In [1]: ```python
import pandas as pd
```

In [2]: ```python
pip install tabulate
```

Requirement already satisfied: tabulate in c:\users\smair\anaconda3\lib\site-packa
ges (0.8.10)
Note: you may need to restart the kernel to use updated packages.

In [3]: ```python
data=pd.read_csv("C:/Users/smair/OneDrive/Desktop/book31.csv")
```

In [4]: ```python
data
```

In [1]: ```python
import pandas as pd
```

In [2]: ```python
pip install tabulate
```

Requirement already satisfied: tabulate in c:\users\smair\anaconda3\lib\site-packa
ges (0.8.10)

ggg

Out[4]:

	Name	Age	Education	Have you noticed an increase in your awareness of environmental issues over the past few years?	Have you changed your shopping habits in the past year to support more sustainable options?	How important is environmental sustainability to you when making purchasing decisions?	What type of sustainable products do you purchase most frequently?	What s... inform... inf... know... awaren... sustaina...
0	Rahael MOUMI	25-35	Post-Grad	Yes	Yes, significantly	4	Organic Food and Beverages	Social
1	Cristina Morales	25-35	Post-Grad	Yes	Yes, significantly	2	Eco-Friendly Clothing	Social
2	Pooja	25-35	Post-Grad	Yes	Yes, significantly	4	Organic Food and Beverages	News (
3	Naomi	25-35	Under-Grad	Yes	Yes, slightly	3	Cruelty free products	Social
4	Harri	55-65	Post-Grad	Yes	Yes, slightly	3	Energy efficient appliances	Re
5	Duncan	25-35	Under-Grad	Yes	Yes, significantly	3	Eco-Friendly Clothing	News (
6	Li	25-35	Post-Grad	Yes	Yes, significantly	4	Re-useable household items	Social
7	Yulia Prokopiv	35-45	Higher Education	Yes	Yes, significantly	5	Re-useable household items	Social
8	Vasundhara Sharma	35-45	Post-Grad	Yes	Yes, significantly	3	Re-useable household items	News (
9	KISHORE ASTHANA	55-65	Higher Education	Yes	Yes, slightly	4	Energy efficient appliances	Social
10	Himanshu	35-45	Under-Grad	No	Yes, slightly	3	Energy efficient appliances	Frien
11	Ridham Ghai	18-25	Under-Grad	Yes	Yes, significantly	4	Eco-Friendly Clothing	Social

	Name	Age	Education	Have you noticed an increase in your awareness of environmental issues over the past few years?	Have you changed your shopping habits in the past year to support more sustainable options?	How important is environmental sustainability to you when making purchasing decisions?	What type of sustainable products do you purchase most frequently?	What s... inforr inf know awaren sustaina
12	Samvedanaa Bali	35-45	Higher Education	Yes	No, not at all	2	Organic Food and Beverages	Social
13	Ayush Aggarwal	18-25	Under-Grad	Yes	Yes, significantly	4	Re-useable household items	Social
14	Vyomika	25-35	Post-Grad	Yes	Yes, slightly	3	Energy efficient appliances	Social
15	Rochit Garg	25-35	Under-Grad	Yes	Yes, slightly	4	Energy efficient appliances	Social
16	Shradha Dugade	25-35	Post-Grad	Yes	Yes, slightly	1	Energy efficient appliances	News (
17	Chaitanaya Mohan	25-35	Post-Grad	Yes	Yes, slightly	3	Energy efficient appliances	Social
18	Sarang mukherjee	18-25	Under-Grad	Yes	Yes, slightly	3	Energy efficient appliances	News (
19	Nabihah Imran	18-25	Under-Grad	Yes	Yes, significantly	5	Eco-Friendly Clothing, Re-useable household it...	Social Cor Adve
20	riya sharma	25-35	Post-Grad	Yes	Yes, slightly	2	Re-useable household items, Energy efficient a...	Social Frien Corpora
21	Naisha	18-25	Under-Grad	Yes	Yes, slightly	5	Re-useable household items	Social News (
22	nikhil bhan	18-25	Under-Grad	Yes	Yes, significantly	3	Re-useable household items	Educ Instit Frien

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	Name	Age	Education	Have you noticed an increase in your awareness of environmental issues over the past few years?	Have you changed your shopping habits in the past year to support more sustainable options?	How important is environmental sustainability to you when making purchasing decisions?	What type of sustainable products do you purchase most frequently?	What s... inform... inf... know... aware... sustaina...
23	Pooja naresh	18-25	Under-Grad	Yes	Yes, significantly	5	Organic Food and Beverages, Re-useable househo...	News C Educ Instit F
24	Aaryan kolekar	18-25	Under-Grad	Yes	Yes, slightly	3	Organic Food and Beverages, Re-useable househo...	Social News C Con Adve
25	Saptaswa Sen	18-25	Under-Grad	Yes	Yes, significantly	3	Organic Food and Beverages, Eco-Friendly Cloth...	Social Educ Instit F
26	Anagha	18-25	Under-Grad	Yes	Yes, slightly	4	Re-useable household items, Energy efficient a...	Social Educ Instit C
27	Noella D'Silva	18-25	Under-Grad	Yes	Yes, slightly	4	Organic Food and Beverages	Social Frien Corpora
28	Michelle Miranda	18-25	Under-Grad	Yes	Yes, slightly	5	Organic Food and Beverages, Energy efficient a...	Social News C Educ
29	Vyomika	25-35	Post-Grad	Yes	Yes, significantly	5	Re-useable household items, Energy efficient a...	Social Con Adve
30	Anish	18-25	Under-Grad	Yes	No, not at all	1	Organic Food and Beverages, Re-useable househo...	Social Frien Corpora
31	Shradha Bhat	25-35	Post-Grad	Yes	Yes, slightly	5	Organic Food and Beverages, Re-useable househo...	Social Con Adve

	Name	Age	Education	Have you noticed an increase in your awareness of environmental issues over the past few years?	Have you changed your shopping habits in the past year to support more sustainable options?	How important is environmental sustainability to you when making purchasing decisions?	What type of sustainable products do you purchase most frequently?	What s... inform... inf... know... aware... sustaina...
32	Michelle Lobo	18-25	Under-Grad	Yes	Yes, slightly	2	Organic Food and Beverages	Social Educ Insti
33	Kathyrine Faith Gracia Philip	18-25	Under-Grad	No	No, not at all	3	Eco-Friendly Clothing	Social News C Educ
34	Ayush Paul	18-25	Under-Grad	Yes	No, not at all	4	Organic Food and Beverages, Energy efficient a...	Social News C Educ
35	Arshad	18-25	Under-Grad	Yes	Yes, slightly	4	Organic Food and Beverages	Social News C Educ
36	Alaina Ashfaq	18-25	Under-Grad	Yes	Yes, slightly	2	Organic Food and Beverages	Social News C Frien
37	anju mathew	25-35	Post-Grad	Yes	Yes, significantly	2	Eco-Friendly Clothing	News C Educ Insti F
38	shankar madhvan	35-45	Doctorate	Yes	Yes, slightly	3	Re-useable household items	Educ Insti Frien
39	Taniya Anil	18-25	Under-Grad	Yes	Yes, slightly	2	Organic Food and Beverages, Re-useable househo...	Social Educ Insti
40	Alwyn Antony	18-25	Under-Grad	Yes	Yes, slightly	5	Organic Food and Beverages, Re-useable househo...	Social News C Educ
41	Arghya Basu	18-25	Under-Grad	Yes	Yes, slightly	3	Re-useable household	Social

