13. Are there any particular reason(s) that make you less likely to donate your organs or family member's organs upon death?

Success: I cannot donate .....

Confidence Interval:

$$0.1108 < p < 0.2074$$

Testing:

**Claim:** 16% of the population cannot donate because of medical reasons

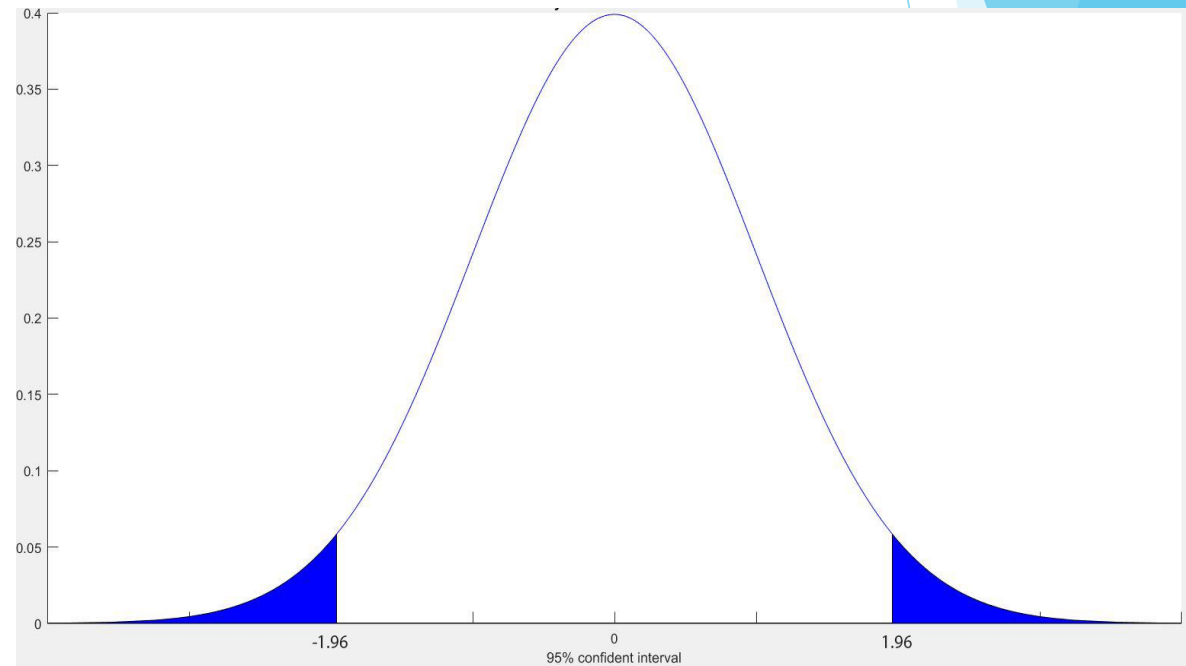
$$H_0: p = 0.16$$

$$H_1: p \neq 0.16$$

