Technology Attitude and VR Experience Exploration

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1 Introduction

This report contains the analysis of the Game Experience Questionnaire (GEQ) survey data. Currently, the GEQ contains only the in-game and post-game modules. In this analysis, we will see how our patient pool perceive virtual reality (VR) using two VR headsets, Oculus Go and Oculus Rift.

2 Methods

2.1 Study Sample

32 patients went through a VR experiment at the Southwest Medical Associates (SMA) clinic in Las Vegas, NV. Upon close inspection of the GEQ data, one patient was missing while the rest were divided into two groups based on the type of VR headsets used. 31 patients used Oculus Go while 18 used Oculus Rift.

2.2 Scoring

Table 1: Reverse Scoring of Negative Items

	Original			New	
Scale	Technology Attitude	VR Game Experience	Scale	Technology Attitude	VR Game Experience
1	Strongly disagree	Not at all	5	Strongly agree	Extremely
2	Disagree	Slightly	4	Agree	Fairly
3	Neither agree nor disagree	Moderately	3	Neither agree nor disagree	Moderately
4	Agree	Fairly	2	Disagree	Sightly
5	Strongly agree	Extremely	1	Strongly disagree	Not at all

2.3 Chi-Square Test

3 Results

3.1 Technology Attitude

Table 2: Technology Attitude Breakdown for Oculus Go VR Headset Users

Technology Attitude	Count	Percentage
Negative	20	64.5
Mixed	10	32.3
Positive	1	3.2

Table 3: Technology Attitude Breakdown by Gender for Oculus Go VR Headset Users

Technology Attitude	Gender	Count	Percentage
Negative	Male	7	22.6
Mixed	Male	3	9.7
Negative	Female	13	41.9
Mixed	Female	7	22.6
Positive	Female	1	3.2

Table 4: Technology Attitude Breakdown by Age for Oculus Go VR Headset Users

Technology Attitude	Age	Count	Percentage
Mixed	18-30	1	3.2
Negative	31-40	2	6.5
Mixed	31-40	1	3.2
Negative	41-50	4	12.9
Negative	51-60	7	22.6
Mixed	51-60	5	16.1
Negative	61-70	5	16.1
Mixed	61-70	1	3.2
Negative	70+	2	6.5
Mixed	70+	2	6.5
Positive	70+	1	3.2

Table 5: Technology Attitude Breakdown for Oculus Rift VR Headset Users

Technology Attitude	Count	Percentage
Negative	14	77.8
Mixed	3	16.7
Positive	1	5.6

Table 6: Technology Attitude Breakdown by Gender for Oculus Rift VR Headset Users

Technology Attitude	Gender	Count	Percentage
Negative	Male	6	33.3
Negative	Female	8	44.4
Mixed	Female	3	16.7
Positive	Female	1	5.6

Table 7: Technology Attitude Breakdown by Age for Oculus Rift VR Headset Users

Technology Attitude	Age	Count	Percentage
Negative	31-40	2	11.1
Negative	41-50	4	22.2
Negative	51-60	4	22.2
Mixed	51-60	2	11.1
Negative	61-70	3	16.7
Negative	70+	1	5.6
Mixed	70+	1	5.6
Positive	70+	1	5.6

3.2 VR Game Experience

Table 8: VR Game Experience Breakdown for Oculus Go VR Headset Users

VR Game Experience	Count	Percentage
Negative	3	9.7
Mixed	6	19.4
Positive	22	71.0

Table 9: VR Game Experience Breakdown by Gender for Oculus Go VR Headset Users

VR Game Experience	Gender	Count	Percentage
Negative	Male	2	6.5
Mixed	Male	4	12.9
Positive	Male	4	12.9
Negative	Female	1	3.2
Mixed	Female	2	6.5
Positive	Female	18	58.1