	Name	Age	Education	Have you noticed an increase in your awareness of environmental issues over the past few years?	Have you changed your shopping habits in the past year to support more sustainable options?	How important is environmental sustainability to you when making purchasing decisions?	What type of sustainable products do you purchase most frequently?	What s... inform... inf... know... awaren... sustaina...
							items	
42	Anthony Gonsalvis	45-55	Post-Grad	No	No, not at all	1	Energy efficient appliances	Frien

In [5]:
```python
data = data.drop(columns=['Unnamed: 14', 'Unnamed: 15', 'Unnamed: 17', 'Unnamed: 18
```

In [6]:
```python
data
```

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Out[6]:

	Name	Age	Education	Have you noticed an increase in your awareness of environmental issues over the past few years?	Have you changed your shopping habits in the past year to support more sustainable options?	How important is environmental sustainability to you when making purchasing decisions?	What type of sustainable products do you purchase most frequently?	What s... inform... inf... know... awaren... sustaina...
0	Rahael MOUMI	25-35	Post-Grad	Yes	Yes, significantly	4	Organic Food and Beverages	Social
1	Cristina Morales	25-35	Post-Grad	Yes	Yes, significantly	2	Eco-Friendly Clothing	Social
2	Pooja	25-35	Post-Grad	Yes	Yes, significantly	4	Organic Food and Beverages	News (
3	Naomi	25-35	Under-Grad	Yes	Yes, slightly	3	Cruelty free products	Social
4	Harri	55-65	Post-Grad	Yes	Yes, slightly	3	Energy efficient appliances	Re
5	Duncan	25-35	Under-Grad	Yes	Yes, significantly	3	Eco-Friendly Clothing	News (
6	Li	25-35	Post-Grad	Yes	Yes, significantly	4	Re-useable household items	Social
7	Yulia Prokopiv	35-45	Higher Education	Yes	Yes, significantly	5	Re-useable household items	Social
8	Vasundhara Sharma	35-45	Post-Grad	Yes	Yes, significantly	3	Re-useable household items	News (
9	KISHORE ASTHANA	55-65	Higher Education	Yes	Yes, slightly	4	Energy efficient appliances	Social
10	Himanshu	35-45	Under-Grad	No	Yes, slightly	3	Energy efficient appliances	Frien
11	Ridham Ghai	18-25	Under-Grad	Yes	Yes, significantly	4	Eco-Friendly Clothing	Social

<div align="center">ggg</div>

	Name	Age	Education	Have you noticed an increase in your awareness of environmental issues over the past few years?	Have you changed your shopping habits in the past year to support more sustainable options?	How important is environmental sustainability to you when making purchasing decisions?	What type of sustainable products do you purchase most frequently?	What s... inform... inf... know... awaren... sustaina...
12	Samvedanaa Bali	35-45	Higher Education	Yes	No, not at all	2	Organic Food and Beverages	Social
13	Ayush Aggarwal	18-25	Under-Grad	Yes	Yes, significantly	4	Re-useable household items	Social
14	Vyomika	25-35	Post-Grad	Yes	Yes, slightly	3	Energy efficient appliances	Social
15	Rochit Garg	25-35	Under-Grad	Yes	Yes, slightly	4	Energy efficient appliances	Social
16	Shradha Dugade	25-35	Post-Grad	Yes	Yes, slightly	1	Energy efficient appliances	News (
17	Chaitanaya Mohan	25-35	Post-Grad	Yes	Yes, slightly	3	Energy efficient appliances	Social
18	Sarang mukherjee	18-25	Under-Grad	Yes	Yes, slightly	3	Energy efficient appliances	News (
19	Nabihah Imran	18-25	Under-Grad	Yes	Yes, significantly	5	Eco-Friendly Clothing, Re-useable household it...	Social Cor Adve
20	riya sharma	25-35	Post-Grad	Yes	Yes, slightly	2	Re-useable household items, Energy efficient a...	Social Frien Corpora
21	Naisha	18-25	Under-Grad	Yes	Yes, slightly	5	Re-useable household items	Social News (
22	nikhil bhan	18-25	Under-Grad	Yes	Yes, significantly	3	Re-useable household items	Educ Instit Frien

	Name	Age	Education	Have you noticed an increase in your awareness of environmental issues over the past few years?	Have you changed your shopping habits in the past year to support more sustainable options?	How important is environmental sustainability to you when making purchasing decisions?	What type of sustainable products do you purchase most frequently?	What s information inf know awaren sustaina
23	Pooja naresh	18-25	Under-Grad	Yes	Yes, significantly	5	Organic Food and Beverages, Re-useable househo...	News Educ Instit F
24	Aaryan kolekar	18-25	Under-Grad	Yes	Yes, slightly	3	Organic Food and Beverages, Re-useable househo...	Social News Cor Adve
25	Saptaswa Sen	18-25	Under-Grad	Yes	Yes, significantly	3	Organic Food and Beverages, Eco-Friendly Cloth...	Social Educ Instit F
26	Anagha	18-25	Under-Grad	Yes	Yes, slightly	4	Re-useable household items, Energy efficient a...	Social Educ Instit C
27	Noella D'Silva	18-25	Under-Grad	Yes	Yes, slightly	4	Organic Food and Beverages	Social Frien Corpora
28	Michelle Miranda	18-25	Under-Grad	Yes	Yes, slightly	5	Organic Food and Beverages, Energy efficient a...	Social News Educ
29	Vyomika	25-35	Post-Grad	Yes	Yes, significantly	5	Re-useable household items, Energy efficient a...	Social Cor Adve
30	Anish	18-25	Under-Grad	Yes	No, not at all	1	Organic Food and Beverages, Re-useable househo...	Social Frien Corpora
31	Shradha Bhat	25-35	Post-Grad	Yes	Yes, slightly	5	Organic Food and Beverages, Re-useable househo...	Social Cor Adve

	Name	Age	Education	Have you noticed an increase in your awareness of environmental issues over the past few years?	Have you changed your shopping habits in the past year to support more sustainable options?	How important is environmental sustainability to you when making purchasing decisions?	What type of sustainable products do you purchase most frequently?	What s... inform... inf... know... awaren... sustaina...
32	Michelle Lobo	18-25	Under-Grad	Yes	Yes, slightly	2	Organic Food and Beverages	Social Educ Instit
33	Kathyrine Faith Gracia Philip	18-25	Under-Grad	No	No, not at all	3	Eco-Friendly Clothing	Social News C Educ
34	Ayush Paul	18-25	Under-Grad	Yes	No, not at all	4	Organic Food and Beverages, Energy efficient a...	Social News C Educ
35	Arshad	18-25	Under-Grad	Yes	Yes, slightly	4	Organic Food and Beverages	Social News C Educ
36	Alaina Ashfaq	18-25	Under-Grad	Yes	Yes, slightly	2	Organic Food and Beverages	Social News C Frien
37	anju mathew	25-35	Post-Grad	Yes	Yes, significantly	2	Eco-Friendly Clothing	News C Educ Instit F
38	shankar madhvan	35-45	Doctorate	Yes	Yes, slightly	3	Re-useable household items	Educ Instit Frien
39	Taniya Anil	18-25	Under-Grad	Yes	Yes, slightly	2	Organic Food and Beverages, Re-useable househo...	Social Educ Instit
40	Alwyn Antony	18-25	Under-Grad	Yes	Yes, slightly	5	Organic Food and Beverages, Re-useable househo...	Social News C Educ
41	Arghya Basu	18-25	Under-Grad	Yes	Yes, slightly	3	Re-useable household	Social

	Name	Age	Education	Have you noticed an increase in your awareness of environmental issues over the past few years?	Have you changed your shopping habits in the past year to support more sustainable options?	How important is environmental sustainability to you when making purchasing decisions?	What type of sustainable products do you purchase most frequently?	What s... inform inf know awaren sustaina
							items	
42	Anthony Gonsalvis	45-55	Post-Grad	No	No, not at all	1	Energy efficient appliances	Frien