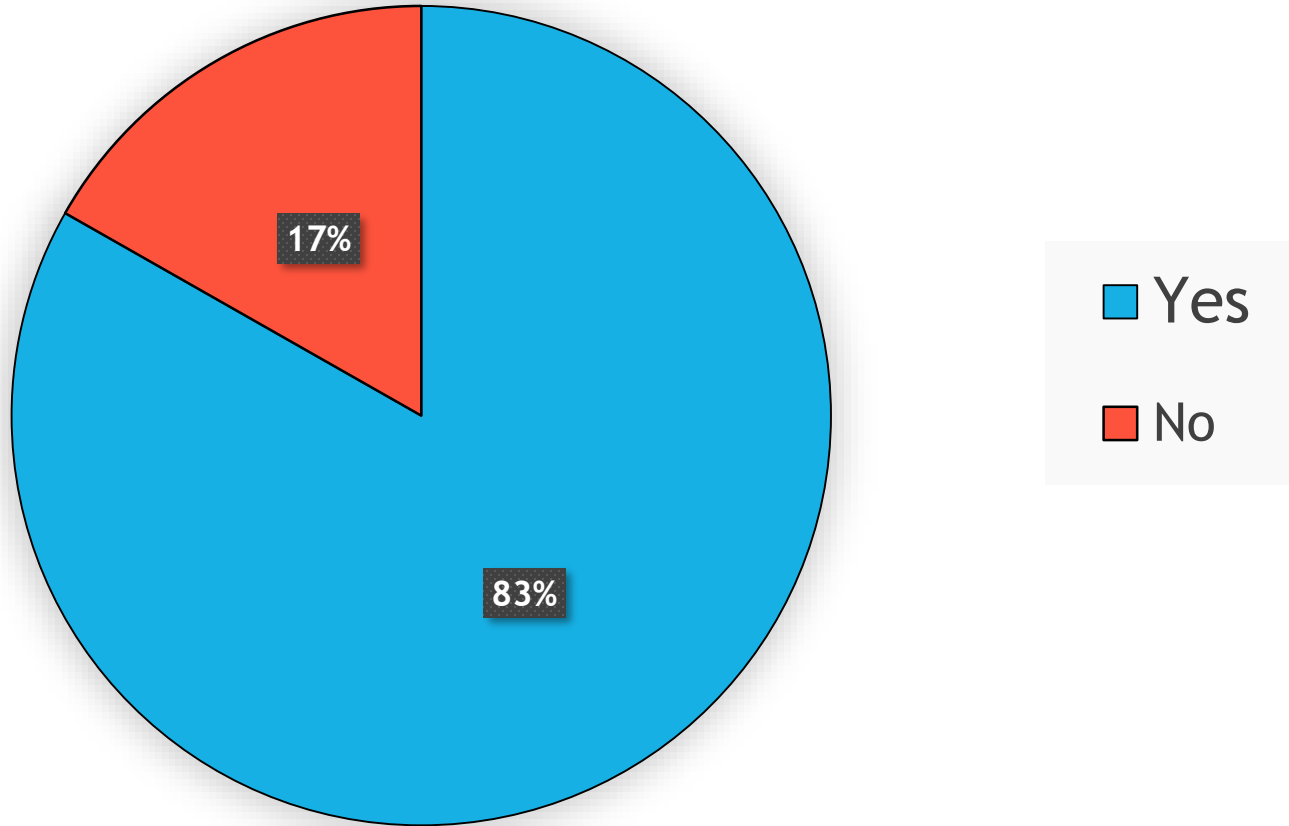
$$Z_{cal} = -0.0368$$

$$Z_{tab} = 1.96$$

Since  $Z_{cal}$  is not in the rejection area we accept  $H_0$



14. Would you encourage the awareness of organ donation and transplant in your country?



# 14. Would you encourage the awareness of organ donation and transplant in your country?

Success: Yes

Confidence Interval:

$$0.7915 < p < 0.8731$$

Testing:

**Claim:** At least 80% will encourage the awareness of organ donation in their country

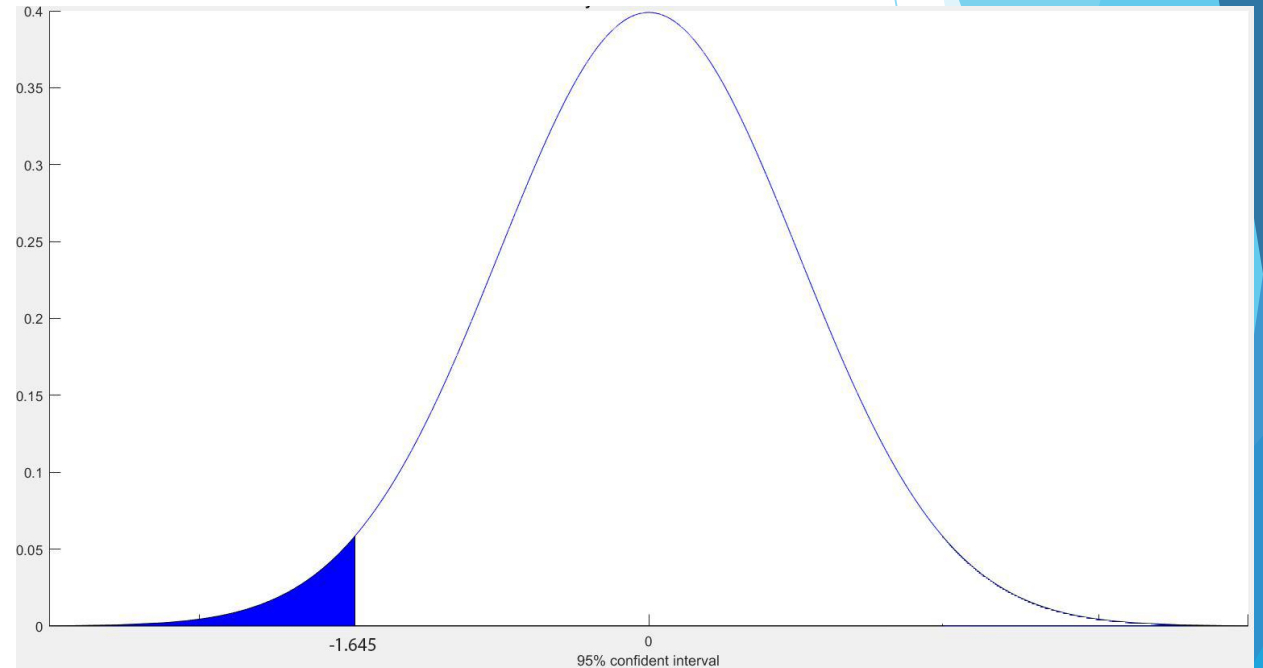
$$H_0: p = 0.80$$

$$H_1: p < 0.80$$

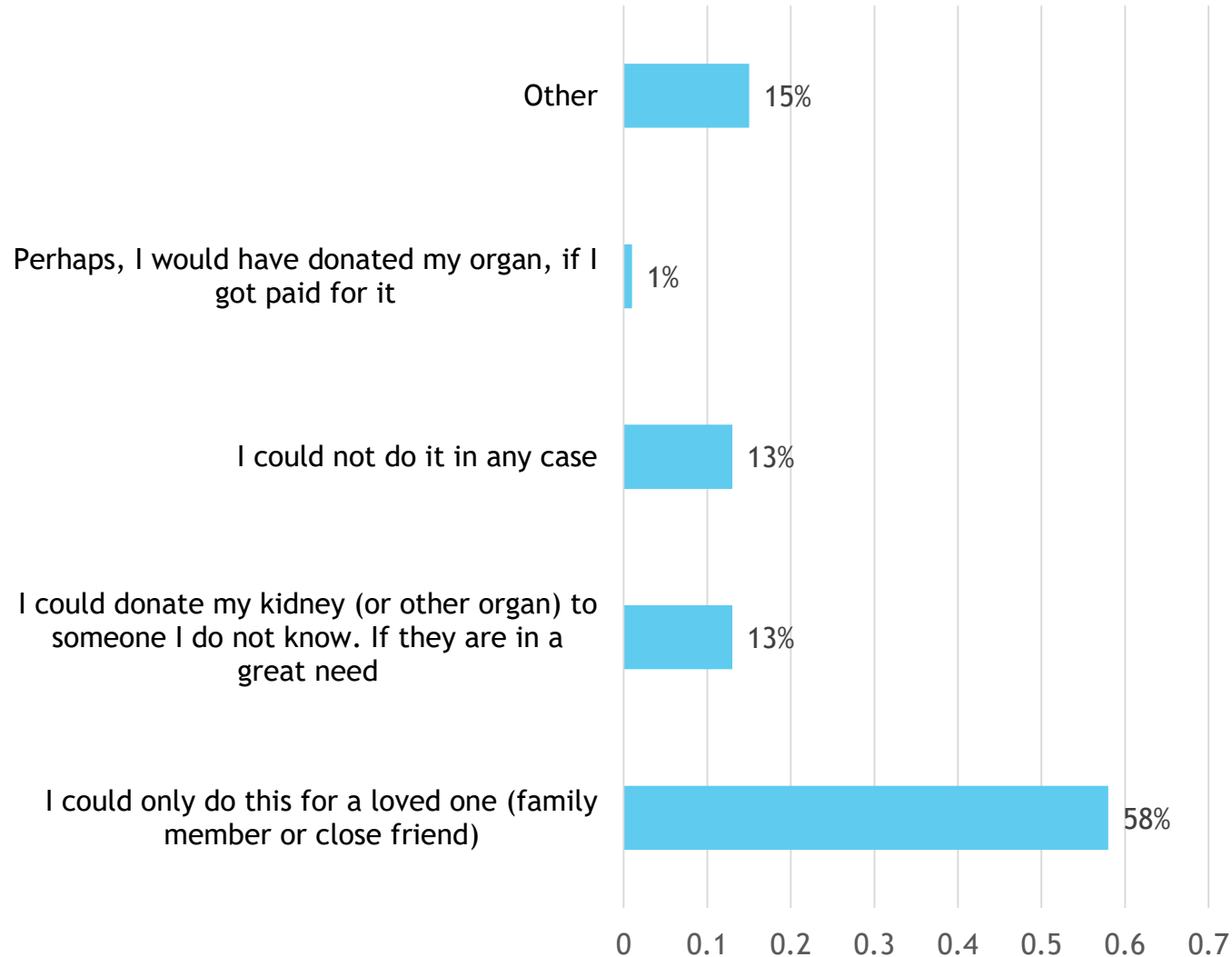
$$Z_{cal} = 1.4489$$

$$Z_{tab} = -1.645$$

Since  $Z_{cal}$  is not in the rejection area we accept  $H_0$



15. Some organs such as kidney or part of livers can be donated while you are alive. How likely are you to donate an organ while you are living?



15. Some organs such as kidney or part of livers can be donated while you are alive. How likely are you to donate an organ while you are living?

Success: I could only do this for a loved one

Confidence Interval:

$$0.5287 < p < 0.6298$$

Testing:

**Claim:** 58% of the population could do this only for a loved one.

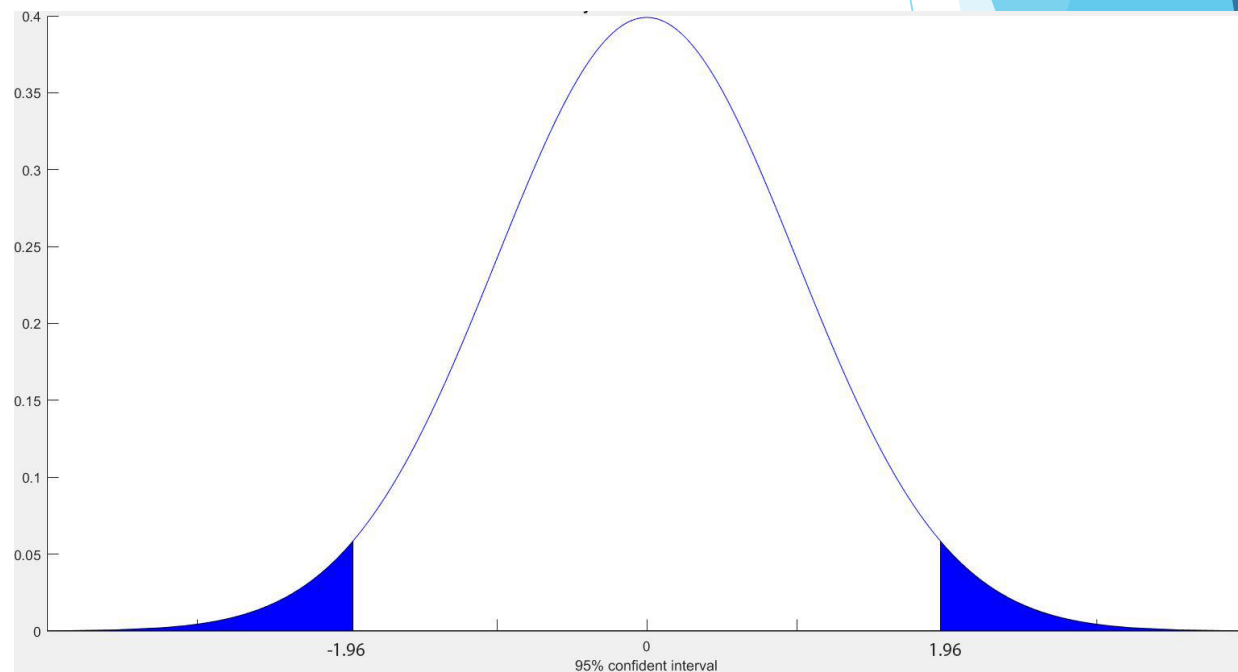
$$H_0: p = 0.58$$

$$H_1: p \neq 0.58$$

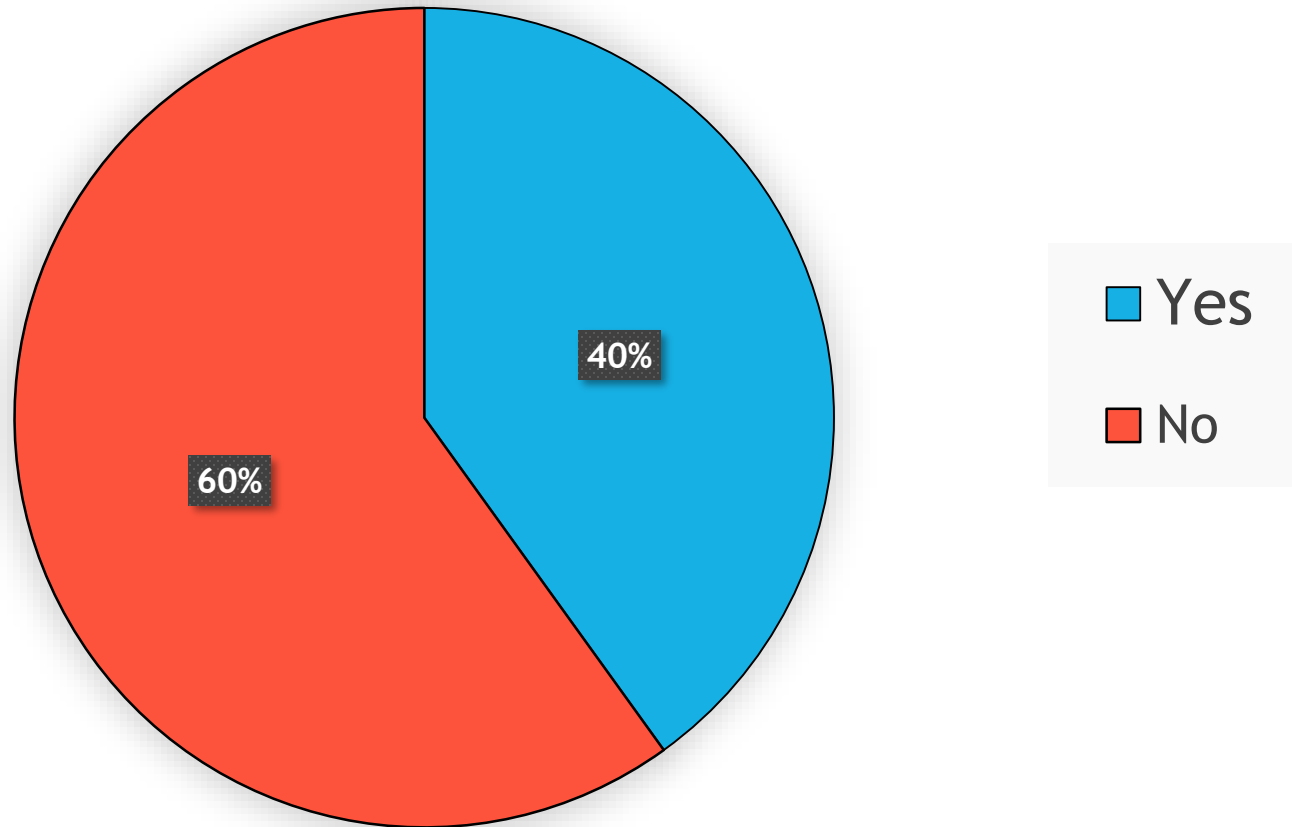
$$Z_{cal} = -0.0297$$

$$Z_{tab} = 1.96$$

Since  $Z_{cal}$  is not in the rejection area we accept  $H_0$



16. Some countries presume that people wish to donate their organs at death. This is called presumed consent. Do you agree with the idea that everyone should be automatically included on the Organ Donor Register with the ability to opt out if they wish?





16. Some countries presume that people wish to donate their organs at death. This is called presumed consent. Do you agree with the idea that everyone should be automatically included on the Organ Donor Register with the ability to opt out if they wish?

Success: Yes

Confidence Interval:

$$0.3471 < p < 0.4541$$

Testing:

**Claim:** 40% of the population supports presumed consent

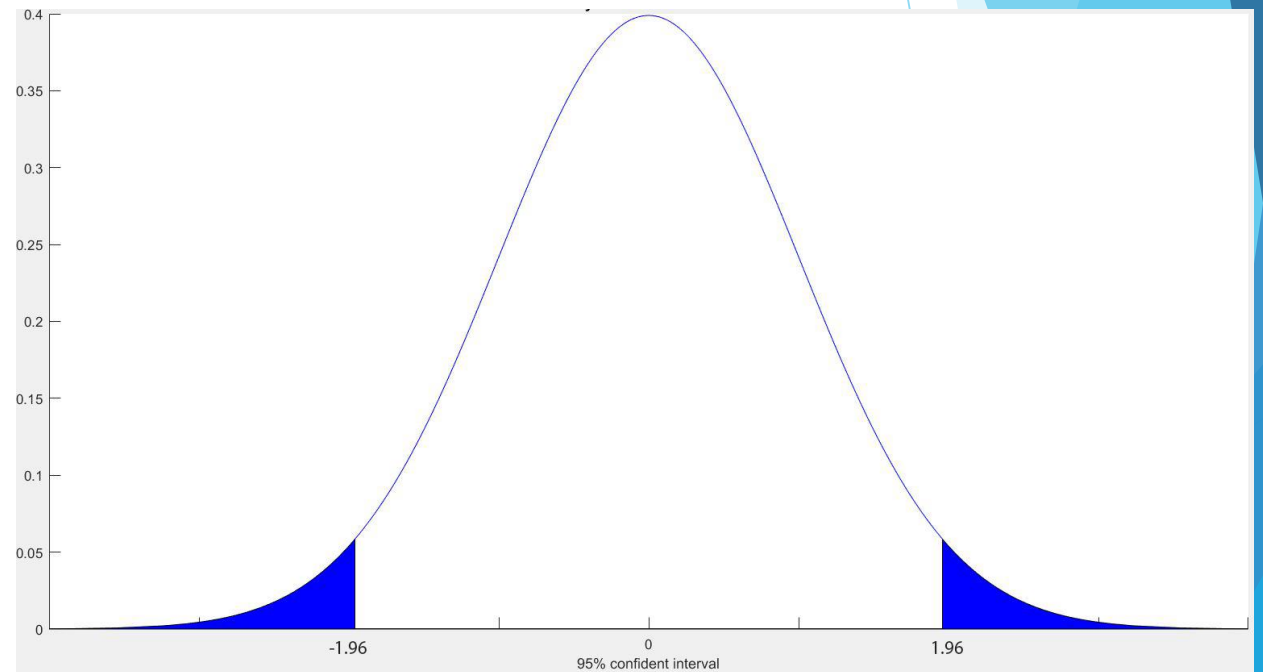
$$H_0: p = 0.40$$

$$H_1: p \neq 0.40$$

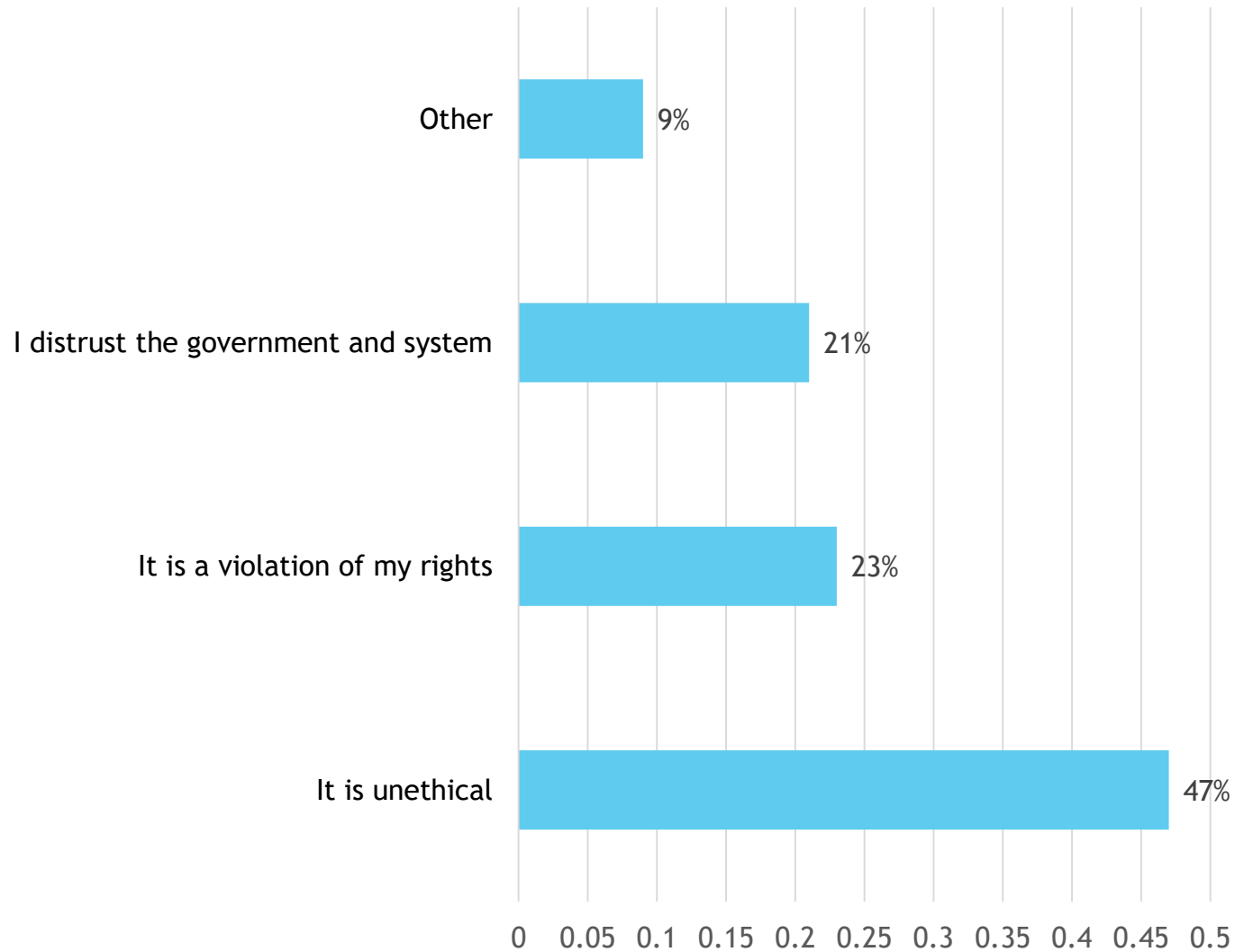
$$Z_{cal} = 0.0228$$

$$Z_{tab} = 1.96$$

Since  $Z_{cal}$  is not in the rejection area we accept  $H_0$



17. If you do not support presumed consent system, what are your reasons.



