ZULAL BHILAJIRAO PATIL COLLEGE, DHULE

A

Project Report On

Effect of COVID-19 on various sectors (Education, Agriculture, Health)

Presented By

Miss. Desale Kalyani Bhausaheb

Miss. Patil Harshali Manoj

Miss. Chavan Shweta Baburav

Mr. Patil Bhavesh Pramod

Mr. Gaikwad Aakash Pandurang

Under the guidance of

Prof.N.S.Chavan Sir

Department Of Statistics

Z.B.Patil College , Dhule

In Partial Fulfillment Of Degree Course

T.Y.B.Sc-Statistics

Year 2020-2021

CERTIFICATE

This is to certify that a project on

Effect of COVID-19 on various sectors (Education,Agriculture,Health)

Submitted By,

Miss. Desale Kalyani Bhausaheb

Miss. Patil Harshali Manoj

Miss. Chavan Shweta Baburav

Mr. Patil Bhavesh Pramod

Mr. Gaikwad Aakash Pandurang

T.Y.B.Sc(Statistics),Zulal Bhilajirao Patil College,Dhule has satisfactorily completed the project work in academic year 2020-2021 under the Guidance of

Prof.N.S.Chavan Sir

Project Guide

Prof.N.S.Chavan

Head of Department

Prof.G.T.Pedram

(Department of Statistics,Z.B.Patil College,Dhule)

INDEX

1. Introduction
2. Questionnaire
3. Data
4. Graphical Representation
5. Statistical Analysis
6. Reference and Software

Introduction

Coronavirus diseases seem to be originated in Wuhan Province of China in December 2019 and spread across many provinces of China and to the whole world within a short span of time. Coronavirus is a disease caused by SARS-CoV-2 that can affect the nose, throat, windpipe and lungs. Now, it has become a pandemic and WHO has named this virus as SARS-COV-2 and the disease is called COVID-19. This pandemic became uncontrollable as no vaccine has been discovered yet. This pandemic has forced nations to remain in lockdown and stopped all the religious, cultural and socio-economic activities all over the world. Thousands of people have lost their lives and lakhs of people got infected.

Main Factors :-

Agriculture and Food Processing

Agriculture is considered the backbone of the Indian economy. As Inter-state transportation services have shut down, farmers are unable to sell their crops in the market. They are incurring huge losses and forced to throw out their crops. They don't have any other source of income. The poultry sector which is the fastest-growing subsector of the Indian economy has also incurred huge losses due to social media where misinformation has been spread by correlating the infection of COVID-19 with the consumption of meat and poultry products. Though the government is providing a helping hand still their conditions are miserable.

Education

Due to the outbreak of the pandemic, most schools and educational institutions have closed down to prevent the transfer of disease among children. Though, we are safeguarding them, this will also negatively impact their academic progress. Now, we need to shift our focus from traditional to the virtual classroom. There are many technology-enabled educational institutions that are providing live classes like byjus, extramarks etc. This pandemic forced the Government to boost edtech sector. COVID-19 has changed the way of learning in the long term. Higher education has also got affected as universities and colleges are shut down, most higher education institutions are not equipped with digital technology. There will be a delay in the admission process, as most of the entrance exams are scheduled around April and May. Despite online education, platforms helped students in learning but if this could continue then there can be seen drastic unemployment in the education sector.

Healthcare Industry

COVID-19 has exposed the vulnerabilities of healthcare systems. As we know that access to healthcare is a fundamental right but the fear of COVID-19 everywhere has in turn affected may people's primary

healthcare provisions. This pandemic has made impossible for the pregnant women to visit obstetrician for prenatal checkups and instead of this, opting for telemedicine. Many hospitals are mainly focusing only on COVID-19 patients and due to this, they are ignoring other people who are suffering from some other major problems like cancer and found it difficult to get proper treatment. If this will be continued the death rate from corona will be lower than the death rate from other diseases. This pandemic has taught a lesson that temples, statues and museums are not a necessary requirement but the hospital with world-class infrastructure is. Even there can be seen an adverse impact on the profitability of medical device manufacturer who imports consumables, disposables and capital equipment from china.

Questionnaire

Name *

Gender *

Male

Female

Other

Age *

Q1 : Is it more difficult to you to focus during online teaching than on-site teaching?

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree

Q2 : Can you figure out how to do the most difficult classwork since on-site classes were cancelled?

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree

Q3 : Is your performance as a student has worsen since on-site classes were cancelled?

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree

5. Strongly Disagree

Q4 : How satisfied have you been with support of teaching staff?

1. Very Satisfied
2. Satisfied
3. Neutral
4. Dissatisfied
5. Very Dissatisfied

Q5 : Which mode of learning do you like to prefer?

1. Online
2. Offline

Q6 : What you think how Covid-19 affects on Agricultural Industry?

1. Positively
2. Neutral
3. Negatively

Q7 : Do you think Covid-19 affects on annual income of farmers?

1. Strongly Agree
2. Somewhere Agree
3. Somewhere Disagree
4. Strongly Disagree

Q8 : What's your opinion about quality of vegetables and pulses before and after Covid-19?

1. Extremely Bad
2. Bad
3. Remains Same
4. Good
5. Excellent

Q9 : How is the pandemic affecting or will affect vegetables and pulses prices?

1. Less affected
2. Neutral

3. Somewhere affected
4. Highly affected

Q10 : Do you think is there any impact of farm labours issues on farming operation?

1. Not Impacting
2. Slightly Impacting
3. Significantly Impacting

Q11 : What do you think about medical facilities in India before and after Covid-19 arrived?

1. Increase greatly
2. Increase a little
3. Decrease a little
4. Decrease greatly

Q12 : Do you think our hospitals and services are trustworthy in Covid-19?

1. Agree
2. Somewhere agree
3. Disagree
4. Somewhere disagree

Q13 : Are medical staff really aware about patients? What's your opinion?

1. Low awareness
2. Rarely awareness
3. Fully awareness

Q14 : Is our medical facilities are strong enough to provide beds and ventilators to common people?

1. Yes
2. No

Q15 : Rate the hospital's services in Covid-19 pandemic.

1. Worst

2. Poor
3. Good
4. Excellent

Q16 : Please access the satisfaction in dealing with the Covid-19 pandemic of the following sectors.

Very dissatisfied Dissatisfied Neutral Satisfied Very satisfied

- Education
- Agricultural
- Hospitals

Data

SR.NO.	NAME	GENDER	AGE	Q1				
				A	B	C	D	E
1	Nilesh Ghitre	M	21	0	0	0	1	0
2	Jayesh Patil	M	20	0	0	0	1	0
3	Santosh Kuklare	M	24	0	0	0	1	0
4	Amol Chavan	M	24	0	0	0	0	0
5	Ranjit Chavan	M	25	0	0	1	0	0
6	Chetna Jamadar	F	20	0	0	0	1	0
7	Minal Mahajan	F	26	0	0	0	1	0
8	Rahul Gadhari	M	28	0	0	0	1	0
9	Mohit Desale	M	16	0	0	0	1	0
10	Kavita Pawar	F	25	0	1	0	0	0
11	Sonali Borse	F	24	0	0	1	0	0
12	Komal Yevle	F	20	0	0	0	1	0
13	Manisha Patil	F	22	0	0	1	0	0
14	Sayali Wakode	F	18	0	0	0	0	1
15	Hemlata Desale	F	26	0	1	0	0	0
16	Tushar Deore	M	24	0	0	1	0	0
17	Paresh Patil	M	20	0	0	1	0	0
18	Kalyani Desale	F	21	0	0	0	0	1
19	Ganesh Thakare	M	26	0	0	1	0	0
20	Ranjana Patil	F	25	0	0	0	1	0
21	Harish Patil	M	21	0	0	0	1	0
22	Mayur Salunkhe	M	23	0	0	0	1	0
23	Harshada Deore	F	20	0	0	0	1	0
24	Snehal Ingale	F	18	0	0	0	1	0
25	Pratik Patil	M	26	0	0	1	0	0
26	Mayur Patil	M	19	0	0	1	0	0
27	Akash Gangurde	M	23	0	0	0	0	1
28	Ajay Bhoi	M	22	0	1	0	0	0
29	Shweta Mahajan	F	21	0	1	0	0	0
30	Sameer Shinde	M	18	0	0	0	1	0
31	Sushma Patil	F	26	0	0	1	0	0
32	Vidya Mali	F	19	0	0	1	0	0
33	Chetan Shinde	M	19	0	1	0	0	0
34	Akshay Pawar	M	25	0	0	0	0	1
35	Krushna Chaudhari	M	21	0	0	0	0	1

Q2					Q3				
A	B	C	D	E	A	B	C	D	E

0	0	0	1	0	0	1	0	0	0
0	1	0	0	0	0	0	0	1	0
1	0	0	0	0	0	0	0	1	0
0	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0	1	0
0	0	1	0	0	0	0	0	1	0
0	0	0	1	0	0	0	0	1	0
0	0	0	1	0	0	0	0	1	0
0	0	0	1	0	0	0	0	1	0
0	0	0	1	0	0	0	0	1	0
0	0	1	0	0	0	0	0	0	1
0	0	1	0	0	0	0	0	1	0
0	0	0	1	0	0	0	1	0	0
0	0	0	1	0	0	0	0	0	1
1	0	0	0	0	0	0	0	0	1
0	0	0	1	0	0	0	0	0	1
0	0	0	1	0	0	0	1	0	0
0	0	0	1	0	0	0	1	0	0
0	0	0	1	0	0	1	0	0	0
0	0	0	1	0	0	1	0	0	0
0	0	0	1	0	0	1	0	0	0
0	0	0	1	0	0	0	0	1	0
0	1	0	0	0	0	0	1	0	0
0	0	1	0	0	0	0	0	0	1
0	0	0	1	0	0	0	1	0	0
0	0	0	0	1	0	0	0	0	1
0	0	1	0	0	0	0	0	1	0
0	0	0	1	0	0	1	0	0	0
0	0	1	0	0	0	0	0	0	1
0	1	0	0	0	0	0	0	0	1
0	0	1	0	0	0	0	1	0	0
0	0	0	1	0	0	1	0	0	0
0	1	0	0	0	0	0	0	0	1
0	0	0	1	0	0	0	1	0	0
0	0	0	1	0	0	0	1	0	0

Q4					Q5		Q6		
A	**B**	**C**	**D**	**E**	**A**	**B**	**A**	**B**	**C**
0	1	0	0	0	1	0	0	1	0
0	0	0	1	0	0	1	0	1	0
0	1	0	0	0	0	1	1	0	0
0	0	0	0	0	0	0	0	0	0

0	1	0	0	0	0	1	1	0	0
0	1	0	0	0	0	1	0	0	0
0	1	0	0	0	0	1	0	1	0
0	1	0	0	0	0	1	1	0	0
0	0	1	0	0	0	1	0	1	0
0	1	0	0	0	0	1	0	1	0
0	1	0	0	0	0	1	0	0	1
0	1	0	0	0	0	1	0	0	1
0	0	0	1	0	0	1	0	1	0
0	0	0	1	0	0	1	0	1	0
0	1	0	0	0	0	1	1	0	0
0	1	0	0	0	0	1	0	0	1
1	0	0	0	0	0	1	1	0	0
0	1	0	0	0	0	1	0	1	0
1	0	0	0	0	1	0	0	1	0
0	1	0	0	0	0	1	0	0	1
0	0	1	0	0	0	1	0	1	0
0	1	0	0	0	0	1	1	0	0
0	1	0	0	0	1	0	0	1	0
0	0	0	1	0	0	1	0	1	0
0	1	0	0	0	0	1	1	0	0
1	0	0	0	0	1	0	0	1	0
0	0	1	0	0	0	1	0	0	1
0	0	0	1	0	1	0	0	0	1
0	1	0	0	0	1	0	0	1	0
0	1	0	0	0	0	1	0	1	0
0	0	1	0	0	0	1	0	0	1
0	1	0	0	0	1	0	1	0	0
0	1	0	0	0	0	1	0	1	0
1	0	0	0	0	0	1	1	0	0
0	0	0	1	0	0	1	0	1	0

Q7				Q8				
A	**B**	**C**	**D**	**A**	**B**	**C**	**D**	**E**
0	1	0	0	0	0	1	0	0
0	1	0	0	0	0	1	0	0
0	1	0	0	0	0	1	0	0
0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	1	0	0
1	0	0	0	0	0	1	0	0
0	1	0	0	0	0	1	0	0

1	0	0	0	0	0	1	0	0
0	1	0	0	0	0	1	0	0
0	1	0	0	0	0	0	1	0
1	0	0	0	0	0	1	0	0
0	1	0	0	1	0	0	0	0
0	1	0	0	0	1	0	0	0
1	0	0	0	0	0	1	0	0
1	0	0	0	0	0	0	1	0
1	0	0	0	0	0	0	1	0
1	0	0	0	0	1	0	0	0
1	0	0	0	0	1	0	0	0
1	0	0	0	0	0	1	0	0
0	1	0	0	0	0	1	0	0
0	1	0	0	0	0	0	1	0
1	0	0	0	0	0	0	1	0
0	1	0	0	0	0	1	0	0
0	1	0	0	0	1	0	0	0
1	0	0	0	0	0	1	0	0
1	0	0	0	1	0	0	0	0
1	0	0	0	0	0	1	0	0
0	1	0	0	0	0	0	1	0
1	0	0	0	0	0	0	1	0
1	0	0	0	1	0	0	0	0
0	1	0	0	0	0	1	0	0
1	0	0	0	0	1	0	0	0
1	0	0	0	1	0	0	0	0
0	1	0	0	0	0	0	1	0
1	0	0	0	0	0	1	0	0

Q9				Q10		
A	**B**	**C**	**D**	**A**	**B**	**C**
0	1	0	0	1	0	0
0	1	0	0	0	1	0
0	0	0	1	0	0	1
0	0	0	0	0	0	0
0	0	0	1	0	1	0
0	1	0	0	0	0	1
0	0	1	0	0	1	0
0	0	1	0	0	1	0
0	1	0	0	0	1	0
0	0	1	0	0	0	1
0	1	0	0	0	1	0
1	0	0	0	0	0	1

0	1	0	0	0	1	0
0	0	1	0	0	1	0
0	1	0	0	0	0	1
0	0	0	1	0	1	0
0	1	0	0	0	1	0
1	0	0	0	0	1	0
0	0	1	0	0	1	0
1	0	0	0	0	0	1
0	0	1	0	0	1	0
0	0	1	0	0	0	1
0	1	0	0	1	0	0
0	0	0	1	0	0	1
0	0	1	0	0	1	0
1	0	0	0	1	0	0
0	0	1	0	0	1	0
0	1	0	0	0	1	0
0	0	1	0	0	0	1
0	0	0	1	0	0	1
0	0	1	0	0	1	0
0	0	1	0	0	1	0
0	0	0	1	0	0	1
1	0	0	0	1	0	0
0	0	1	0	0	0	1

Q11				Q12			
A	**B**	**C**	**D**	**A**	**B**	**C**	**D**
0	1	0	0	1	0	0	0
0	1	0	0	0	1	0	0
1	0	0	0	0	0	1	0
0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	1
1	0	0	0	0	1	0	0
0	0	1	0	0	1	0	0
0	1	0	0	0	1	0	0
1	0	0	0	0	1	0	0
0	1	0	0	0	1	0	0
0	1	0	0	0	1	0	0
0	1	0	0	0	1	0	0
0	1	0	0	0	1	0	0
0	1	0	0	0	0	0	1
1	0	0	0	1	0	0	0
1	0	0	0	1	0	0	0

1	0	0	0	1	0	0	0
0	1	0	0	0	1	0	0
0	1	0	0	0	1	0	0
0	1	0	0	0	1	0	0
1	0	0	0	1	0	0	0
1	0	0	0	1	0	0	0
1	0	0	0	1	0	0	0
0	1	0	0	0	0	1	0
0	1	0	0	0	0	1	0
0	1	0	0	1	0	0	0
0	1	0	0	0	1	0	0
0	0	0	1	0	0	1	0
0	0	0	1	0	0	1	0
1	0	0	0	0	0	0	1
0	1	0	0	0	1	0	0
0	1	0	0	1	0	0	0
0	1	0	0	0	0	1	0
1	0	0	0	0	0	1	0
1	0	0	0	1	0	0	0