In [7]:
```
data.drop(columns=['Lookup Table'])
```

Out[7]:

	Name	Age	Education	Have you noticed an increase in your awareness of environmental issues over the past few years?	Have you changed your shopping habits in the past year to support more sustainable options?	How important is environmental sustainability to you when making purchasing decisions?	What type of sustainable products do you purchase most frequently?	What s... inform... inf... know... awaren... sustaina...
0	Rahael MOUMI	25-35	Post-Grad	Yes	Yes, significantly	4	Organic Food and Beverages	Social
1	Cristina Morales	25-35	Post-Grad	Yes	Yes, significantly	2	Eco-Friendly Clothing	Social
2	Pooja	25-35	Post-Grad	Yes	Yes, significantly	4	Organic Food and Beverages	News (
3	Naomi	25-35	Under-Grad	Yes	Yes, slightly	3	Cruelty free products	Social
4	Harri	55-65	Post-Grad	Yes	Yes, slightly	3	Energy efficient appliances	Re
5	Duncan	25-35	Under-Grad	Yes	Yes, significantly	3	Eco-Friendly Clothing	News (
6	Li	25-35	Post-Grad	Yes	Yes, significantly	4	Re-useable household items	Social
7	Yulia Prokopiv	35-45	Higher Education	Yes	Yes, significantly	5	Re-useable household items	Social
8	Vasundhara Sharma	35-45	Post-Grad	Yes	Yes, significantly	3	Re-useable household items	News (
9	KISHORE ASTHANA	55-65	Higher Education	Yes	Yes, slightly	4	Energy efficient appliances	Social
10	Himanshu	35-45	Under-Grad	No	Yes, slightly	3	Energy efficient appliances	Frien
11	Ridham Ghai	18-25	Under-Grad	Yes	Yes, significantly	4	Eco-Friendly Clothing	Social

	Name	Age	Education	Have you noticed an increase in your awareness of environmental issues over the past few years?	Have you changed your shopping habits in the past year to support more sustainable options?	How important is environmental sustainability to you when making purchasing decisions?	What type of sustainable products do you purchase most frequently?	What s information inf know awaren sustaina
12	Samvedanaa Bali	35-45	Higher Education	Yes	No, not at all	2	Organic Food and Beverages	Social
13	Ayush Aggarwal	18-25	Under-Grad	Yes	Yes, significantly	4	Re-useable household items	Social
14	Vyomika	25-35	Post-Grad	Yes	Yes, slightly	3	Energy efficient appliances	Social
15	Rochit Garg	25-35	Under-Grad	Yes	Yes, slightly	4	Energy efficient appliances	Social
16	Shradha Dugade	25-35	Post-Grad	Yes	Yes, slightly	1	Energy efficient appliances	News (
17	Chaitanaya Mohan	25-35	Post-Grad	Yes	Yes, slightly	3	Energy efficient appliances	Social
18	Sarang mukherjee	18-25	Under-Grad	Yes	Yes, slightly	3	Energy efficient appliances	News (
19	Nabihah Imran	18-25	Under-Grad	Yes	Yes, significantly	5	Eco-Friendly Clothing, Re-useable household it...	Social Con Adve
20	riya sharma	25-35	Post-Grad	Yes	Yes, slightly	2	Re-useable household items, Energy efficient a...	Social Frien Corpora
21	Naisha	18-25	Under-Grad	Yes	Yes, slightly	5	Re-useable household items	Social News (
22	nikhil bhan	18-25	Under-Grad	Yes	Yes, significantly	3	Re-useable household items	Educ Instit Frien

	Name	Age	Education	Have you noticed an increase in your awareness of environmental issues over the past few years?	Have you changed your shopping habits in the past year to support more sustainable options?	How important is environmental sustainability to you when making purchasing decisions?	What type of sustainable products do you purchase most frequently?	What s… inform… inf… know… aware… sustaina…
23	Pooja naresh	18-25	Under-Grad	Yes	Yes, significantly	5	Organic Food and Beverages, Re-useable househo…	News C Educ Instit F
24	Aaryan kolekar	18-25	Under-Grad	Yes	Yes, slightly	3	Organic Food and Beverages, Re-useable househo…	Social News C Cor Adve
25	Saptaswa Sen	18-25	Under-Grad	Yes	Yes, significantly	3	Organic Food and Beverages, Eco-Friendly Cloth…	Social Educ Instit F
26	Anagha	18-25	Under-Grad	Yes	Yes, slightly	4	Re-useable household items, Energy efficient a…	Social Educ Instit C
27	Noella D'Silva	18-25	Under-Grad	Yes	Yes, slightly	4	Organic Food and Beverages	Social Frien Corpora
28	Michelle Miranda	18-25	Under-Grad	Yes	Yes, slightly	5	Organic Food and Beverages, Energy efficient a…	Social News C Educ
29	Vyomika	25-35	Post-Grad	Yes	Yes, significantly	5	Re-useable household items, Energy efficient a…	Social Cor Adve
30	Anish	18-25	Under-Grad	Yes	No, not at all	1	Organic Food and Beverages, Re-useable househo…	Social Frien Corpora
31	Shradha Bhat	25-35	Post-Grad	Yes	Yes, slightly	5	Organic Food and Beverages, Re-useable househo…	Social Cor Adve

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	Name	Age	Education	Have you noticed an increase in your awareness of environmental issues over the past few years?	Have you changed your shopping habits in the past year to support more sustainable options?	How important is environmental sustainability to you when making purchasing decisions?	What type of sustainable products do you purchase most frequently?	What so... inform... inf... know... awaren... sustaina...
32	Michelle Lobo	18-25	Under-Grad	Yes	Yes, slightly	2	Organic Food and Beverages	Social Educ... Insti...
33	Kathyrine Faith Gracia Philip	18-25	Under-Grad	No	No, not at all	3	Eco-Friendly Clothing	Social News C... Educ...
34	Ayush Paul	18-25	Under-Grad	Yes	No, not at all	4	Organic Food and Beverages, Energy efficient a...	Social News C... Educ...
35	Arshad	18-25	Under-Grad	Yes	Yes, slightly	4	Organic Food and Beverages	Social News C... Educ...
36	Alaina Ashfaq	18-25	Under-Grad	Yes	Yes, slightly	2	Organic Food and Beverages	Social News C... Frien...
37	anju mathew	25-35	Post-Grad	Yes	Yes, significantly	2	Eco-Friendly Clothing	News C... Educ... Instit... F...
38	shankar madhvan	35-45	Doctorate	Yes	Yes, slightly	3	Re-useable household items	Educ... Instit... Frien...
39	Taniya Anil	18-25	Under-Grad	Yes	Yes, slightly	2	Organic Food and Beverages, Re-useable househo...	Social Educ... Insti...
40	Alwyn Antony	18-25	Under-Grad	Yes	Yes, slightly	5	Organic Food and Beverages, Re-useable househo...	Social News C... Educ...
41	Arghya Basu	18-25	Under-Grad	Yes	Yes, slightly	3	Re-useable household	Social