# 17. If you do not support presumed consent system, what are your reasons.

Success: It is unethical

Confidence Interval:

$$0.3938 < p < 0.5367$$

Testing:

**Claim:** At least 47% of the population is against presumed consent because they think it is unethical.

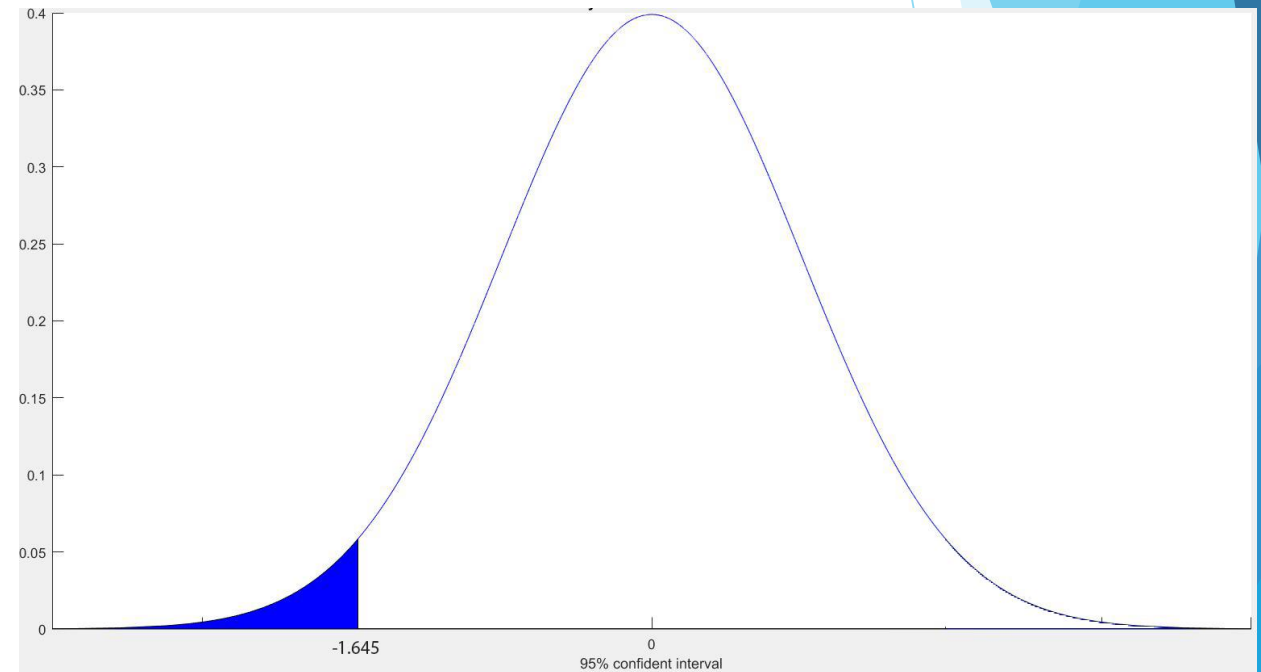
$$H_0: p = 0.47$$

$$H_1: p < 0.47$$

$$Z_{cal} = -0.1304$$

$$Z_{tab} = -1.645$$

Since  $Z_{cal}$  is not in the rejection area we accept  $H_0$



# Conclusion