Q13			**Q14**		**Q15**			
A	**B**	**C**	**A**	**B**	**A**	**B**	**C**	**D**
0	0	1	0	1	0	1	0	0
0	1	0	1	0	0	1	0	0
0	1	0	0	1	0	1	0	0
0	0	0	0	0	0	0	0	0
0	1	0	0	1	0	0	1	0
0	0	1	1	0	0	0	0	1
0	1	0	0	1	0	0	1	0
0	0	1	0	1	0	1	0	0
0	1	0	0	1	0	1	0	0
1	0	0	0	1	0	0	1	0
0	1	0	0	1	0	0	1	0
0	1	0	0	1	0	0	1	0
0	0	1	0	1	0	0	1	0
1	0	0	0	1	0	1	0	0
0	0	1	0	1	0	0	0	1
0	0	1	0	1	0	0	1	0
0	0	1	0	1	0	0	0	1
0	1	0	1	0	0	0	1	0
1	0	0	0	1	0	1	0	0
0	1	0	0	1	0	0	1	0

0	1	0	0	1	0	0	1	0
0	1	0	1	0	0	0	1	0
0	1	0	0	1	0	0	1	0
1	0	0	0	1	1	0	0	0
1	0	0	0	1	0	0	1	0
1	0	0	1	0	0	0	1	0
0	1	0	0	1	0	1	0	0
1	0	0	0	1	0	1	0	0
1	0	0	0	1	0	0	1	0
0	1	0	0	1	1	0	0	0
0	1	0	0	1	0	1	0	0
0	0	1	1	0	0	0	1	0
0	1	0	0	1	0	0	1	0
0	1	0	1	0	0	1	0	0
0	1	0	1	0	0	0	1	0

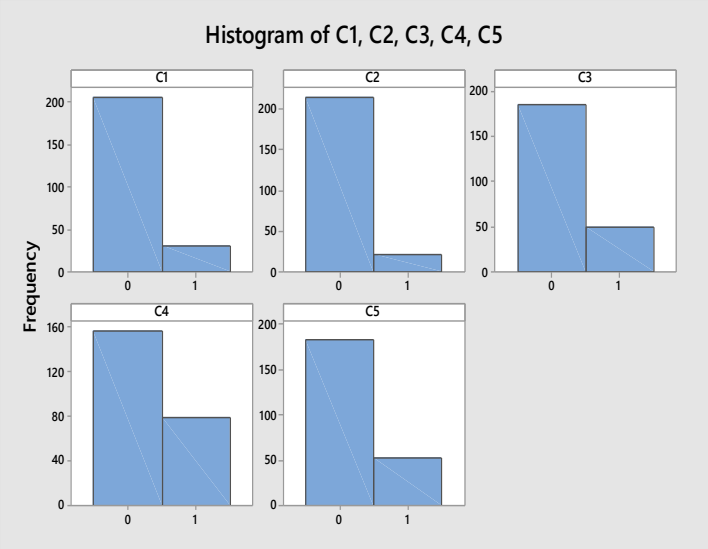
Q16														
A					**B**					**C**				
a	**b**	**c**	**d**	**E**	**a**	**b**	**c**	**d**	**e**	**a**	**b**	**c**	**d**	**e**
1	0	0	0	0	0	1	0	0	0	0	0	1	0	0
1	0	0	0	0	0	0	1	0	0	0	1	0	0	0
1	0	0	0	0	0	1	0	0	0	1	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	1	0	0	0	1	0	0	0
0	1	0	0	0	0	0	1	0	0	0	0	1	0	0
0	1	0	0	0	0	1	0	0	0	0	1	0	0	0
0	1	0	0	0	0	0	1	0	0	0	1	0	0	0
0	0	1	0	0	0	0	1	0	0	0	0	1	0	0
0	0	1	0	0	0	0	1	0	0	0	1	0	0	0
0	0	1	0	0	0	0	0	0	1	0	0	1	0	0
1	0	0	0	0	1	0	0	0	0	0	0	0	0	1
0	0	1	0	0	0	1	0	0	0	1	0	0	0	0
0	0	0	1	0	0	0	1	0	0	0	0	1	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0	1	0	0	0	0	0	1
0	0	1	0	0	0	0	1	0	0	0	0	0	1	0
0	0	0	1	0	0	0	1	0	0	0	0	0	0	1
0	0	0	1	0	0	1	0	0	0	1	0	0	0	0
0	0	0	1	0	0	0	0	0	1	0	0	0	1	0
1	0	0	0	0	0	0	1	0	0	0	0	1	0	0
0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
0	1	0	0	0	0	0	1	0	0	0	0	1	0	0
0	1	0	0	0	0	1	0	0	0	1	0	0	0	0

0	0	0	1	0	0	0	0	1	0	0	1	0	0	0
1	0	0	0	0	0	1	0	0	0	1	0	0	0	0
0	1	0	0	0	0	1	0	0	0	0	1	0	0	0
0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
0	0	0	0	1	0	0	0	1	0	0	0	0	1	0
0	0	1	0	0	0	0	0	1	0	0	0	0	1	0
0	0	1	0	0	0	0	1	0	0	0	0	1	0	0
0	0	0	1	0	0	1	0	0	0	0	0	0	0	1
0	1	0	0	0	0	0	0	1	0	0	0	0	1	0
0	0	0	1	0	0	0	0	0	1	0	0	1	0	0
0	1	0	0	0	0	0	1	0	0	0	0	0	1	0

Graphical Representation

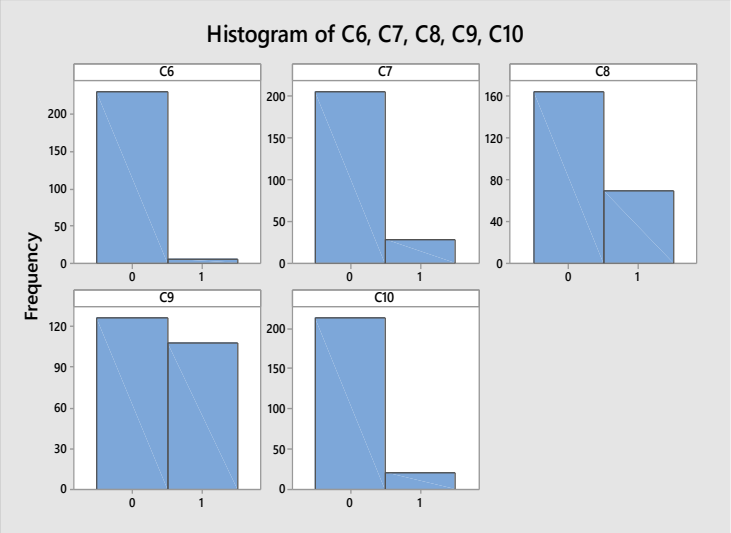
Histogram:-

Q1



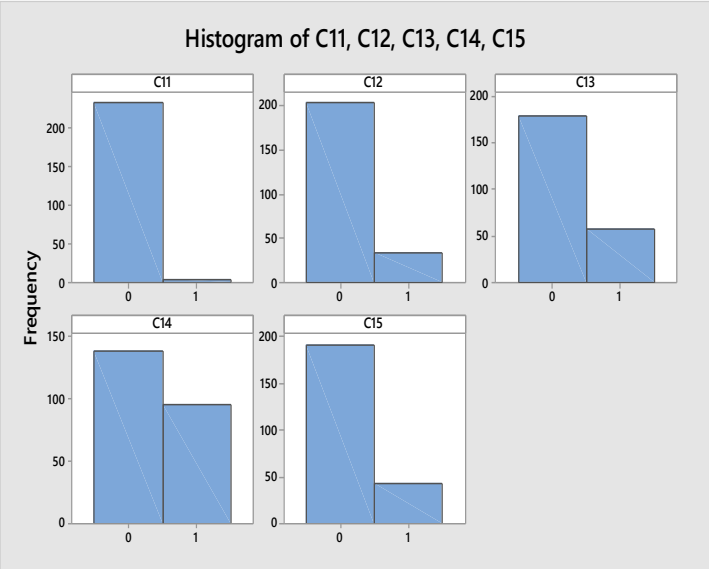
Interpretation: From the above graph we can easily conclude that it is more difficult to focus during online teaching than on-site.

Q2.



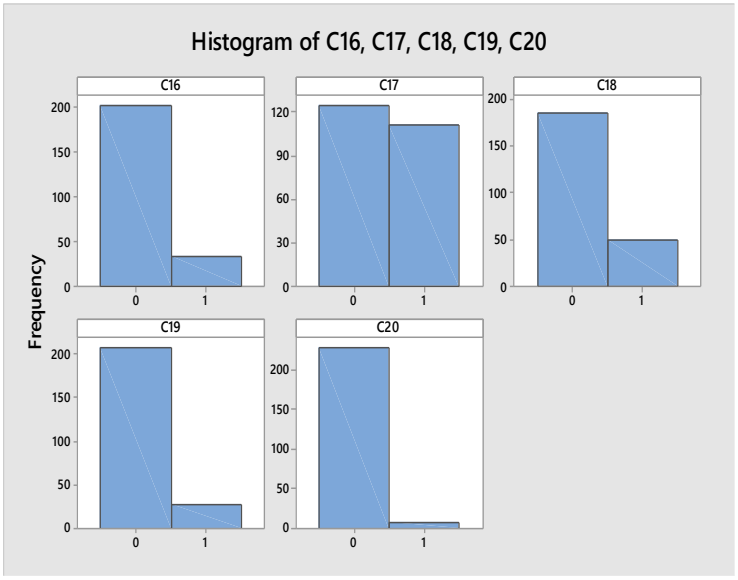
Interpretation: From the above graph we can conclude that most of the people cannot figure out how to do the most difficult work since on-site classes were cancelled

Q3.



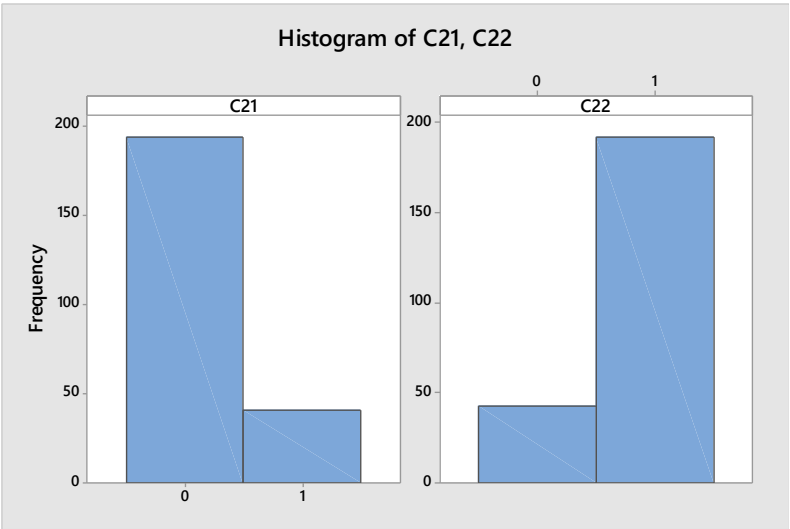
Interpretation: From the above graph we can conclude that most of the them think that their performance has not worsen but some of the them think that their performance has worsen since on-site classes were cancelled.

Q4.



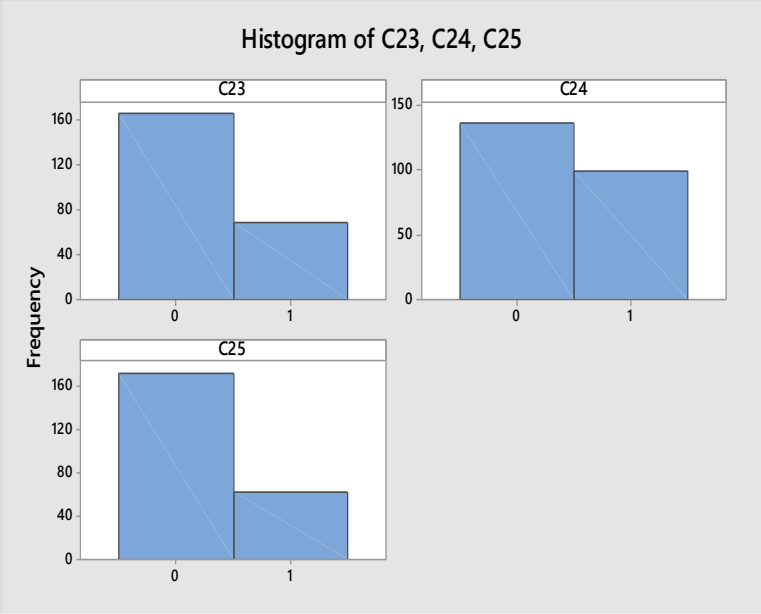
Interpretation: From the above graph we can conclude that most of the people are satisfied with their teaching staff.

Q5.



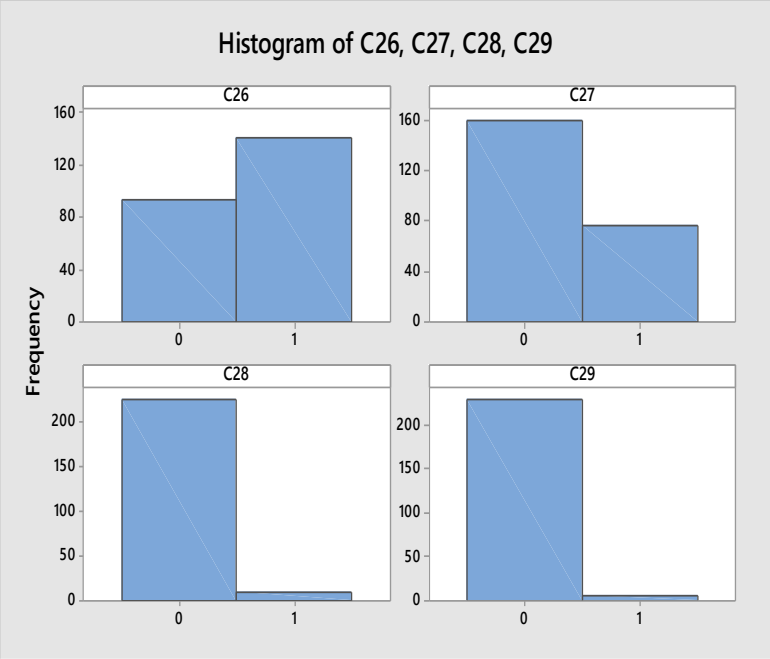
Interpretation: From the above graph we can conclude that most of the people prefer offline learning than online.

Q6.



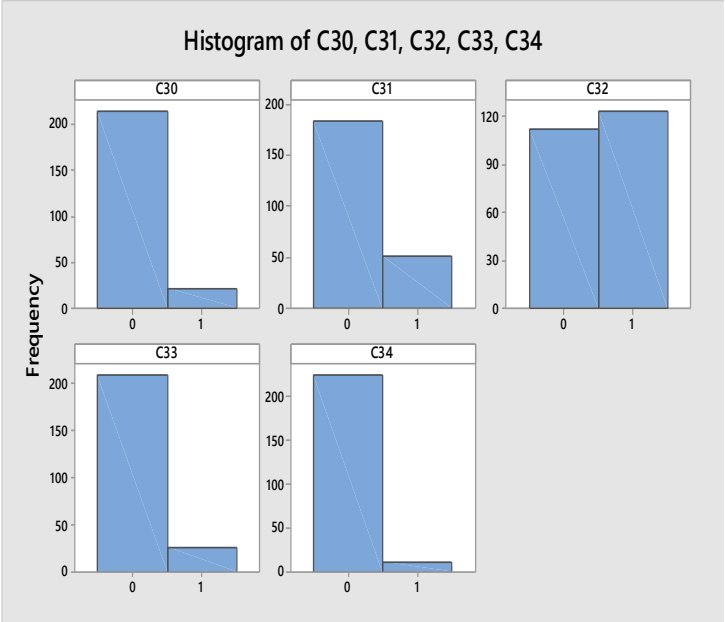
Interpretation: From the above graph ,most of the people think that Covid-19 not affected on agricultural industry. But some still think it affected positively.