	Name	Age	Education	Have you noticed an increase in your awareness of environmental issues over the past few years?	Have you changed your shopping habits in the past year to support more sustainable options?	How important is environmental sustainability to you when making purchasing decisions?	What type of sustainable products do you purchase most frequently?	What s᠁ inforᴍ᠁ inf᠁ knov᠁ awareᴍ᠁ sustaina᠁
							items	
42	Anthony Gonsalvis	45-55	Post-Grad	No	No, not at all	1	Energy efficient appliances	Frien᠁

```
In [8]:  print(data.columns)
```

```
Index(['Name', 'Age', 'Education',
       'Have you noticed an increase in your awareness of environmental issues over the past few years?',
       'Have you changed your shopping habits in the past year to support more sustainable options?',
       'How important is environmental sustainability to you when making purchasing decisions?',
       'What type of sustainable products do you purchase most frequently?',
       'What sources of information influence your knowledge and awareness of sustainability?',
       'How willing are you to pay a premium for products that are environmentally friendly?',
       'What actions would encourage you to support sustainability more actively in your daily life?',
       'How do you verify the sustainability claims made by companies?',
       'Do you believe that your individual choices can make a significant impact on the environment?',
       'Have you influenced others (friends, family) to make more sustainable choices?',
       'Gender', 'Lookup Table'],
      dtype='object')
```

```
In [9]:  data = pd.get_dummies(data, columns=[
             'What type of sustainable products do you purchase most frequently?',
             'What sources of information influence your knowledge and awareness of sustaina᠁
             'What actions would encourage you to support sustainability more actively in yc᠁
             'How do you verify the sustainability claims made by companies?'
         ])
```

```
In [10]:  data
```

Out[10]:

	Name	Age	Education	Have you noticed an increase in your awareness of environmental issues over the past few years?	Have you changed your shopping habits in the past year to support more sustainable options?	How important is environmental sustainability to you when making purchasing decisions?	How willing are you to pay a premium for products that are environmentally friendly?	b c env
0	Rahael MOUMI	25-35	Post-Grad	Yes	Yes, significantly	4	5	
1	Cristina Morales	25-35	Post-Grad	Yes	Yes, significantly	2	2	
2	Pooja	25-35	Post-Grad	Yes	Yes, significantly	4	4	
3	Naomi	25-35	Under-Grad	Yes	Yes, slightly	3	2	
4	Harri	55-65	Post-Grad	Yes	Yes, slightly	3	3	
5	Duncan	25-35	Under-Grad	Yes	Yes, significantly	3	2	
6	Li	25-35	Post-Grad	Yes	Yes, significantly	4	4	
7	Yulia Prokopiv	35-45	Higher Education	Yes	Yes, significantly	5	5	
8	Vasundhara Sharma	35-45	Post-Grad	Yes	Yes, significantly	3	3	
9	KISHORE ASTHANA	55-65	Higher Education	Yes	Yes, slightly	4	3	
10	Himanshu	35-45	Under-Grad	No	Yes, slightly	3	3	
11	Ridham Ghai	18-25	Under-Grad	Yes	Yes, significantly	4	2	
12	Samvedanaa Bali	35-45	Higher Education	Yes	No, not at all	2	1	
13	Ayush Aggarwal	18-25	Under-Grad	Yes	Yes, significantly	4	1	

	Name	Age	Education	Have you noticed an increase in your awareness of environmental issues over the past few years?	Have you changed your shopping habits in the past year to support more sustainable options?	How important is environmental sustainability to you when making purchasing decisions?	How willing are you to pay a premium for products that are environmentally friendly?	b ... env
14	Vyomika	25-35	Post-Grad	Yes	Yes, slightly	3	5	
15	Rochit Garg	25-35	Under-Grad	Yes	Yes, slightly	4	4	
16	Shradha Dugade	25-35	Post-Grad	Yes	Yes, slightly	1	1	
17	Chaitanaya Mohan	25-35	Post-Grad	Yes	Yes, slightly	3	2	
18	Sarang mukherjee	18-25	Under-Grad	Yes	Yes, slightly	3	2	
19	Nabihah Imran	18-25	Under-Grad	Yes	Yes, significantly	5	5	
20	riya sharma	25-35	Post-Grad	Yes	Yes, slightly	2	3	
21	Naisha	18-25	Under-Grad	Yes	Yes, slightly	5	4	
22	nikhil bhan	18-25	Under-Grad	Yes	Yes, significantly	3	3	
23	Pooja naresh	18-25	Under-Grad	Yes	Yes, significantly	5	3	
24	Aaryan kolekar	18-25	Under-Grad	Yes	Yes, slightly	3	4	
25	Saptaswa Sen	18-25	Under-Grad	Yes	Yes, significantly	3	4	
26	Anagha	18-25	Under-Grad	Yes	Yes, slightly	4	4	

	Name	Age	Education	Have you noticed an increase in your awareness of environmental issues over the past few years?	Have you changed your shopping habits in the past year to support more sustainable options?	How important is environmental sustainability to you when making purchasing decisions?	How willing are you to pay a premium for products that are environmentally friendly?	b... ... env...
27	Noella D'Silva	18-25	Under-Grad	Yes	Yes, slightly	4	4	
28	Michelle Miranda	18-25	Under-Grad	Yes	Yes, slightly	5	5	
29	Vyomika	25-35	Post-Grad	Yes	Yes, significantly	5	4	
30	Anish	18-25	Under-Grad	Yes	No, not at all	1	1	
31	Shradha Bhat	25-35	Post-Grad	Yes	Yes, slightly	5	5	
32	Michelle Lobo	18-25	Under-Grad	Yes	Yes, slightly	2	1	
33	Kathyrine Faith Gracia Philip	18-25	Under-Grad	No	No, not at all	3	2	
34	Ayush Paul	18-25	Under-Grad	Yes	No, not at all	4	5	
35	Arshad	18-25	Under-Grad	Yes	Yes, slightly	4	4	
36	Alaina Ashfaq	18-25	Under-Grad	Yes	Yes, slightly	2	3	
37	anju mathew	25-35	Post-Grad	Yes	Yes, significantly	2	2	
38	shankar madhvan	35-45	Doctorate	Yes	Yes, slightly	3	3	
39	Taniya Anil	18-25	Under-Grad	Yes	Yes, slightly	2	3	
40	Alwyn Antony	18-25	Under-Grad	Yes	Yes, slightly	5	2	

	Name	Age	Education	Have you noticed an increase in your awareness of environmental issues over the past few years?	Have you changed your shopping habits in the past year to support more sustainable options?	How important is environmental sustainability to you when making purchasing decisions?	How willing are you to pay a premium for products that are environmentally friendly?	b c env
41	Arghya Basu	18-25	Under-Grad	Yes	Yes, slightly	3	4	
42	Anthony Gonsalvis	45-55	Post-Grad	No	No, not at all	1	1	

43 rows × 71 columns

In [ ]:

In [11]:
```python
import pandas as pd
from tabulate import tabulate

# Load your data (assuming it's loaded into a DataFrame called 'data')
# data = pd.read_csv('your_data.csv')  # Uncomment and specify your file if needed

# Define the column mapping dictionary
column_mapping = {
    'Age': 'Age',
    'Education': 'Education_Level',
    'Have you noticed an increase in your awareness of environmental issues over th
    'Have you changed your shopping habits in the past year to support more sustair
    'How important is environmental sustainability to you when making purchasing de
    'How willing are you to pay a premium for products that are environmentally fri
    'What type of sustainable products do you purchase most frequently?': 'Frequent
    'What sources of information influence your knowledge and awareness of sustaina
    'What actions would encourage you to support sustainability more actively in yc
    'How do you verify the sustainability claims made by companies?': 'Verification
    'Do you believe that your individual choices can make a significant impact on t
    'Have you influenced others (friends, family) to make more sustainable choices?
    'How do you verify the sustainability claims made by companies?_Look for certif
    'How do you verify the sustainability claims made by companies?_Look for certif
    'How do you verify the sustainability claims made by companies?_Research online
    'How do you verify the sustainability claims made by companies?_Research online
    'How do you verify the sustainability claims made by companies?_Research online
    'How do you verify the sustainability claims made by companies?_Research online
    'How do you verify the sustainability claims made by companies?_Research online
    'How do you verify the sustainability claims made by companies?_Trust the branc
    'How do you verify the sustainability claims made by companies?_Trust the branc
    'How do you verify the sustainability claims made by companies?_Trust the branc
}

# Rename columns in the DataFrame
data = data.rename(columns=column_mapping)

# Create a DataFrame to display the column mappings
```

```python
column_mapping_df = pd.DataFrame(list(column_mapping.items()), columns=['Original (

# Display the column mappings in tabular format
print(tabulate(column_mapping_df, headers='keys', tablefmt='grid'))
```