Table 10: VR Game Experience Breakdown by Age for Oculus Go VR Headset Users

VR Game Experience	Age	Count	Percentage
Positive	18-30	1	3.2
Mixed	31-40	2	6.5
Positive	31-40	1	3.2
Negative	41-50	1	3.2
Mixed	41-50	1	3.2
Positive	41-50	2	6.5
Negative	51-60	1	3.2
Mixed	51-60	2	6.5
Positive	51-60	9	29.0
Negative	61-70	1	3.2
Mixed	61-70	1	3.2
Positive	61-70	4	12.9
Positive	70+	5	16.1

Table 11: VR Game Experience Breakdown for Oculus Rift VR Headset Users

VR Game Experience	Count	Percentage
Negative	3	16.7
Mixed	5	27.8
Positive	10	55.6

Table 12: VR Game Experience Breakdown by Gender for Oculus Rift VR Headset Users

VR Game Experience	Gender	Count	Percentage
Negative	Male	1	5.6
Mixed	Male	2	11.1
Positive	Male	3	16.7
Negative	Female	2	11.1
Mixed	Female	3	16.7
Positive	Female	7	38.9

Table 13: VR Game Experience Breakdown by Age for Oculus Rift VR Headset Users

VR Game Experience	Age	Count	Percentage
Mixed	31-40	1	5.6
Positive	31-40	1	5.6
Negative	41-50	1	5.6
Mixed	41-50	1	5.6
Positive	41-50	2	11.1
Negative	51-60	2	11.1
Mixed	51-60	1	5.6
Positive	51-60	3	16.7
Mixed	61-70	1	5.6
Positive	61-70	2	11.1
Mixed	70+	1	5.6
Positive	70+	2	11.1

Contingency Table

Table 14: Contingency Table for Oculus Go VR Users

Chi-square test p-value: 0.7			VR Game Experience	
		Negative	Mixed	Positive
	Negative	3	4	13
Technology Attitude	Mixed	0	2	8
	Positive	0	0	1

Table 15: Contingency Table for Oculus Rift VR Users

Chi-square test p-value: 0.8			VR Game Experience	
		Negative	Mixed	Positive
	Negative	3	4	7
Technology Attitude	Mixed	0	1	2
	Positive	0	0	1