Q7.



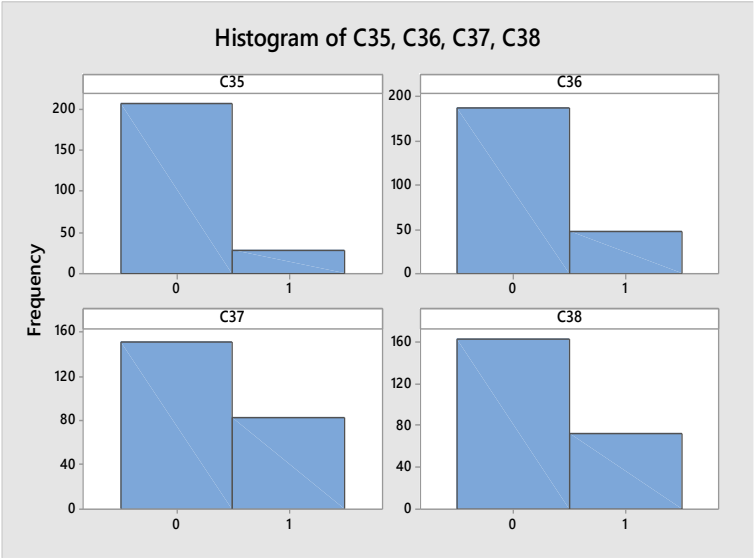
Interpretation: From the above graph , most of the people strongly agreed that Covid-19 affects on annual income of farmers.

Q8.



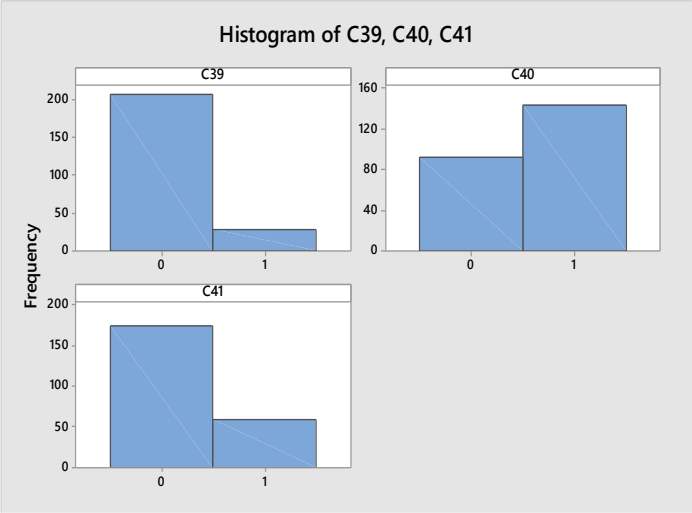
Interpretation: From the above graph , most of the people think that quality of vegetables and pulses before and after Covid-19 remains same.

Q9.



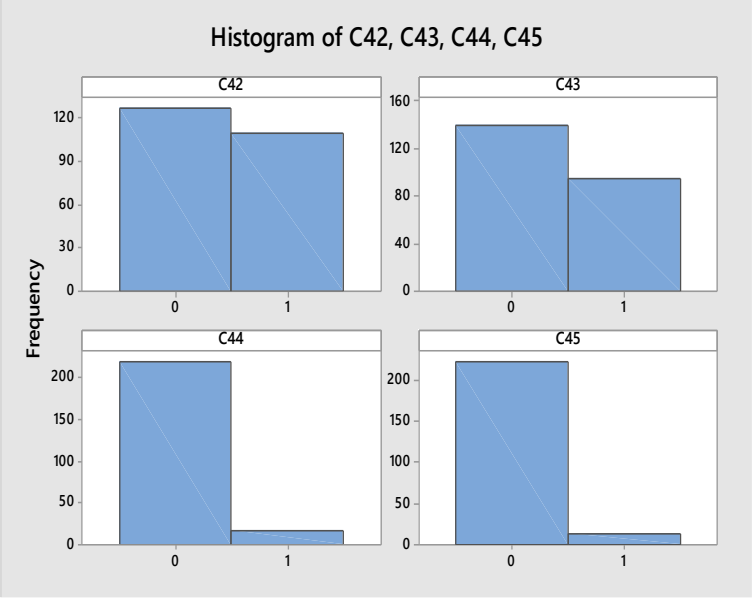
Interpretation: From the above graph, most people think that the pandemic somewhere effecting or will effect on vegetables and pulses prices, On the other hand some people think that prices are highly affected or will affect.

Q10.



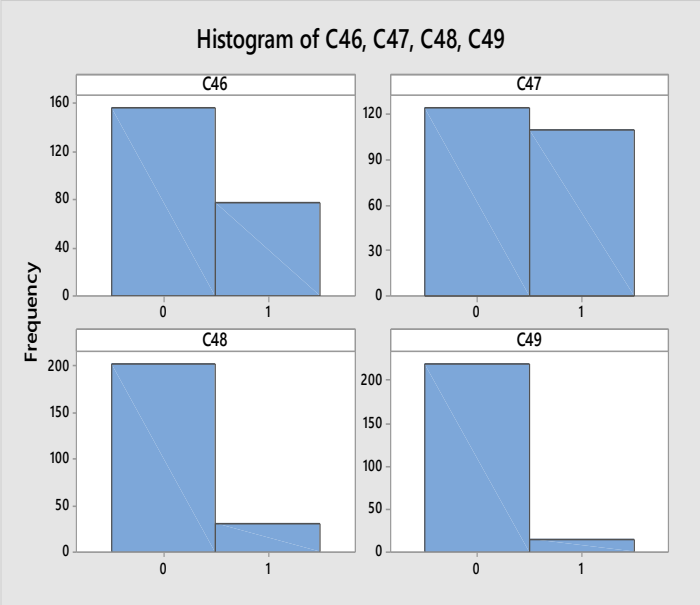
Interpretation: From the above graph, most of the people think that farm labour issues are slightly impacting on farming operations.

Q11.



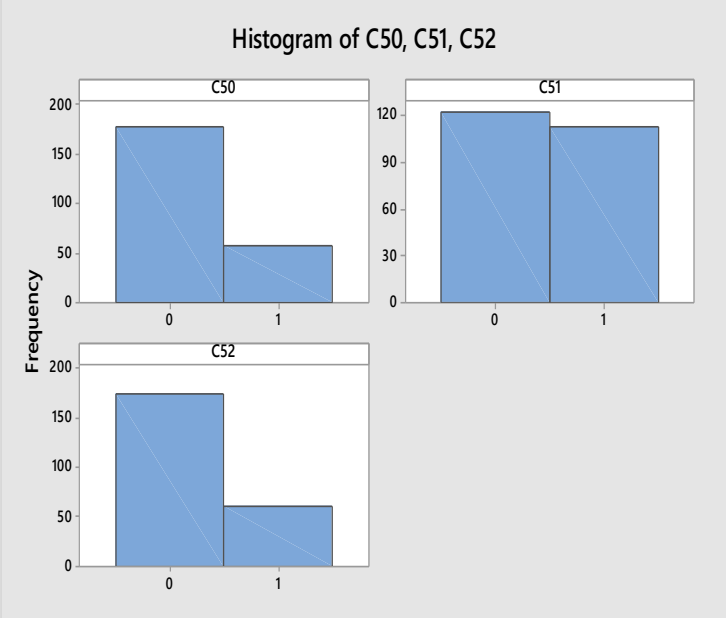
Interpretation: From the above graph, most of the people think that medical facilities in India are increase greatly since Covid-19 arrived.

Q12.



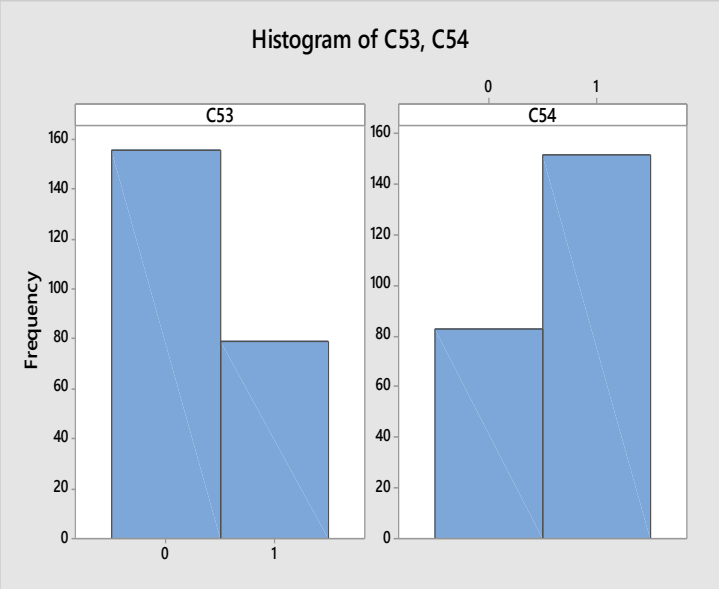
Interpretation: From the above graph, most of the people are somewhere agree that our hospitals are trustworthy in Covid-19.

Q13.



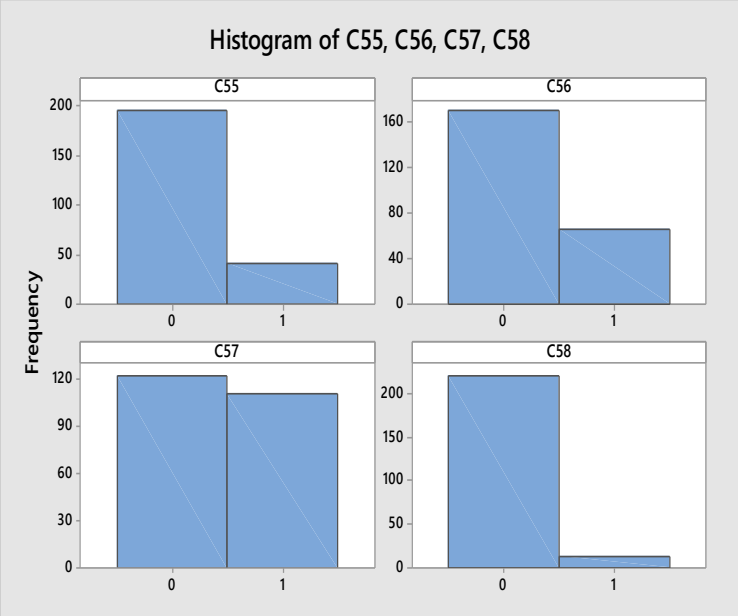
Interpretation: From the above graph, most of the people think that medical staff is rarely aware about their patients.

Q14.



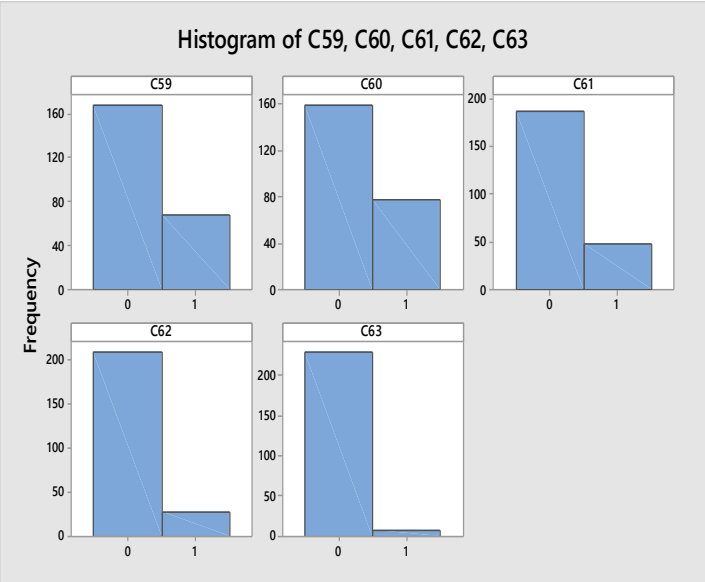
Interpretation: From the above graph, most of the people think that our medical facilities are not strong enough to provide beds and ventilators to common people.

Q15.



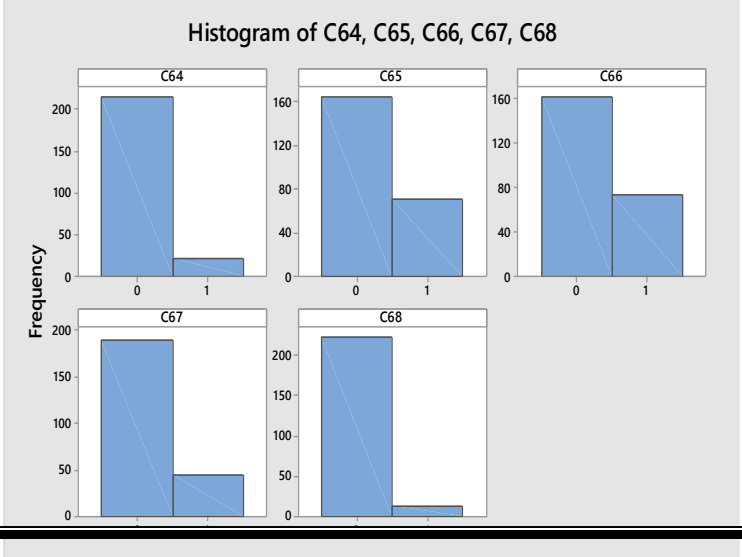
Interpretation: From the above graph, most of the people rated good to our hospital services in Covid-19 pandemic.

Q16-A



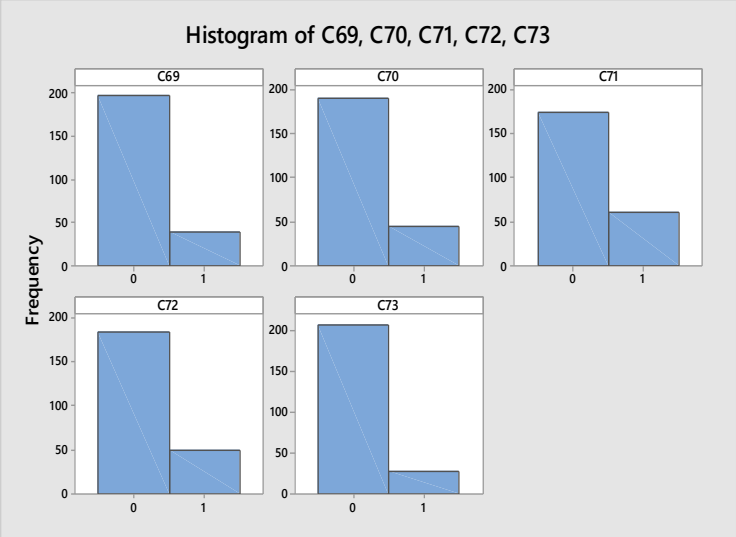
Interpretation: From the above graph, most of the people are dissatisfied with online education facilities.

Q16-B



Interpretation: From the above graph, most of the people are neutrally satisfied with agricultural industry.