	Original Column	New Column Name
0	Age	Age
1	Education	Education_Level
2	Have you noticed an increase in your awareness of environmental issues over the past few years?	Environmental_Awareness_Increase
3	Have you changed your shopping habits in the past year to support more sustainable options?	Changed_Shopping_Habits
4	How important is environmental sustainability to you when making purchasing decisions?	Importance_of_Sustainability_in_Purchase
5	How willing are you to pay a premium for products that are environmentally friendly?	Willingness_to_Pay_Premium
6	What type of sustainable products do you purchase most frequently?	Frequent_Sustainable_Product_Type
7	What sources of information influence your knowledge and awareness of sustainability?	Source_of_Sustainability_Info
8	What actions would encourage you to support sustainability more actively in your daily life?	Encouragement_to_Support_Sustainability
9	How do you verify the sustainability claims made by companies?	Verification_Method_for_Sustainability_Claims

```
| 10 | Do you believe that your individual choices can make a significant impact o
n the environment?                                        | Belief_in_Individual_
Impact                    |
+----+---------------------------------------------------------------------------
-----------------------------------------------------------+--------------------
-----------------------+
| 11 | Have you influenced others (friends, family) to make more sustainable choic
es?                                                       | Influence_on_Friends_
and_Family                |
+----+---------------------------------------------------------------------------
-----------------------------------------------------------+--------------------
-----------------------+
| 12 | How do you verify the sustainability claims made by companies?_Look for cer
tifications                                               | Verify_Look_for_Certi
fications                 |
+----+---------------------------------------------------------------------------
-----------------------------------------------------------+--------------------
-----------------------+
| 13 | How do you verify the sustainability claims made by companies?_Look for cer
tifications, Ask from friends or experts                  | Verify_Certifications
_and_Ask_Friends          |
+----+---------------------------------------------------------------------------
-----------------------------------------------------------+--------------------
-----------------------+
| 14 | How do you verify the sustainability claims made by companies?_Research onl
ine                                                       | Verify_Research_Onlin
e                         |
+----+---------------------------------------------------------------------------
-----------------------------------------------------------+--------------------
-----------------------+
| 15 | How do you verify the sustainability claims made by companies?_Research onl
ine, Ask from friends or experts                          | Verify_Online_and_Ask
_Friends                  |
+----+---------------------------------------------------------------------------
-----------------------------------------------------------+--------------------
-----------------------+
| 16 | How do you verify the sustainability claims made by companies?_Research onl
ine, Look for certifications                              | Verify_Online_and_Cer
tifications               |
+----+---------------------------------------------------------------------------
-----------------------------------------------------------+--------------------
-----------------------+
| 17 | How do you verify the sustainability claims made by companies?_Research onl
ine, Look for certifications, Ask from friends or experts | Verify_Online_Certifi
cations_and_Friends       |
+----+---------------------------------------------------------------------------
-----------------------------------------------------------+--------------------
-----------------------+
| 18 | How do you verify the sustainability claims made by companies?_Research onl
ine, Trust the brand's reputation, Look for certifications | Verify_Online_Reputat
ion_and_Certifications    |
+----+---------------------------------------------------------------------------
-----------------------------------------------------------+--------------------
-----------------------+
| 19 | How do you verify the sustainability claims made by companies?_Trust the br
and's reputation                                          | Verify_Trust_Brand_Re
putation                  |
+----+---------------------------------------------------------------------------
-----------------------------------------------------------+--------------------
-----------------------+
| 20 | How do you verify the sustainability claims made by companies?_Trust the br
and's reputation, Ask from friends or experts             | Verify_Reputation_and
_Friends                  |
+----+---------------------------------------------------------------------------
```

```
---------------------------------------------------------------+--------------------
-----------------------+
| 21 | How do you verify the sustainability claims made by companies?_Trust the br
and's reputation, Look for certifications                      | Verify_Reputation_and
_Certifications        |
+----+---------------------------------------------------------------+--------------------
---------------------------------------------------------------+--------------------
-----------------------+
```

In [12]:
```python
column_mapping_df = pd.DataFrame(list(column_mapping.items()), columns=['Original C

column_mapping_df
```

Out[12]:

	Original Column	New Column Name
0	Age	Age
1	Education	Education_Level
2	Have you noticed an increase in your awareness...	Environmental_Awareness_Increase
3	Have you changed your shopping habits in the p...	Changed_Shopping_Habits
4	How important is environmental sustainability ...	Importance_of_Sustainability_in_Purchase
5	How willing are you to pay a premium for produ...	Willingness_to_Pay_Premium
6	What type of sustainable products do you purch...	Frequent_Sustainable_Product_Type
7	What sources of information influence your kno...	Source_of_Sustainability_Info
8	What actions would encourage you to support su...	Encouragement_to_Support_Sustainability
9	How do you verify the sustainability claims ma...	Verification_Method_for_Sustainability_Claims
10	Do you believe that your individual choices ca...	Belief_in_Individual_Impact
11	Have you influenced others (friends, family) t...	Influence_on_Friends_and_Family
12	How do you verify the sustainability claims ma...	Verify_Look_for_Certifications
13	How do you verify the sustainability claims ma...	Verify_Certifications_and_Ask_Friends
14	How do you verify the sustainability claims ma...	Verify_Research_Online
15	How do you verify the sustainability claims ma...	Verify_Online_and_Ask_Friends
16	How do you verify the sustainability claims ma...	Verify_Online_and_Certifications
17	How do you verify the sustainability claims ma...	Verify_Online_Certifications_and_Friends
18	How do you verify the sustainability claims ma...	Verify_Online_Reputation_and_Certifications
19	How do you verify the sustainability claims ma...	Verify_Trust_Brand_Reputation
20	How do you verify the sustainability claims ma...	Verify_Reputation_and_Friends
21	How do you verify the sustainability claims ma...	Verify_Reputation_and_Certifications

In [13]:
```python
data
```

Out[13]:

	Name	Age	Education_Level	Environmental_Awareness_Increase	Changed_Shopping_Habi
0	Rahael MOUMI	25-35	Post-Grad	Yes	Yes, significant
1	Cristina Morales	25-35	Post-Grad	Yes	Yes, significant
2	Pooja	25-35	Post-Grad	Yes	Yes, significant
3	Naomi	25-35	Under-Grad	Yes	Yes, slight
4	Harri	55-65	Post-Grad	Yes	Yes, slight
5	Duncan	25-35	Under-Grad	Yes	Yes, significant
6	Li	25-35	Post-Grad	Yes	Yes, significant
7	Yulia Prokopiv	35-45	Higher Education	Yes	Yes, significant
8	Vasundhara Sharma	35-45	Post-Grad	Yes	Yes, significant
9	KISHORE ASTHANA	55-65	Higher Education	Yes	Yes, slight
10	Himanshu	35-45	Under-Grad	No	Yes, slight
11	Ridham Ghai	18-25	Under-Grad	Yes	Yes, significant
12	Samvedanaa Bali	35-45	Higher Education	Yes	No, not at
13	Ayush Aggarwal	18-25	Under-Grad	Yes	Yes, significant
14	Vyomika	25-35	Post-Grad	Yes	Yes, slight
15	Rochit Garg	25-35	Under-Grad	Yes	Yes, slight