GEQ Post-game - Oculus Go
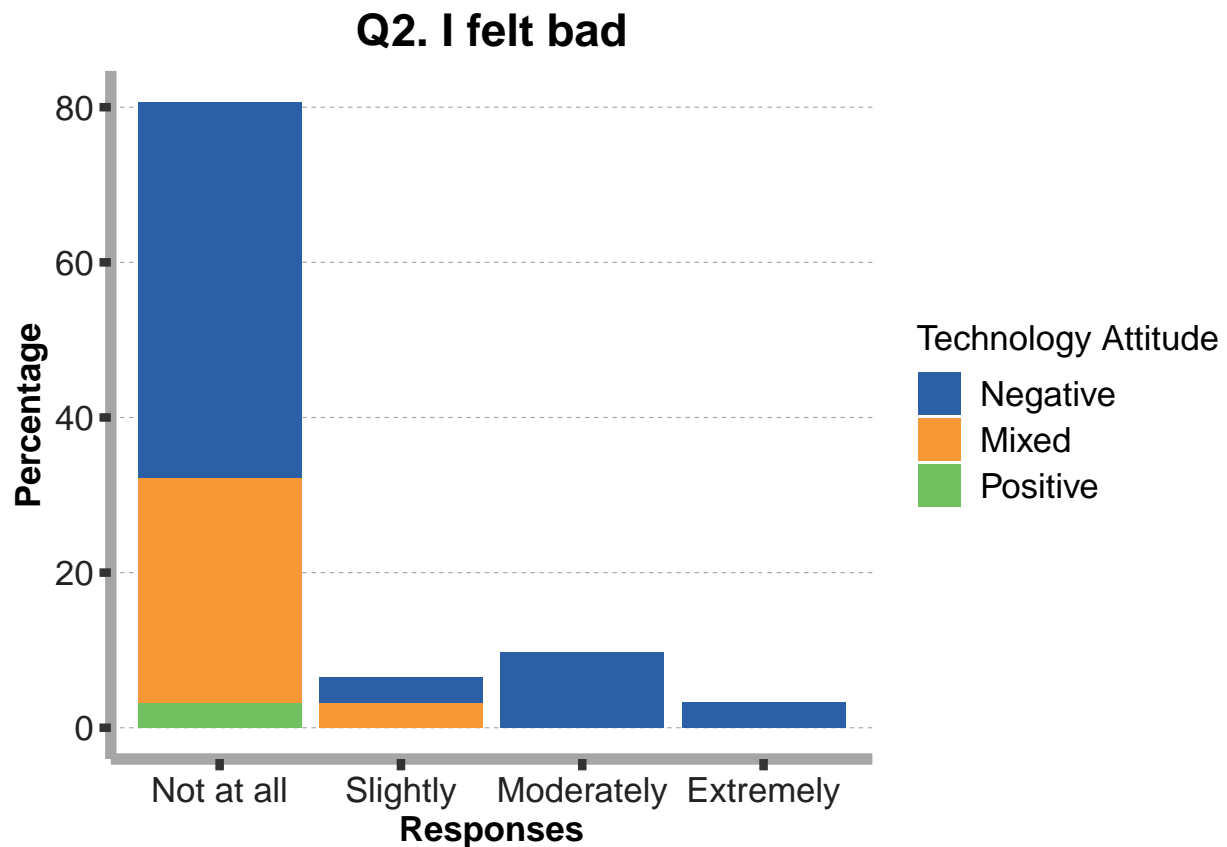