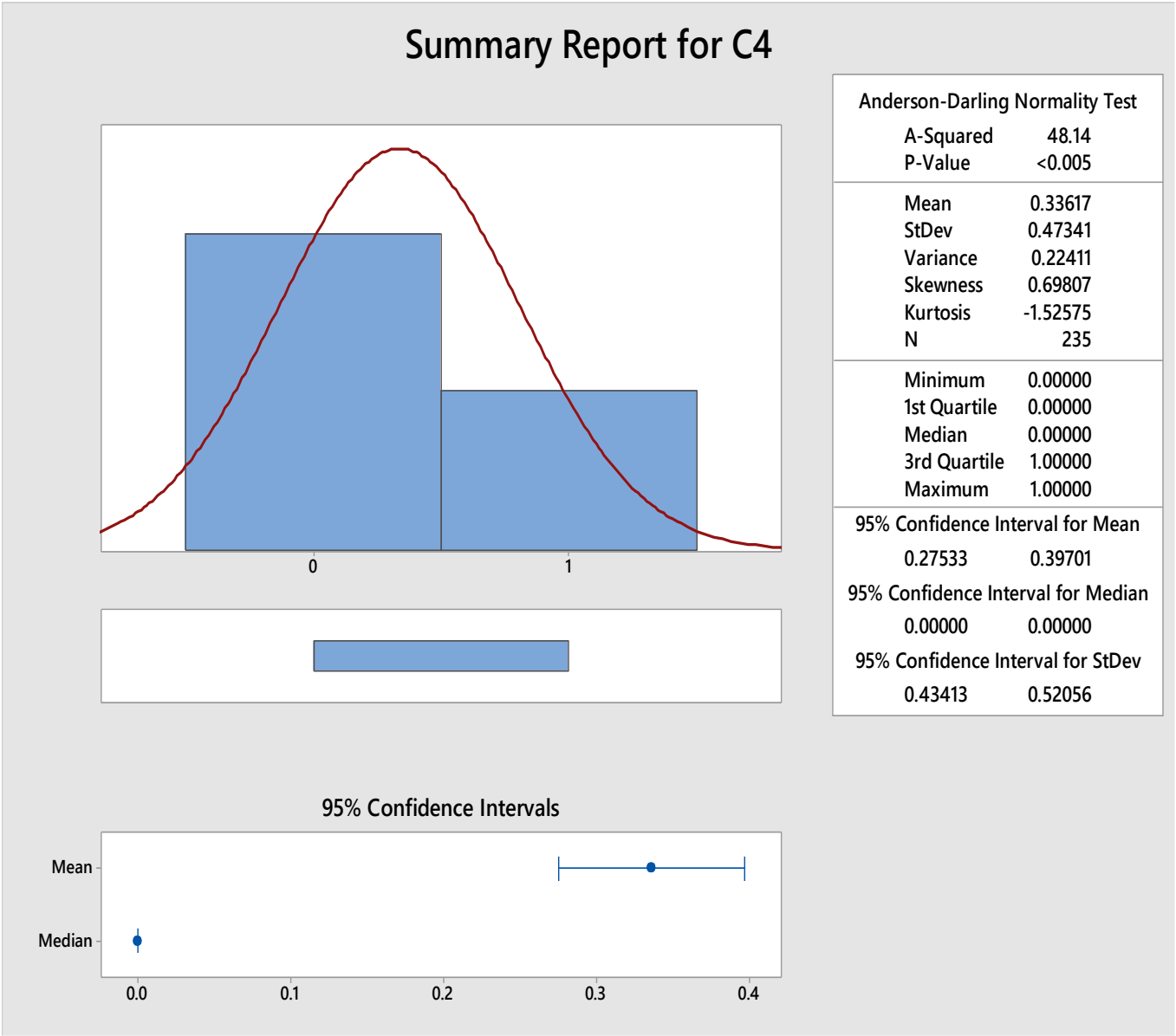
Q16-C



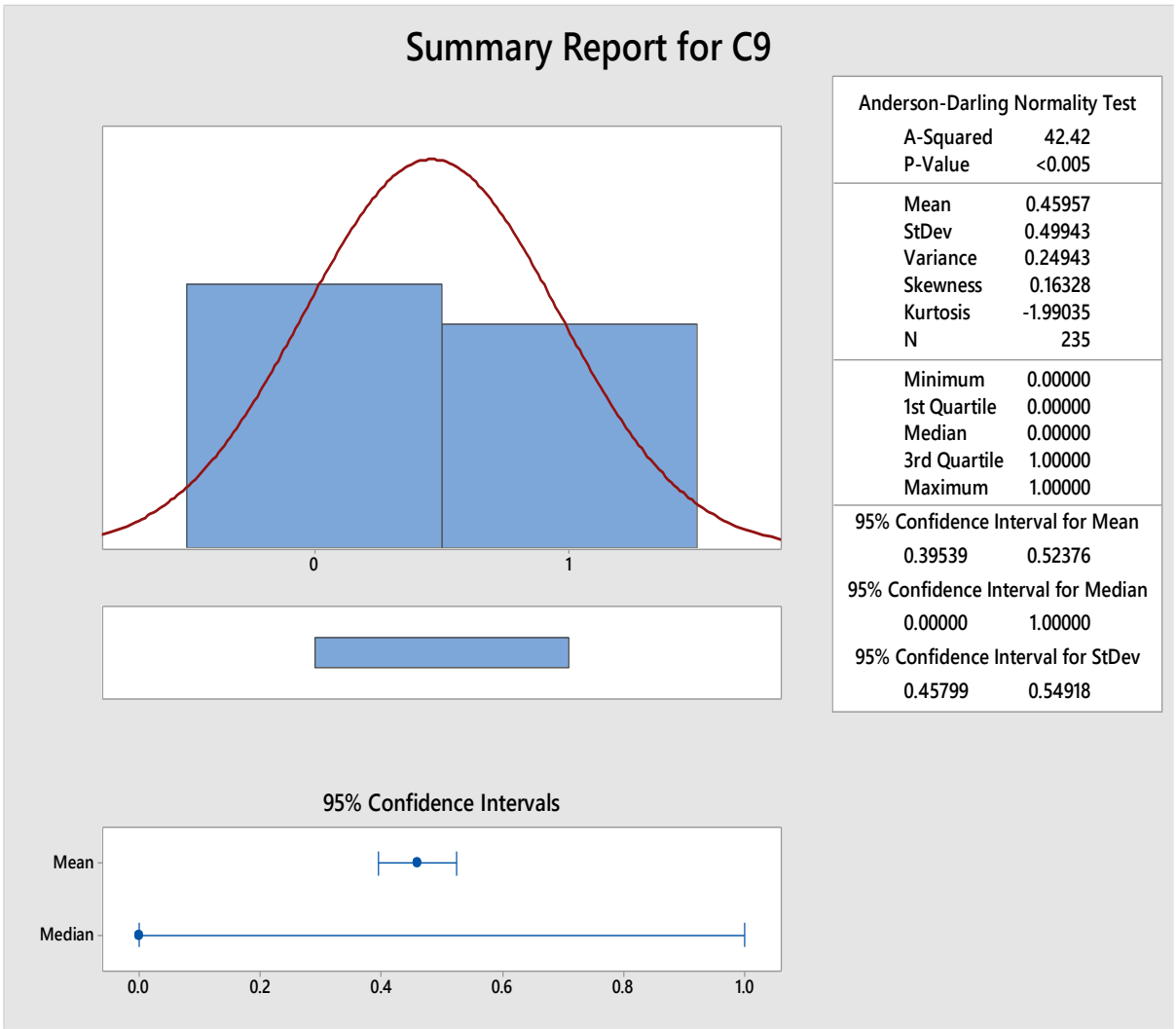
Interpretation: From the above graph, most of the people are neutrally satisfied with medical facilities.