	Name	Age	Education_Level	Environmental_Awareness_Increase	Changed_Shopping_Habi
16	Shradha Dugade	25-35	Post-Grad	Yes	Yes, slight
17	Chaitanaya Mohan	25-35	Post-Grad	Yes	Yes, slight
18	Sarang mukherjee	18-25	Under-Grad	Yes	Yes, slight
19	Nabihah Imran	18-25	Under-Grad	Yes	Yes, significant
20	riya sharma	25-35	Post-Grad	Yes	Yes, slight
21	Naisha	18-25	Under-Grad	Yes	Yes, slight
22	nikhil bhan	18-25	Under-Grad	Yes	Yes, significant
23	Pooja naresh	18-25	Under-Grad	Yes	Yes, significant
24	Aaryan kolekar	18-25	Under-Grad	Yes	Yes, slight
25	Saptaswa Sen	18-25	Under-Grad	Yes	Yes, significant
26	Anagha	18-25	Under-Grad	Yes	Yes, slight
27	Noella D'Silva	18-25	Under-Grad	Yes	Yes, slight
28	Michelle Miranda	18-25	Under-Grad	Yes	Yes, slight
29	Vyomika	25-35	Post-Grad	Yes	Yes, significant
30	Anish	18-25	Under-Grad	Yes	No, not at
31	Shradha Bhat	25-35	Post-Grad	Yes	Yes, slight

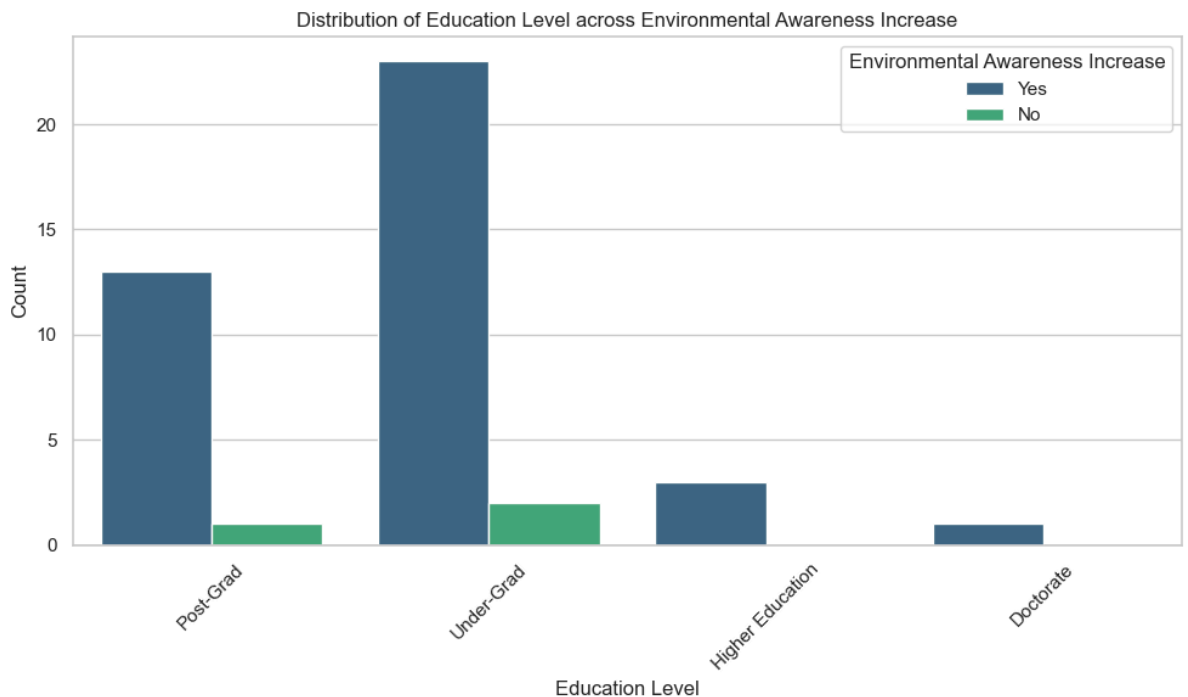|	Name	Age	Education_Level	Environmental_Awareness_Increase	Changed_Shopping_Habi
32	Michelle Lobo	18-25	Under-Grad	Yes	Yes, slight
33	Kathyrine Faith Gracia Philip	18-25	Under-Grad	No	No, not at
34	Ayush Paul	18-25	Under-Grad	Yes	No, not at
35	Arshad	18-25	Under-Grad	Yes	Yes, slight
36	Alaina Ashfaq	18-25	Under-Grad	Yes	Yes, slight
37	anju mathew	25-35	Post-Grad	Yes	Yes, significant
38	shankar madhvan	35-45	Doctorate	Yes	Yes, slight
39	Taniya Anil	18-25	Under-Grad	Yes	Yes, slight
40	Alwyn Antony	18-25	Under-Grad	Yes	Yes, slight
41	Arghya Basu	18-25	Under-Grad	Yes	Yes, slight
42	Anthony Gonsalvis	45-55	Post-Grad	No	No, not at

43 rows × 71 columns

```python
In [14]:   import pandas as pd
           import matplotlib.pyplot as plt
           import seaborn as sns
           import warnings
           warnings.filterwarnings("ignore", category=UserWarning)  # Ignores UserWarnings


           sns.set(style="whitegrid")

           plt.figure(figsize=(10, 6))
           sns.countplot(data=data, x='Education_Level', hue='Environmental_Awareness_Increase
           plt.title('Distribution of Education Level across Environmental Awareness Increase'
           plt.xlabel('Education Level')
           plt.ylabel('Count')
           plt.legend(title='Environmental Awareness Increase')
           plt.xticks(rotation=45)
           plt.tight_layout()
           plt.show()
```

```python
plt.figure(figsize=(10, 6))
sns.barplot(data=data, x='Gender', y='Importance_of_Sustainability_in_Purchase', ci
plt.title('Importance of Sustainability in Purchase Decisions by Gender')
plt.xlabel('Gender')
plt.ylabel('Average Importance of Sustainability')
plt.tight_layout()
plt.show()
```

Distribution of Education Level across Environmental Awareness Increase


```
C:\Users\smair\AppData\Local\Temp\ipykernel_23812\1649481442.py:21: FutureWarning:

The `ci` parameter is deprecated. Use `errorbar='sd'` for the same effect.

  sns.barplot(data=data, x='Gender', y='Importance_of_Sustainability_in_Purchase',
ci='sd', palette='muted')
```