Graphical Summary

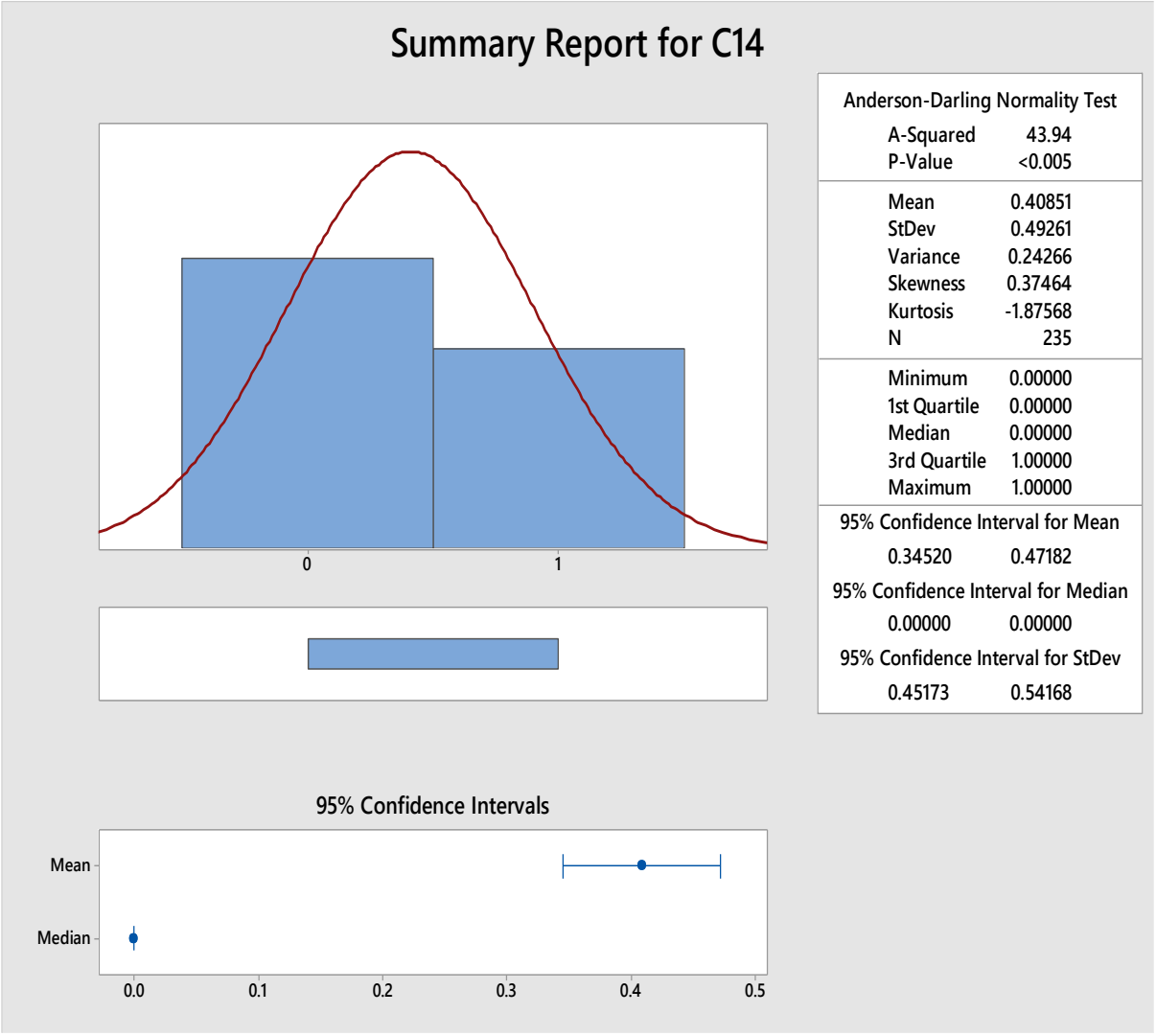
Summary of most selected option of Q1



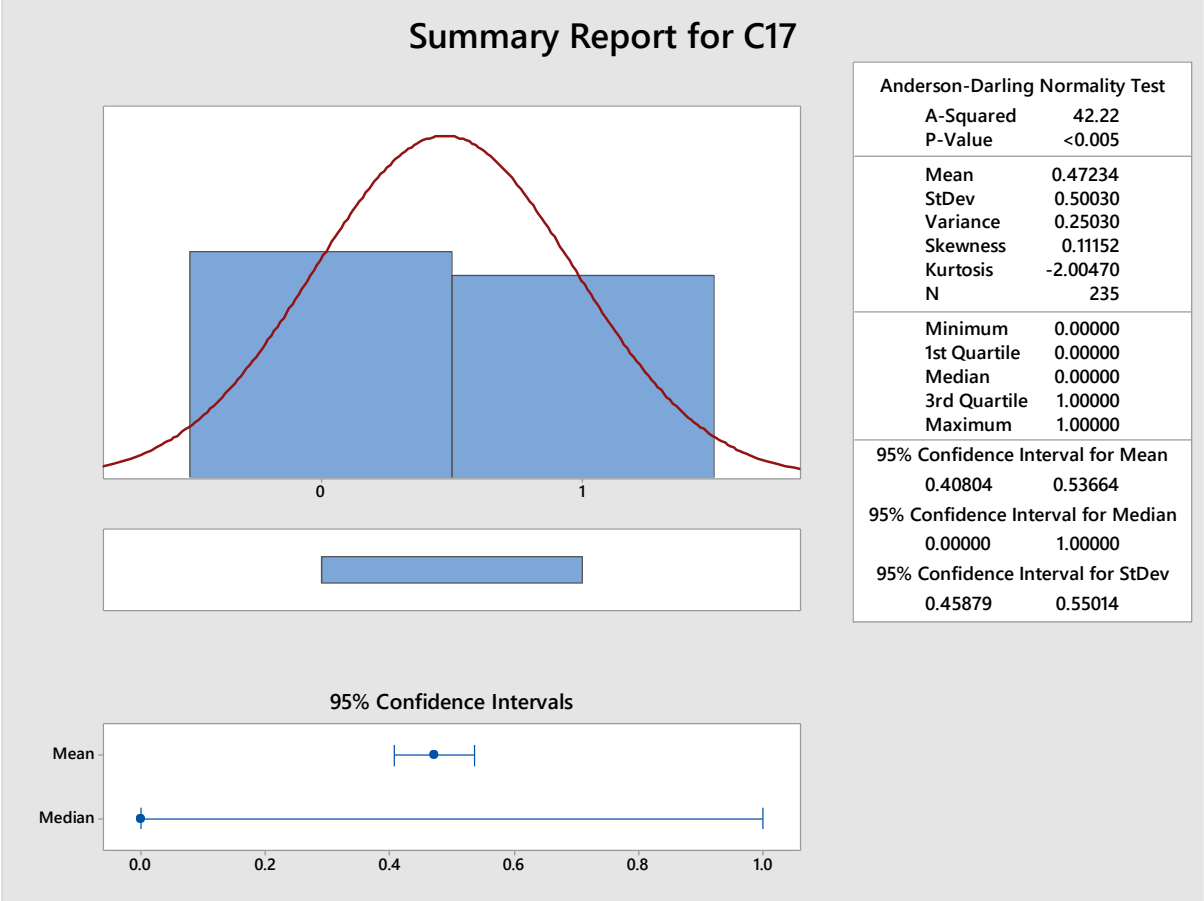
Summary of most selected option of Q2



Summary of most selected option of Q3

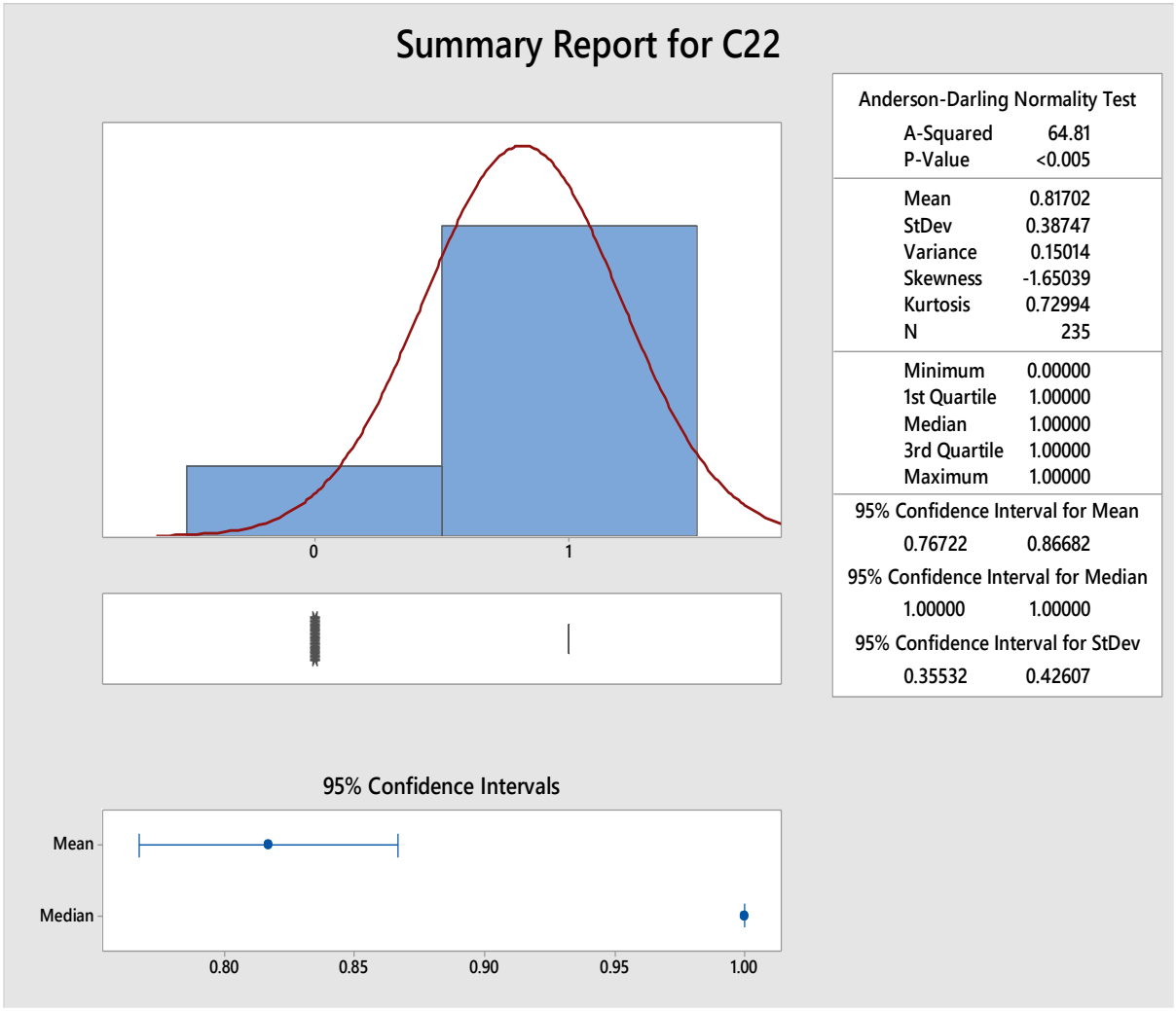


Summary of most selected option of Q4



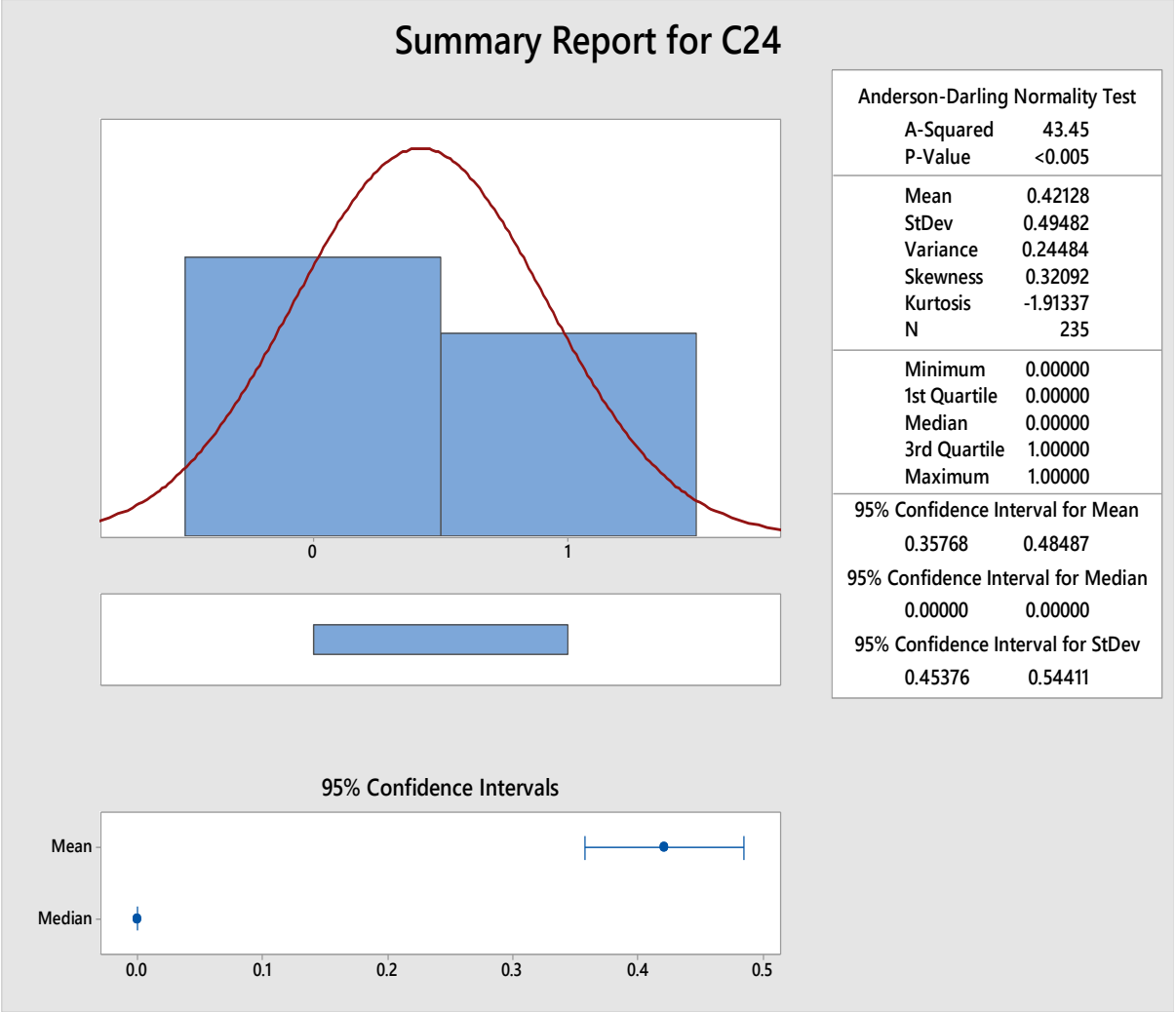
Anderson-Darling Normality Test	
A-Squared	42.22
P-Value	<0.005
Mean	0.47234
StDev	0.50030
Variance	0.25030
Skewness	0.11152
Kurtosis	-2.00470
N	235
Minimum	0.00000
1st Quartile	0.00000
Median	0.00000
3rd Quartile	1.00000
Maximum	1.00000
95% Confidence Interval for Mean	
0.40804	0.53664
95% Confidence Interval for Median	
0.00000	1.00000
95% Confidence Interval for StDev	
0.45879	0.55014

Summary of most selected option of Q5

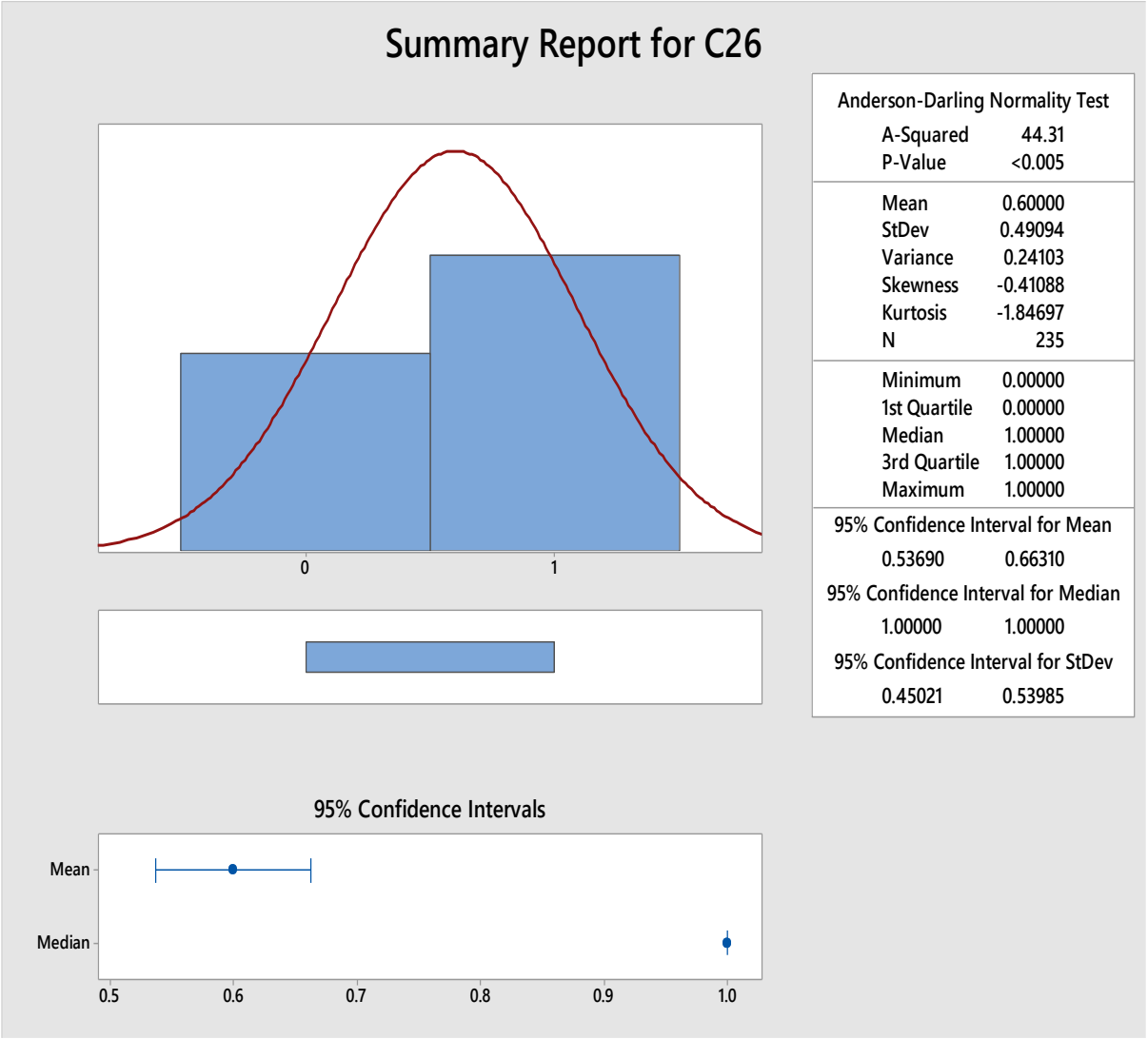


Anderson-Darling Normality Test	
A-Squared	64.81
P-Value	<0.005
Mean	0.81702
StDev	0.38747
Variance	0.15014
Skewness	-1.65039
Kurtosis	0.72994
N	235
Minimum	0.00000
1st Quartile	1.00000
Median	1.00000
3rd Quartile	1.00000
Maximum	1.00000
95% Confidence Interval for Mean	
0.76722	0.86682
95% Confidence Interval for Median	
1.00000	1.00000
95% Confidence Interval for StDev	
0.35532	0.42607

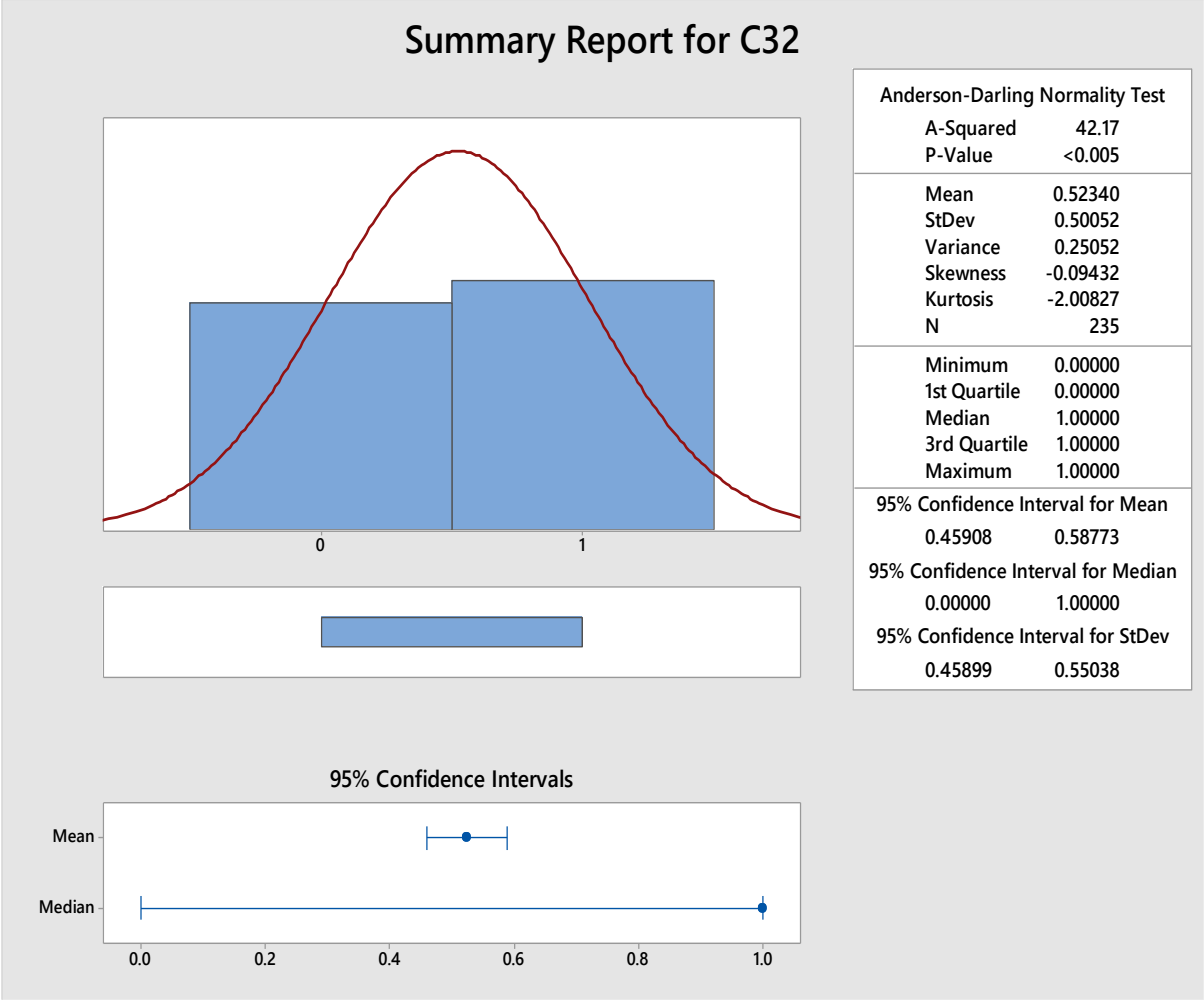
Summary of most selected option of Q6



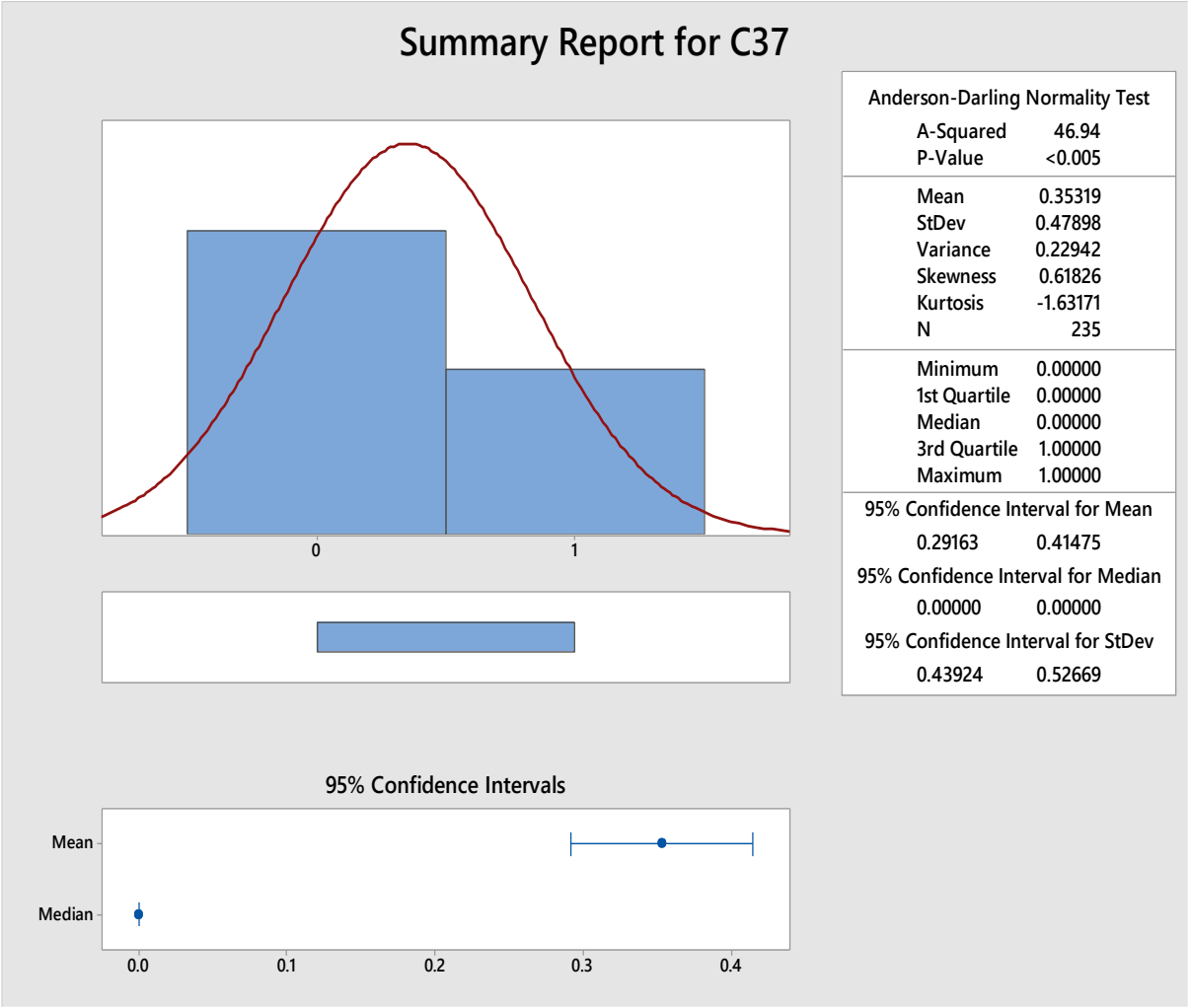
Summary of most selected option of Q7



Summary of most selected option of Q8

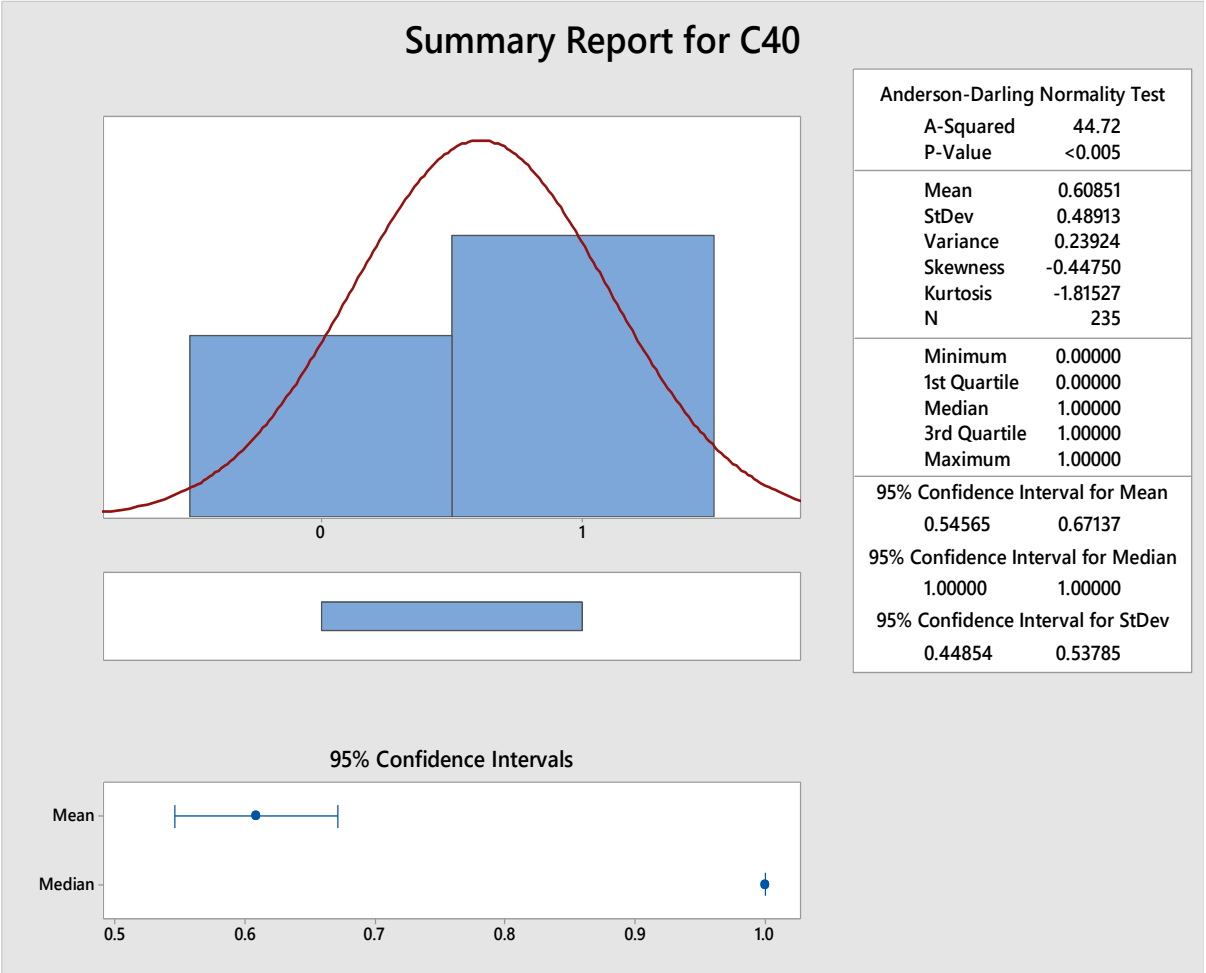


Summary of most selected option of Q9



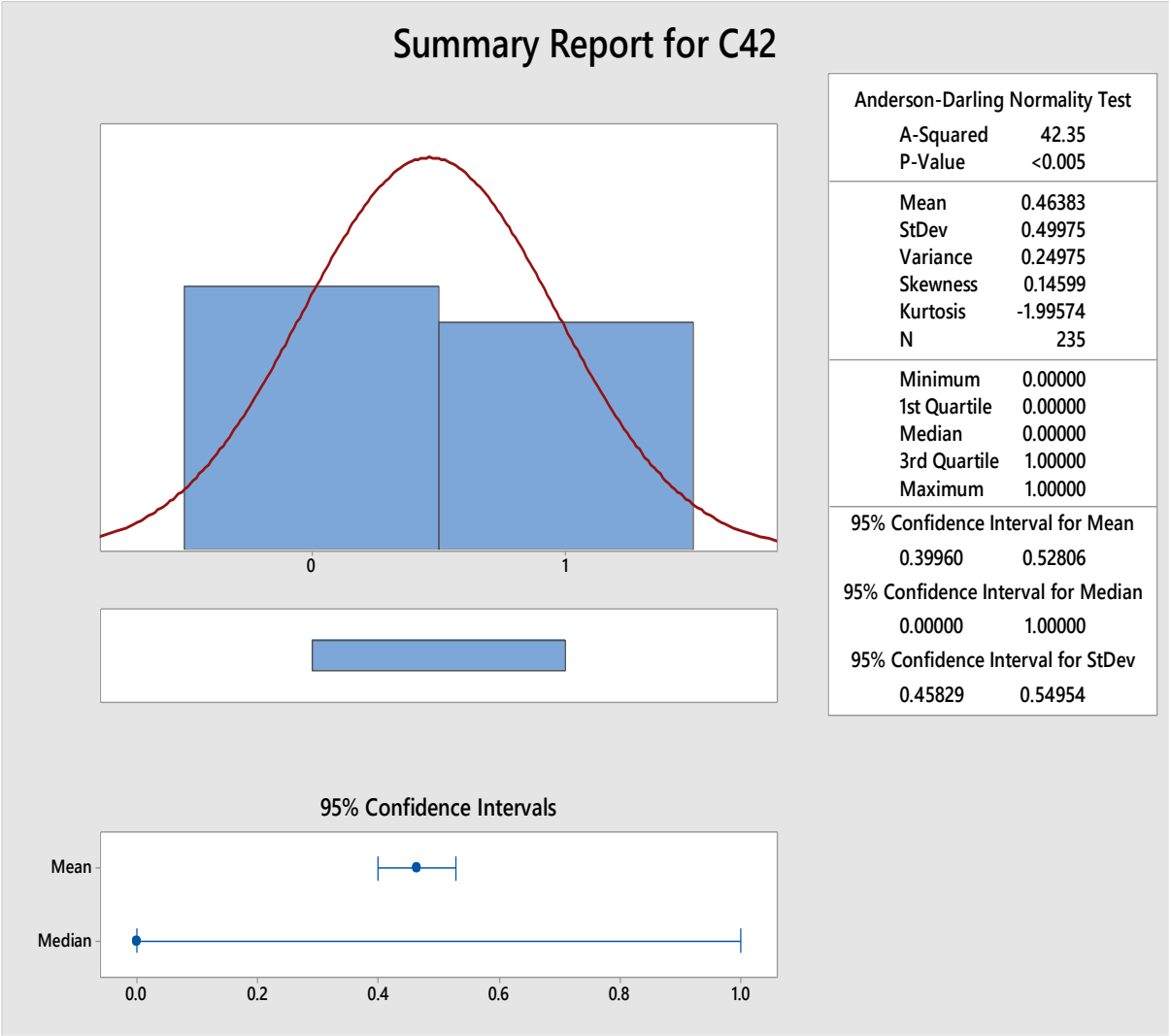
Anderson-Darling Normality Test	
A-Squared	46.94
P-Value	<0.005
Mean	0.35319
StDev	0.47898
Variance	0.22942
Skewness	0.61826
Kurtosis	-1.63171
N	235
Minimum	0.00000
1st Quartile	0.00000
Median	0.00000
3rd Quartile	1.00000
Maximum	1.00000
95% Confidence Interval for Mean	
0.29163	0.41475
95% Confidence Interval for Median	
0.00000	0.00000
95% Confidence Interval for StDev	
0.43924	0.52669

Summary of most selected option of Q10

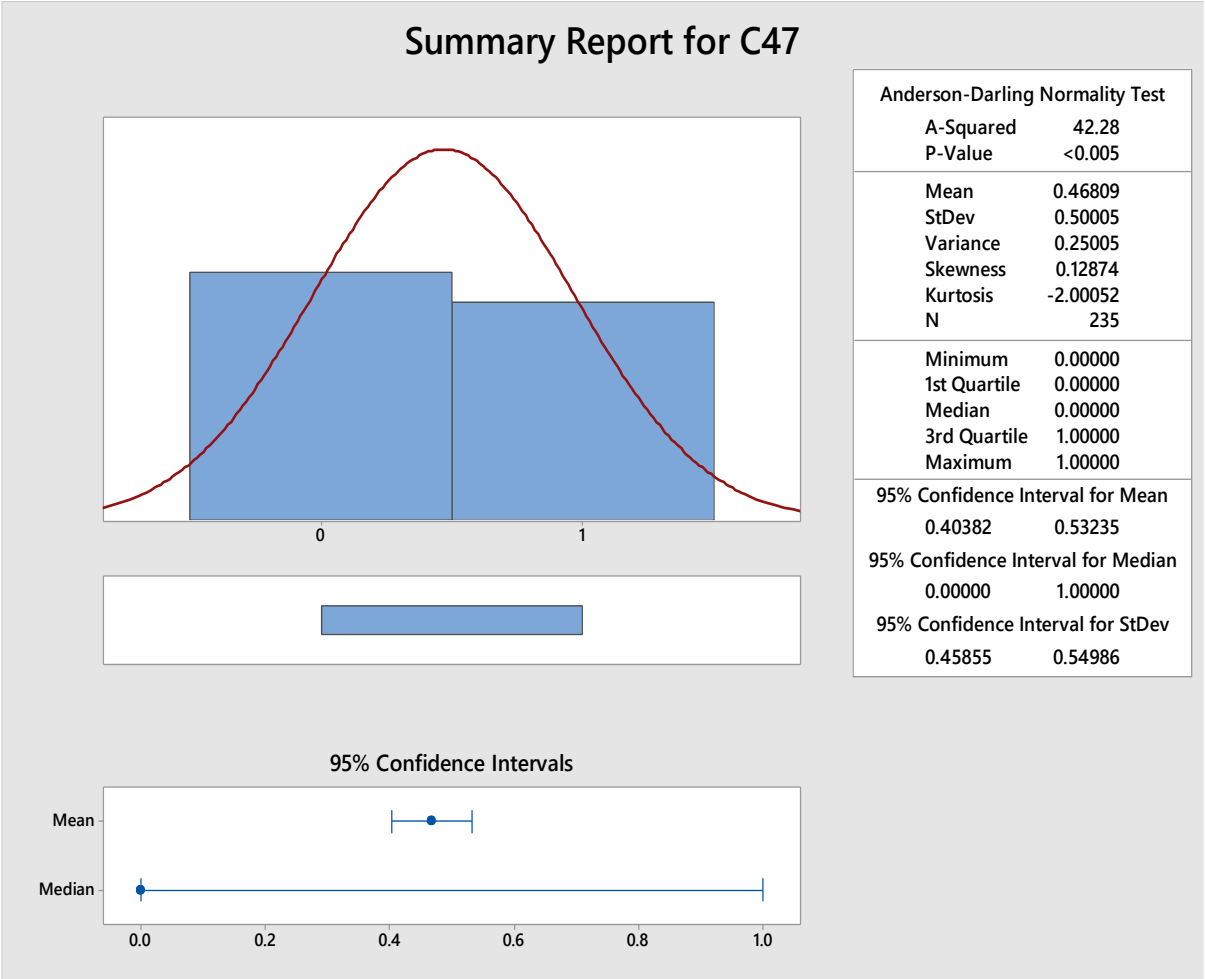


Anderson-Darling Normality Test	
A-Squared	44.72
P-Value	<0.005
Mean	0.60851
StDev	0.48913
Variance	0.23924
Skewness	-0.44750
Kurtosis	-1.81527
N	235
Minimum	0.00000
1st Quartile	0.00000
Median	1.00000
3rd Quartile	1.00000
Maximum	1.00000
95% Confidence Interval for Mean	
0.54565	0.67137
95% Confidence Interval for Median	
1.00000	1.00000
95% Confidence Interval for StDev	
0.44854	0.53785