Importance of Sustainability in Purchase Decisions by Gender


```python
In [15]:  # Import libraries if not already imported
          import pandas as pd
          import matplotlib.pyplot as plt
          import seaborn as sns
```

```python
import warnings
warnings.filterwarnings("ignore", category=UserWarning)

# Set the style for seaborn
sns.set(style="whitegrid")

# Plot: Education_Level vs. Importance_of_Sustainability_in_Purchase
plt.figure(figsize=(10, 6))
sns.barplot(data=data, x='Education_Level', y='Importance_of_Sustainability_in_Purc
plt.title('Education Level vs. Importance of Sustainability in Purchase Decisions')
plt.xlabel('Education Level')
plt.ylabel('Average Importance of Sustainability in Purchase')
plt.xticks(rotation=45)
plt.tight_layout()
plt.show()
```
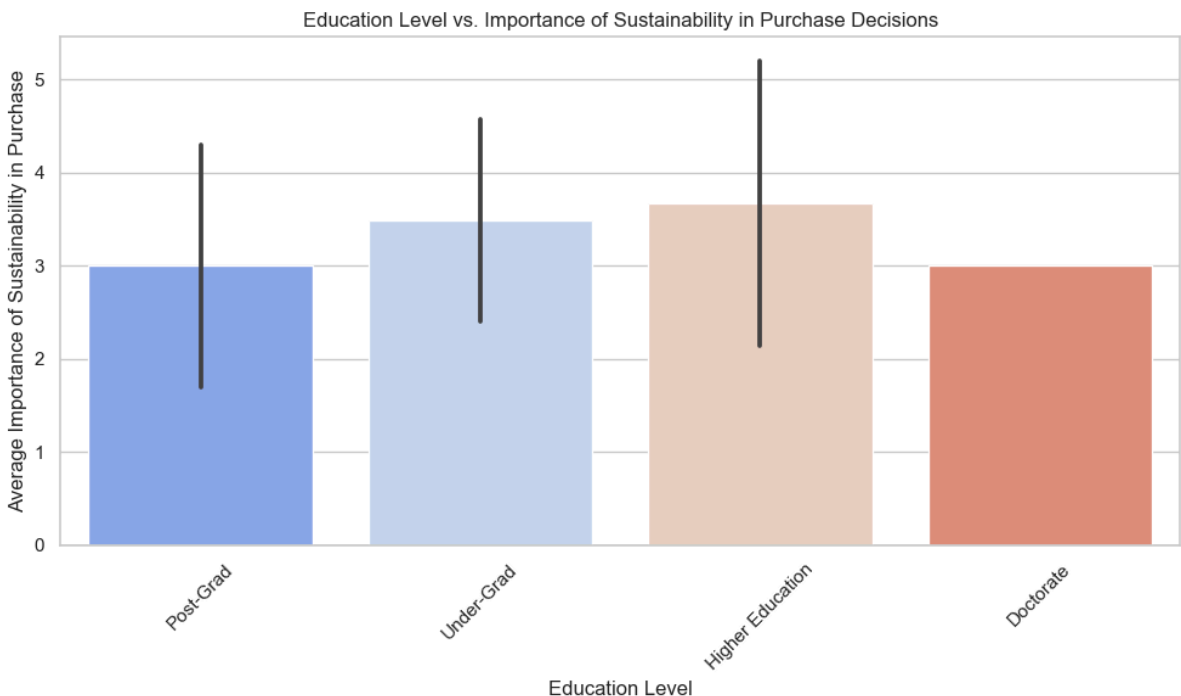
```
C:\Users\smair\AppData\Local\Temp\ipykernel_23812\3476123598.py:13: FutureWarning:

The `ci` parameter is deprecated. Use `errorbar='sd'` for the same effect.

  sns.barplot(data=data, x='Education_Level', y='Importance_of_Sustainability_in_P
urchase', ci='sd', palette='coolwarm')
```


Education Level vs. Importance of Sustainability in Purchase Decisions
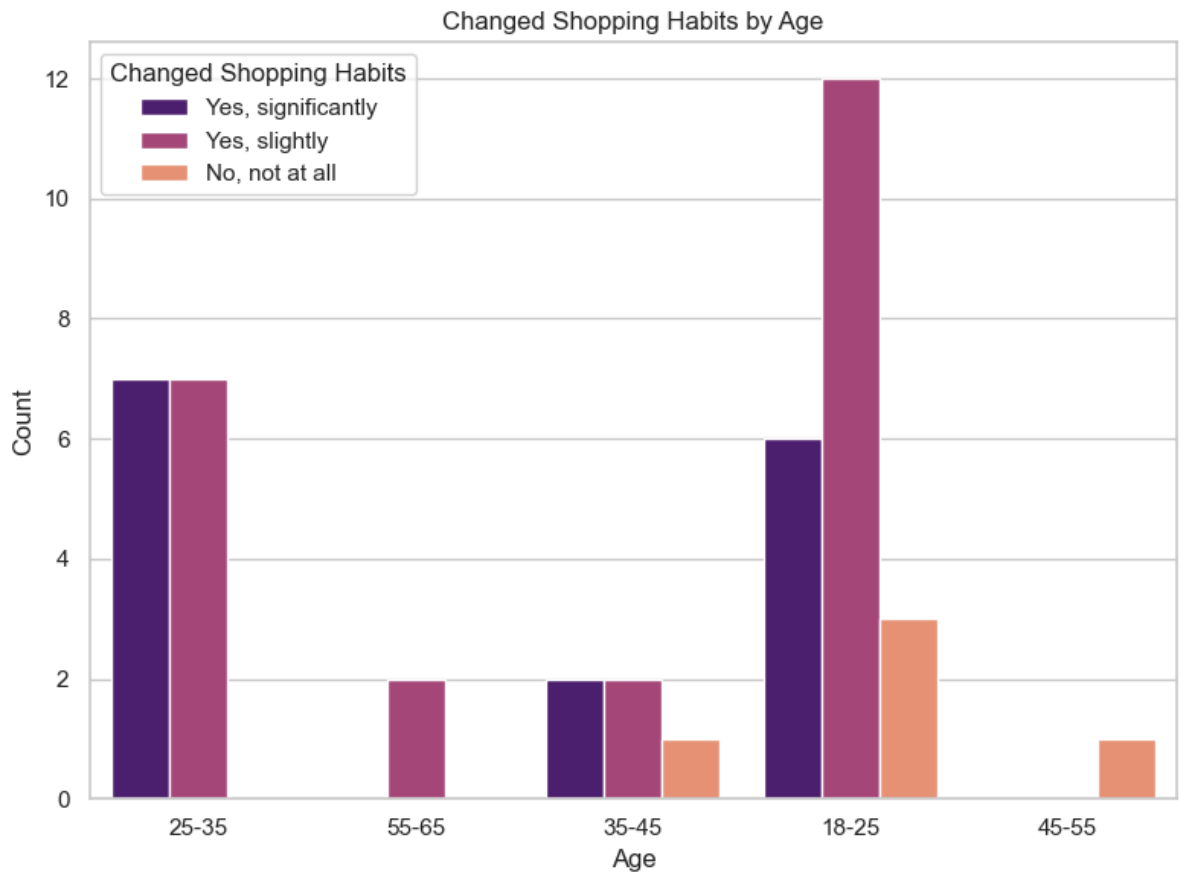
```python
In [16]:   # Import libraries if not already imported
           import pandas as pd
           import matplotlib.pyplot as plt
           import seaborn as sns

           # Set the style for seaborn
           sns.set(style="whitegrid")

           # Set up the plot for Age vs. Changed Shopping Habits
           plt.figure(figsize=(8, 6))
           sns.countplot(data=data, x='Age', hue='Changed_Shopping_Habits', palette='magma')
           plt.title('Changed Shopping Habits by Age')
           plt.xlabel('Age')
           plt.ylabel('Count')
           plt.legend(title='Changed Shopping Habits')

           # Show the plot
           plt.tight_layout()
           plt.show()
```