Summary of most selected option of Q11

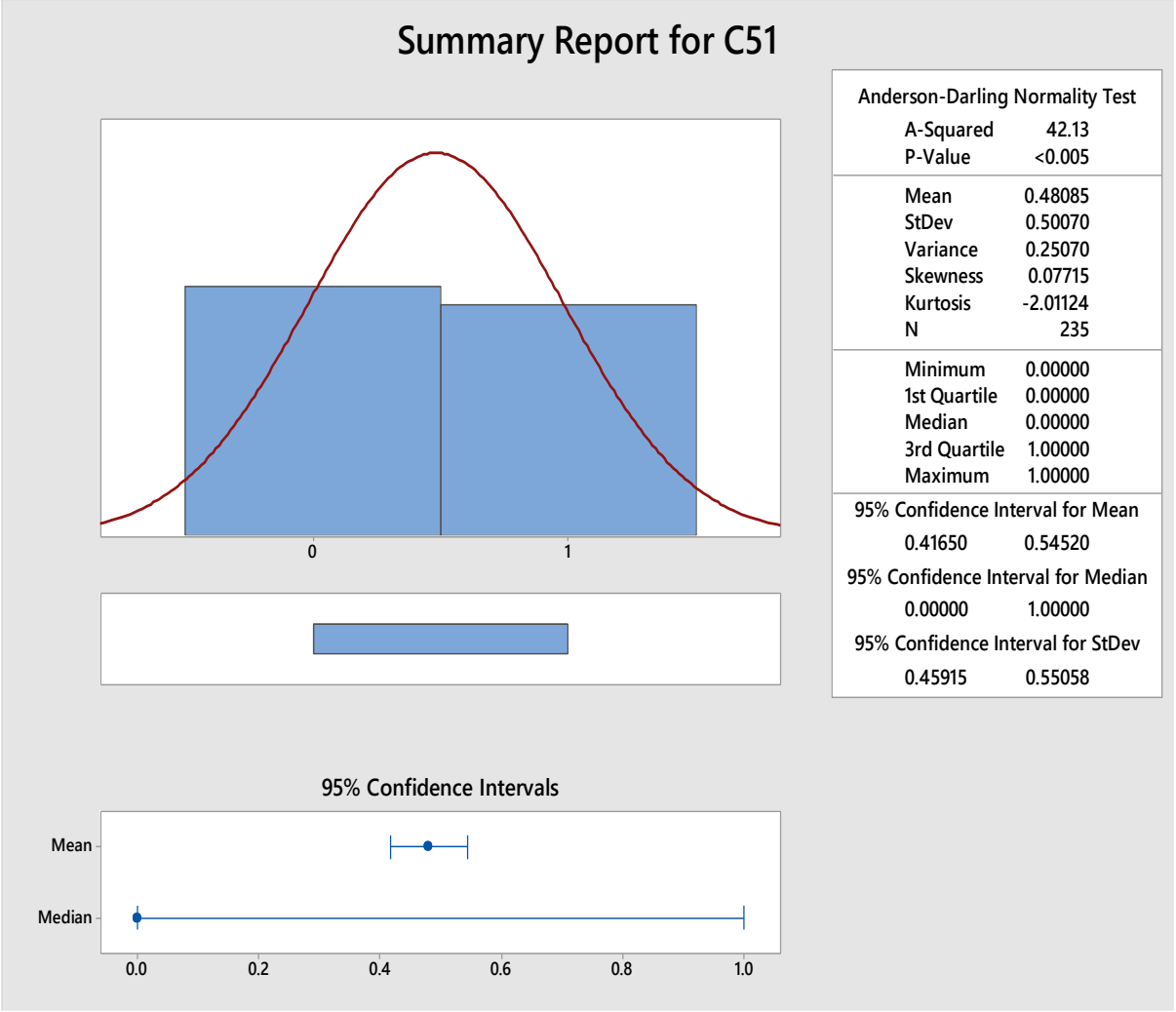


Summary of most selected option of Q12

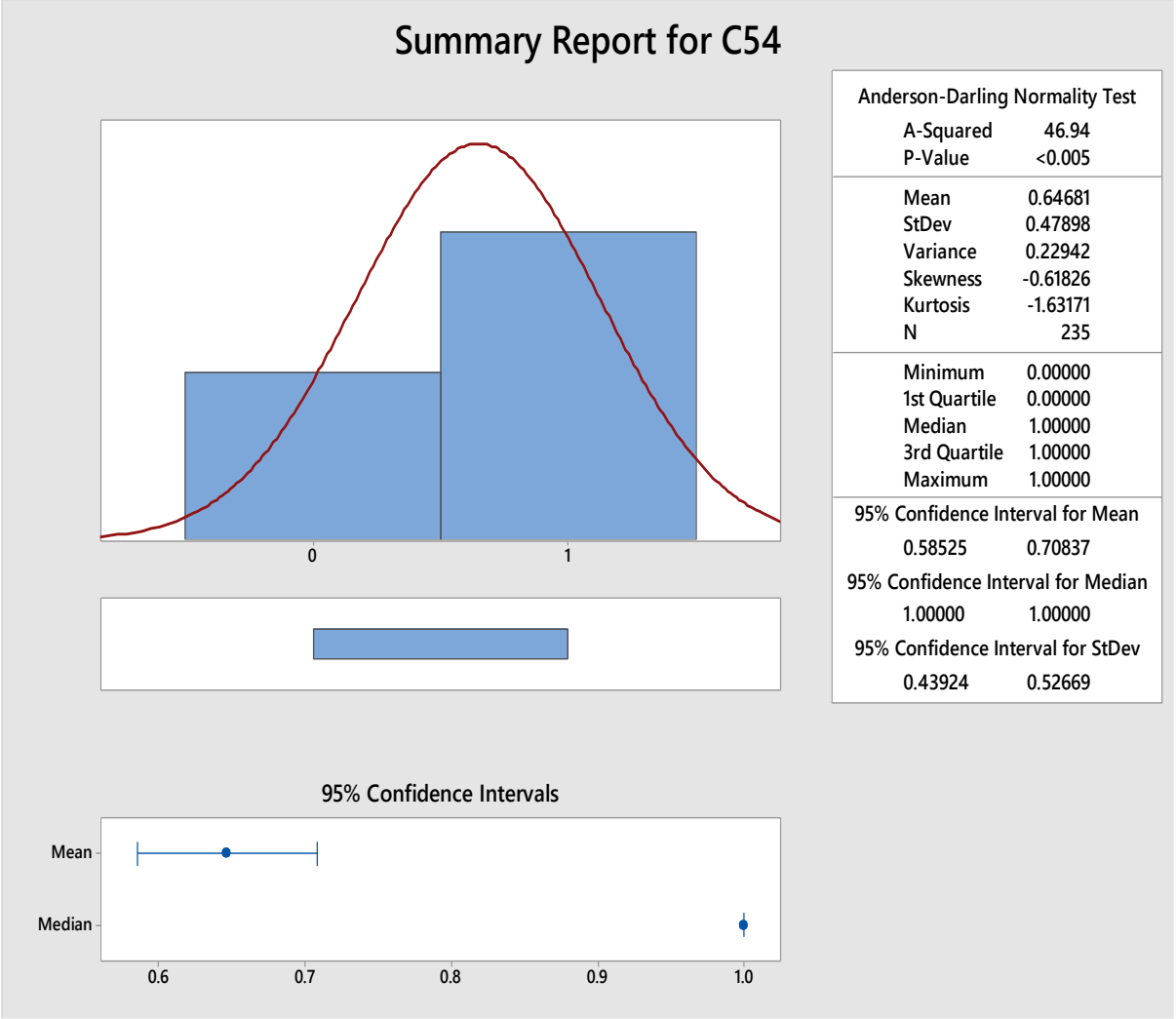


Anderson-Darling Normality Test	
A-Squared	42.28
P-Value	<0.005
Mean	0.46809
StDev	0.50005
Variance	0.25005
Skewness	0.12874
Kurtosis	-2.00052
N	235
Minimum	0.00000
1st Quartile	0.00000
Median	0.00000
3rd Quartile	1.00000
Maximum	1.00000
95% Confidence Interval for Mean	
0.40382	0.53235
95% Confidence Interval for Median	
0.00000	1.00000
95% Confidence Interval for StDev	
0.45855	0.54986

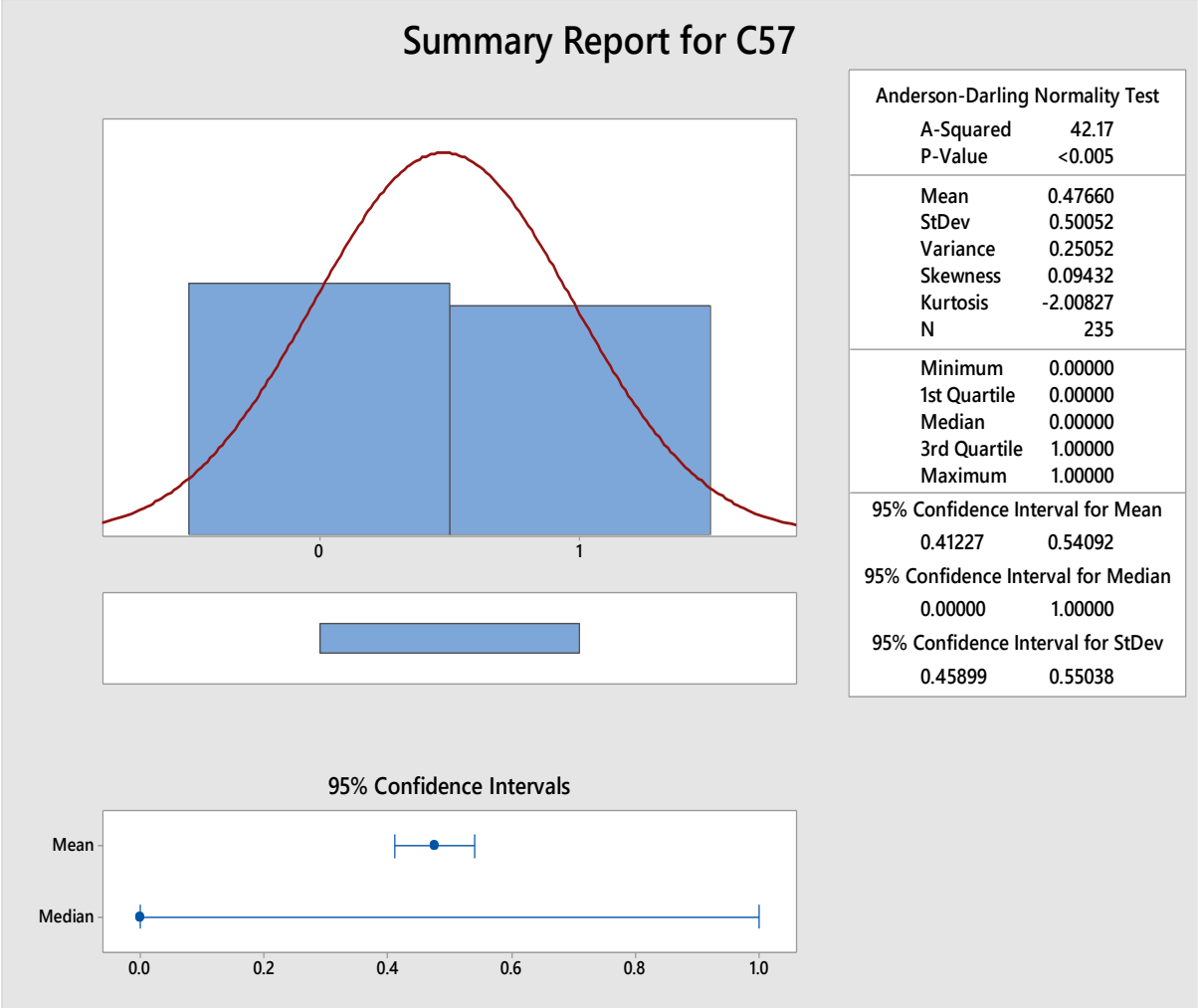
Summary of most selected option of Q13



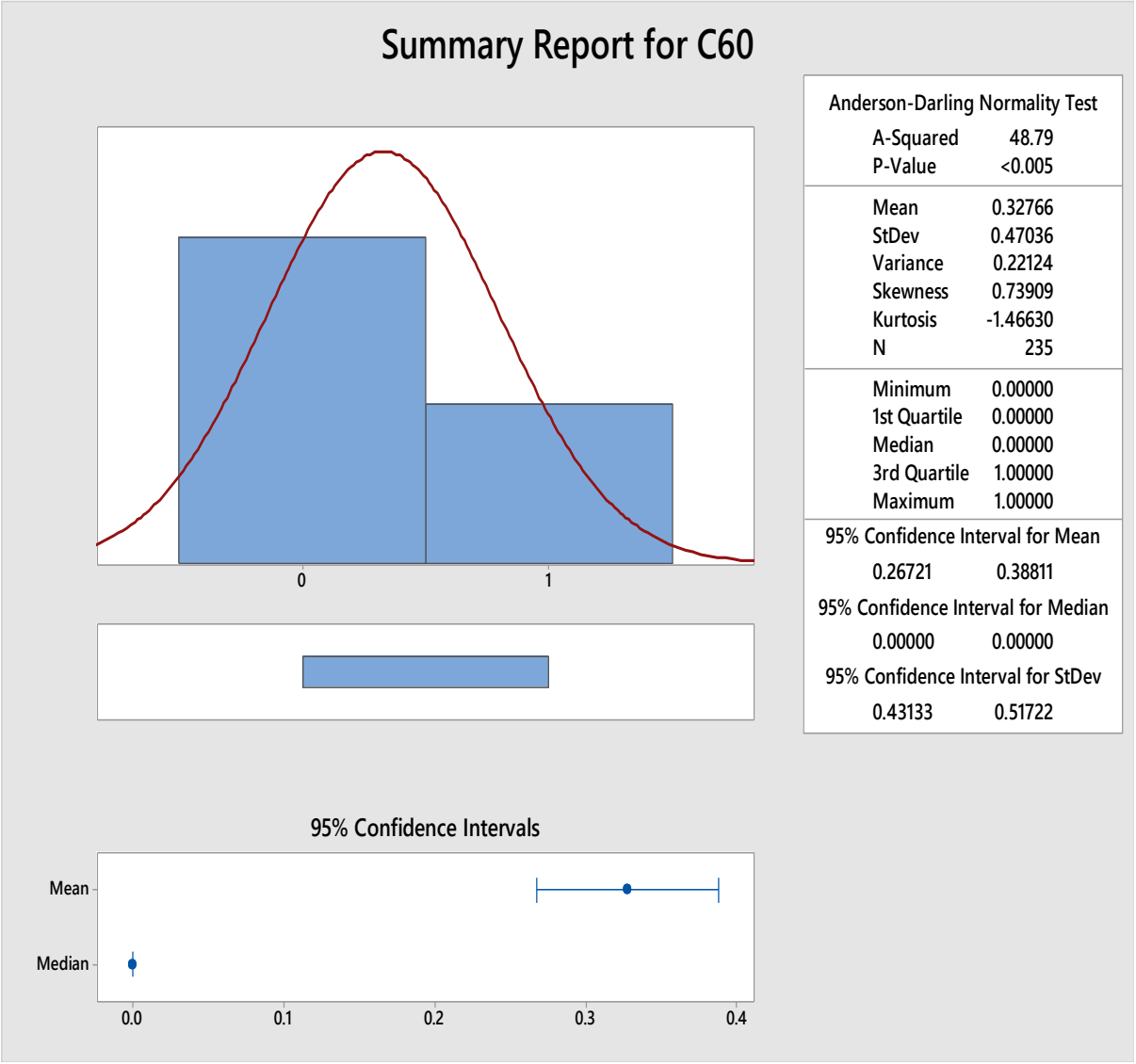
Summary of most selected option of Q14



Summary of most selected option of Q15

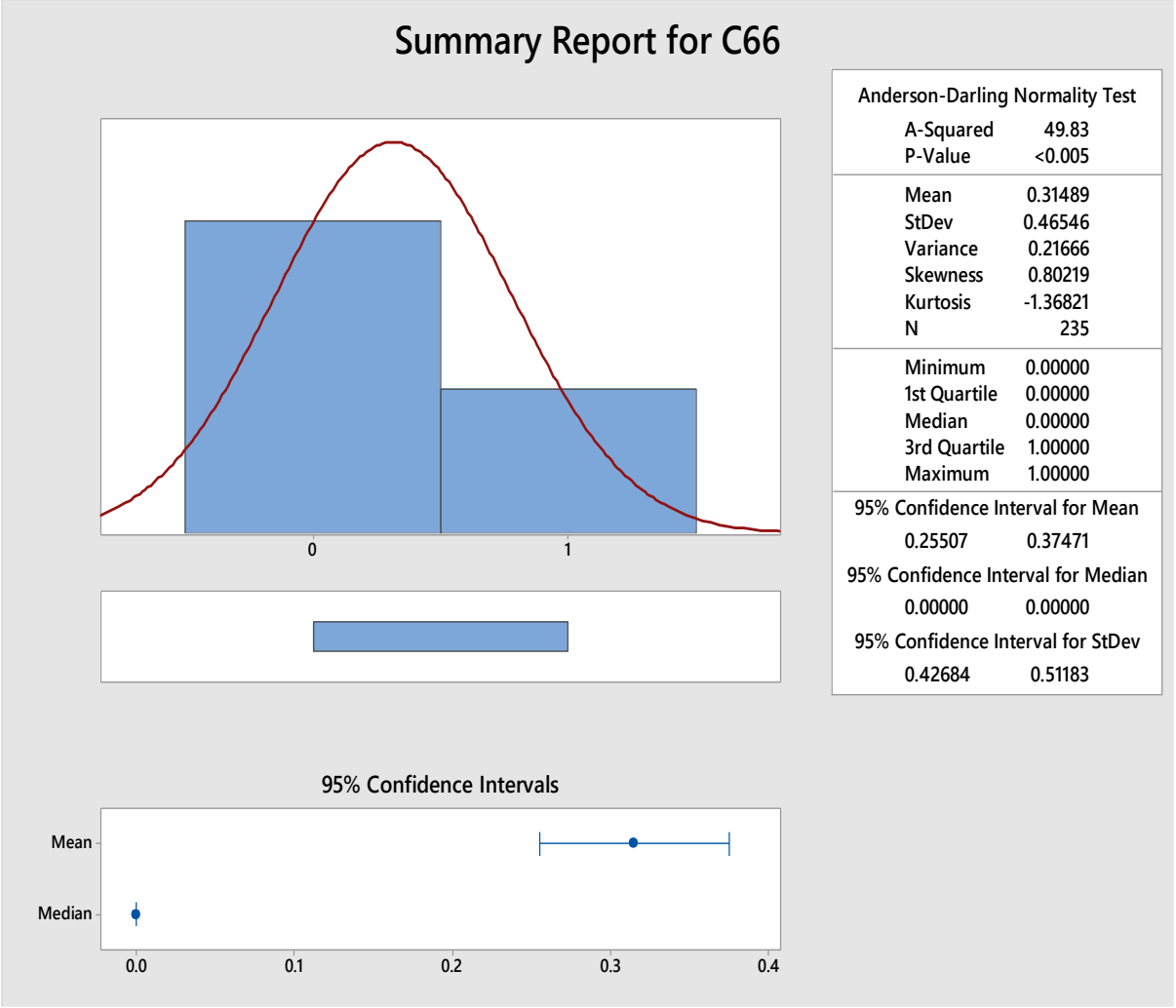


Summary of most selected option of Q16-A

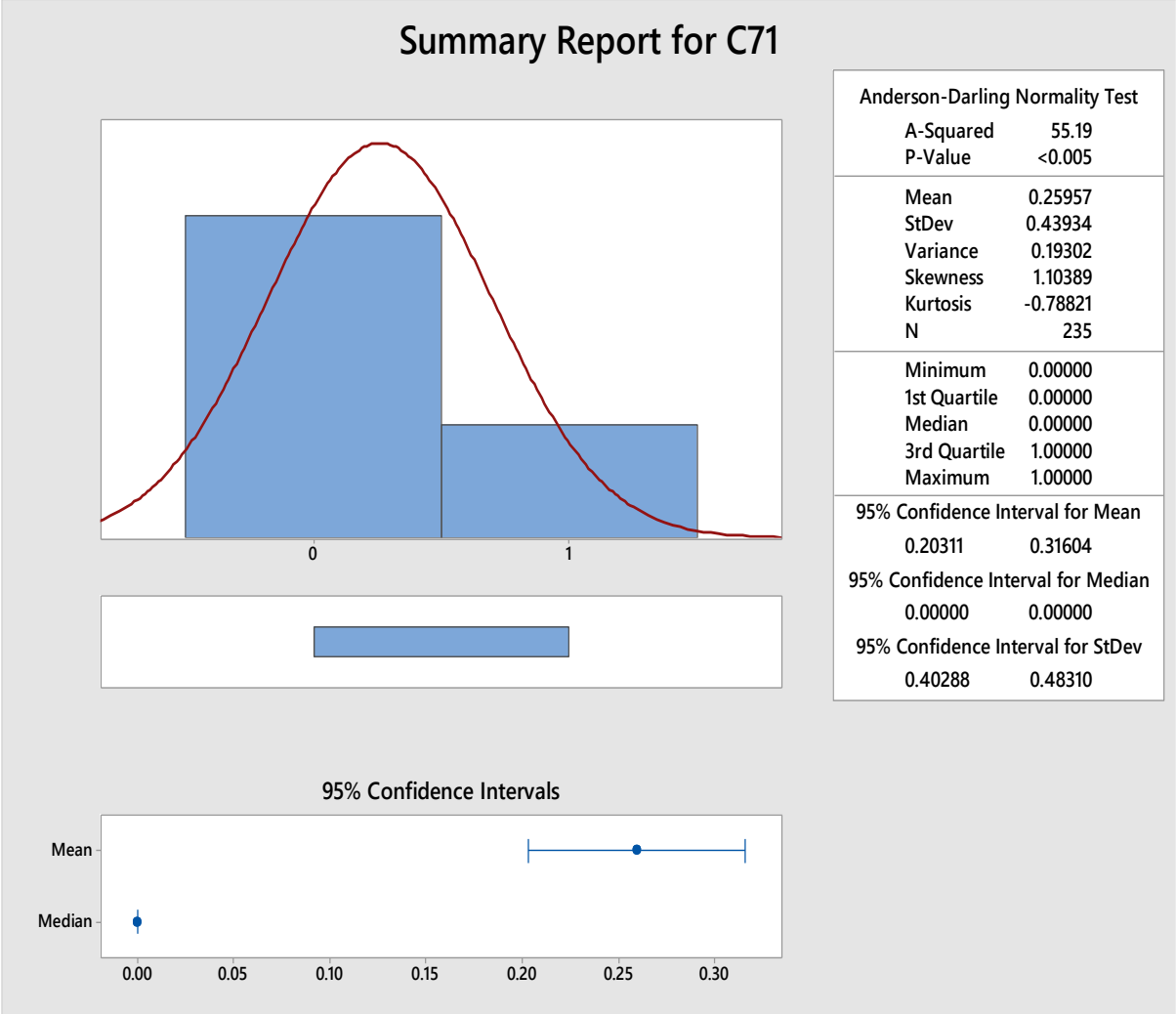


Anderson-Darling Normality Test	
A-Squared	48.79
P-Value	<0.005
Mean	0.32766
StDev	0.47036
Variance	0.22124
Skewness	0.73909
Kurtosis	-1.46630
N	235
Minimum	0.00000
1st Quartile	0.00000
Median	0.00000
3rd Quartile	1.00000
Maximum	1.00000
95% Confidence Interval for Mean	
0.26721	0.38811
95% Confidence Interval for Median	
0.00000	0.00000
95% Confidence Interval for StDev	
0.43133	0.51722

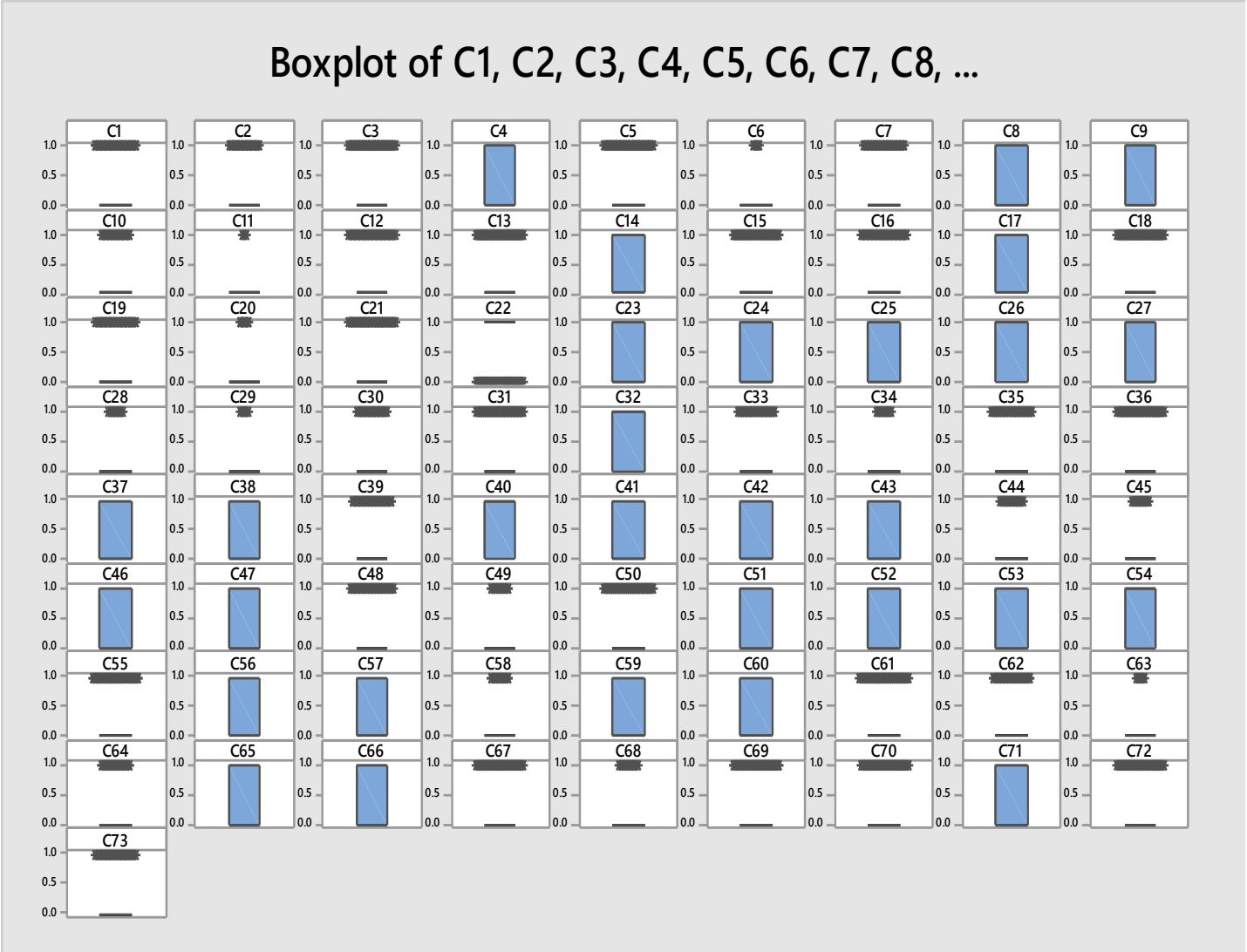
Summary of most selected option of Q16-B



Summary of most selected option of Q16-C



BOXPLOT


Boxplot of C1, C2, C3, C4, C5, C6, C7, C8, ...
C1
C2
C3
C4
C5
C6
C7
C8
C9
C10
C11
C12
C13
C14
C15
C16
C17
C18
C19
C20
C21
C22
C23
C24
C25
C26
C27
C28
C29
C30
C31
C32
C33
C34
C35
C36
C37
C38
C39
C40
C41
C42
C43
C44
C45
C46
C47
C48
C49
C50
C51
C52
C53
C54
C55
C56
C57
C58
C59
C60
C61
C62
C63
C64
C65
C66
C67
C68
C69
C70
C71
C72
C73
1.0
0.5
0.0

Statistical Analysis

* Test of randomness

To test whether the given sample is drawn at random or not,
We use the parametric test of randomness.

Hypothesis as:-

H0=The sample drawn is random

H1=The sample drawn is not random

Concider,

S=Satisfied people on education

D=Disatisfied people on education

The sequence of observations is,

SSSSSSSSSSSSDSSSDDDSSSSDSSSSSSDSD
SSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS
SSSSSSSSSSSSSSSSSSSSSSSSSSSSSDDSSSSSD
SSSSSSDSSSSDSSSSSSSSSSSSSSSSSSSSSSS
SSSSSSSSDSSSSSSSSSSSSSSSSSSDSSSSSSSDD
SSSSDDSSSSSSSSSSSSSSSDSDDSSSDDSDSSSSS
SSSSSSSDDD

To test h0,

The test statistic

No. of runs=r=36

n1=No of S letters =208

n2=No of D letters =27

Since ,n1&n2>20 We use Normal approximation of the test statistic ,

Given as;

Zcal=r-E®/sqrt(var(r))

Here,

E(r)= (2n1*n2/n1+n2)+1

E(r)= 82

Var(r)=2*n1*n2*(2*n1*n2-n1-n2)/((n1+n2)^2*(n1+n2-1))

Var(r)= 9.558279765

Zcal=-14.8788

Since ,

Zcal < Ztab

Hence, H0 is Accepted

Conclusion;-

From the test of randomness we conclude that,Given sample is drawn at random

* To test whether the proportion of those who like online teaching is 50%

Learning Mode	No of student
Online	41
Offline	194

Here,

We consider Population is taken as sample.

Let,

X= No of students like to online teaching in sample

n=Sample size =

p= Population proportion =

We want to test :

Ho:P=0.5 VS H1:P<0.5

Under H0

Z= -9.9806

Decision rule -

Reject H0 at $\alpha\%$ LOS if $|Zcal|<Z\alpha$.
Otherwise accept H0

For α= 0.05

Here

$Z\alpha$= 1.6448

Then

|Zcal| > Z0.05

Therefore we may reject H0 at 5% los

Conclusion:-

We may conclude that proportion of those who online teaching is less than 50%

<u>Chi-Square Test</u>

Q-1 :
Chi-Square Test for Association: Gender, Worksheet columns

H_0 : There is no relationship between gender and difficulties on focusing during online learning.

H_1 : There is relationship between gender and difficulties on focusing during online learning.

Rows: Gender Columns: Worksheet columns

	a	b	c	d	e	All
1	19	11	30	40	28	128
	16.48	12.09	27.47	43.40	28.57	
0	11	11	20	39	24	105
	13.52	9.91	22.53	35.60	23.43	
All	30	22	50	79	52	233

Pearson Chi-Square = 2.205, DF = 4, P-Value = 0.698

As, P-Value = 0.698 > 0.05

Conclusion : H_0 is accepted, there is no relationship between gender and difficulties on focusing during online learning.

Q-7 :

Chi-Square Test for Association: gender, c2-c5

H_0 : There is no relationship between gender and annual income of farmers.

H_1 : There is relationship between gender and annual income of farmers.

Rows: gender Columns: c2-c5

	C2	C3	C4	C5	All
1	76	42	6	4	128
	77.459	41.751	5.494	3.296	
0	65	34	4	2	105
	63.541	34.249	4.506	2.704	

```
All       141      76     10      6  233
```

```
Pearson Chi-Square = 0.501, DF = 3, P-Value = 0.919
```

```
As,P-Value = 0.919 > 0.05
```

Conclusion: Accept H_0,there is no relationship between gender and annual income of farmers.

Q-7 :

Chi-Square Test for Association: gender, c2-c5

H_0 : There is no relationship between gender and annual income of farmers.

H_1 : There is relationship between gender and annual income of farmers.

```
Rows: gender   Columns: c2-c5

            C2       C3     C4     C5  All

1           76       42      6      4  128
        77.459   41.751  5.494  3.296

0           65       34      4      2  105
        63.541   34.249  4.506  2.704

All        141       76     10      6  233
```

```
Pearson Chi-Square = 0.501, DF = 3, P-Value = 0.919
```

```
As,P-Value = 0.919 > 0.05
```

Conclusion: Accept H_0,there is no relationship between gender and annual income of farmers.

Q-13:
Chi-Square Test for Association: gender, c2-c4

H_0 : There is no relationship between gender and awareness of medical staff about patients.
H_1 : There is relationship between gender and awareness of medical staff about patients.

Rows: gender Columns: c2-c4

	C2	C3	C4	All
1	34	67	27	128
	31.58	62.61	33.80	
0	23	46	34	103
	25.42	50.39	27.20	
All	57	113	61	231

Pearson Chi-Square = 4.172, DF = 2, P-Value = 0.124

As, P-Value = 0.124 > 0.05

Conclusion: Accept H_0,there is no relationship between gender and awareness of medical staff about patients.

*Reference:-

1. Fundamentals Of Mathematical Statistics

2. Google Search

*Software used:-

1.Microsoft Excel

2.Microsoft Word

3.Minitab