Changed Shopping Habits by Age


```
In [17]:  # Import libraries if not already imported
          import pandas as pd
          import matplotlib.pyplot as plt
          import seaborn as sns
          import warnings
          warnings.filterwarnings("ignore", category=UserWarning)

          # Set the style for seaborn
          sns.set(style="whitegrid")

          # Plot: Education_Level vs. Importance_of_Sustainability_in_Purchase
          plt.figure(figsize=(10, 6))

          # Convert Importance_of_Sustainability_in_Purchase to numeric if it is not already
          data['Importance_of_Sustainability_in_Purchase'] = pd.to_numeric(data['Importance_o

          # Plotting the barplot
          sns.barplot(
              data=data,
              x='Education_Level',
              y='Importance_of_Sustainability_in_Purchase',
              ci='sd',
              palette='coolwarm'
          )

          # Adding labels and title
          plt.title('Education Level vs. Importance of Sustainability in Purchase Decisions')
          plt.xlabel('Education Level')
          plt.ylabel('Average Importance of Sustainability in Purchase')
          plt.xticks(rotation=45)

          # Adjust layout and show the plot
          plt.tight_layout()
          plt.show()
```
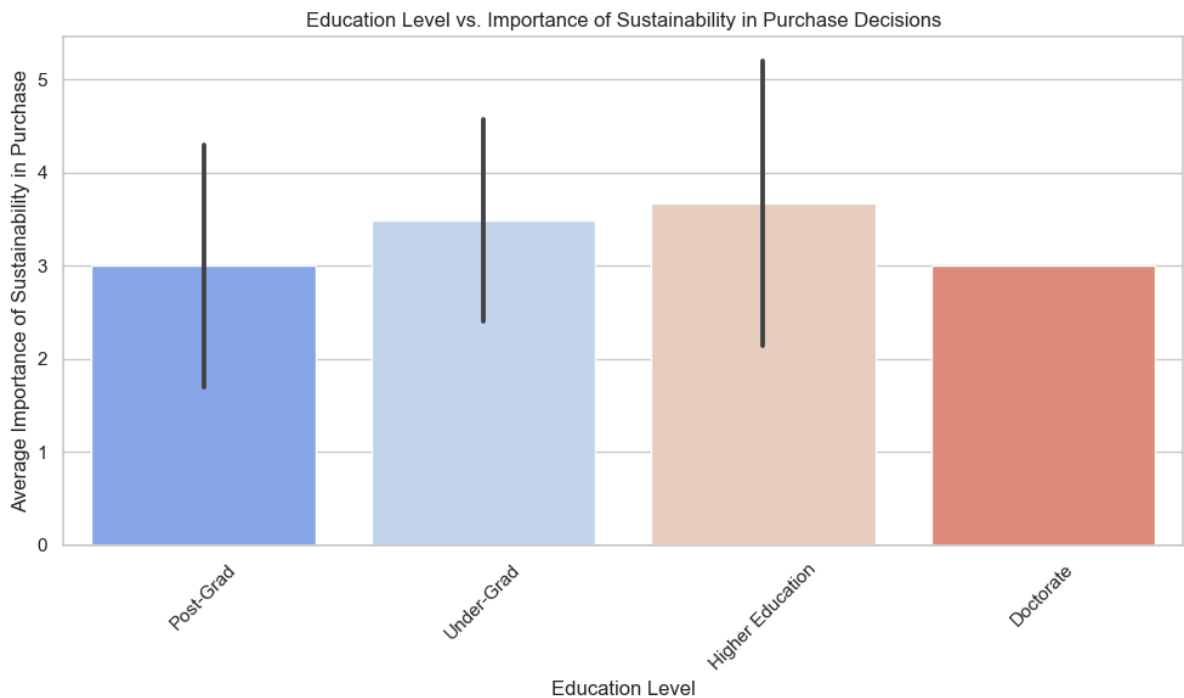
```
C:\Users\smair\AppData\Local\Temp\ipykernel_23812\3614443603.py:18: FutureWarning:

The `ci` parameter is deprecated. Use `errorbar='sd'` for the same effect.

  sns.barplot(
```


Education Level vs. Importance of Sustainability in Purchase Decisions

In [18]:
```python
# Plot: Importance_of_Sustainability_in_Purchase grouped by Age
plt.figure(figsize=(10, 6))

# Plotting the barplot
sns.barplot(
    data=data,
    x='Age',
    y='Importance_of_Sustainability_in_Purchase',
    ci='sd',
    palette='Set3'
)

# Adding labels and title
plt.title('Importance of Sustainability in Purchase Decisions by Age')
plt.xlabel('Age')
plt.ylabel('Average Importance of Sustainability in Purchase')
plt.xticks(rotation=45)

# Adjust layout and show the plot
plt.tight_layout()
plt.show()
```
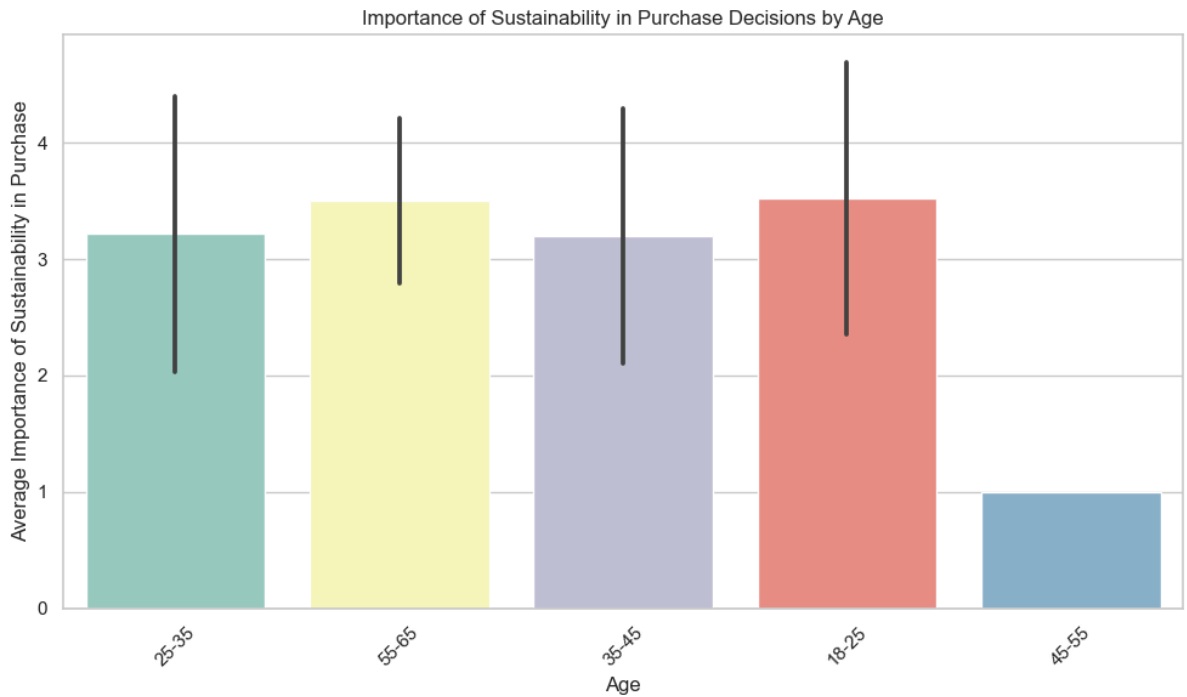
```
C:\Users\smair\AppData\Local\Temp\ipykernel_23812\2342890243.py:5: FutureWarning:

The `ci` parameter is deprecated. Use `errorbar='sd'` for the same effect.

  sns.barplot(
```

Importance of Sustainability in Purchase Decisions by Age


```python
# Import necessary libraries
import seaborn as sns
import matplotlib.pyplot as plt

# Select the relevant columns for the correlation matrix
columns_to_analyze = [
    'Importance_of_Sustainability_in_Purchase',
    'Belief_in_Individual_Impact',
    'Willingness_to_Pay_Premium'
]

# Calculate the correlation matrix
corr_matrix = data[columns_to_analyze].corr()

# Plotting the heatmap
plt.figure(figsize=(8, 6))
sns.heatmap(corr_matrix, annot=True, cmap='coolwarm', fmt='.2f', cbar=True, linewid

# Adding title
plt.title('Correlation Matrix: Attitudes Towards Sustainability')

# Show the plot
plt.tight_layout()
plt.show()
```

```
C:\Users\smair\AppData\Local\Temp\ipykernel_23812\1343707897.py:13: FutureWarning:
The default value of numeric_only in DataFrame.corr is deprecated. In a future ver
sion, it will default to False. Select only valid columns or specify the value of
numeric_only to silence this warning.
  corr_matrix = data[columns_to_analyze].corr()
```

Correlation Matrix: Attitudes Towards Sustainability