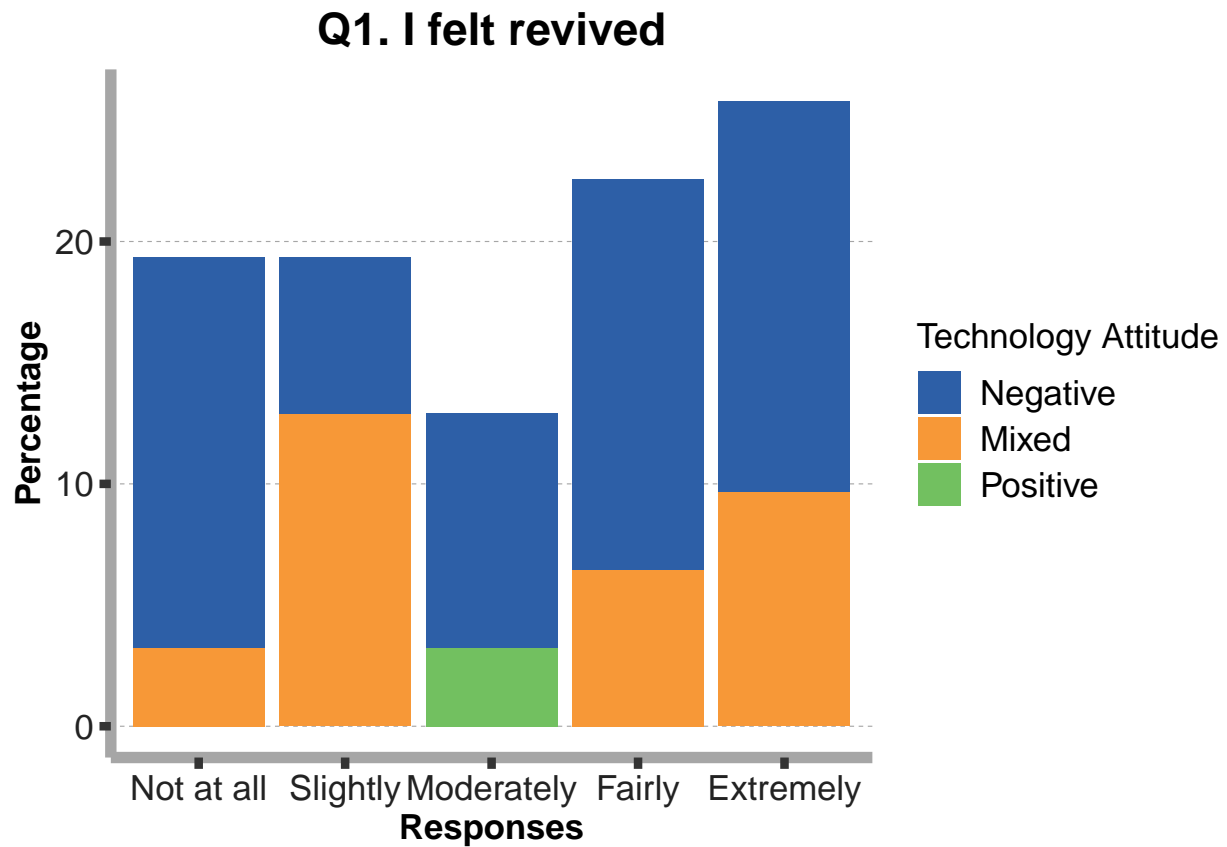
Q1. I felt revived
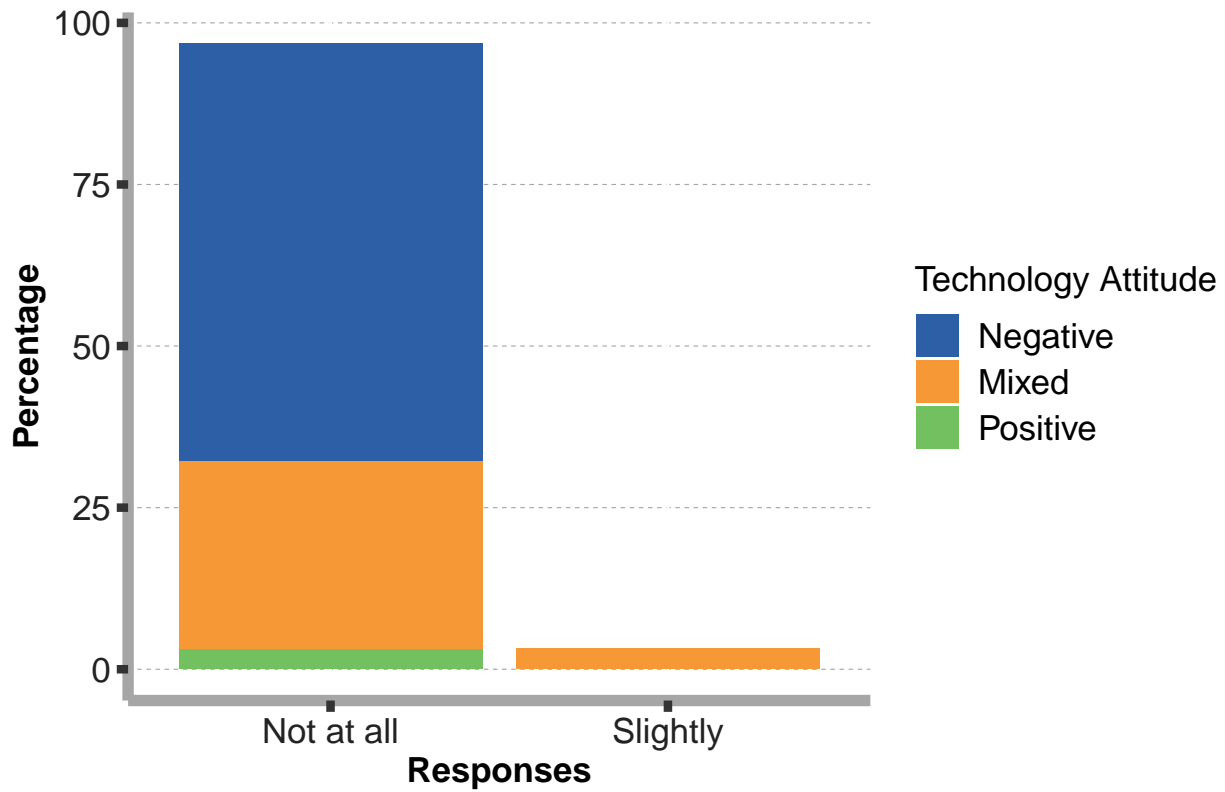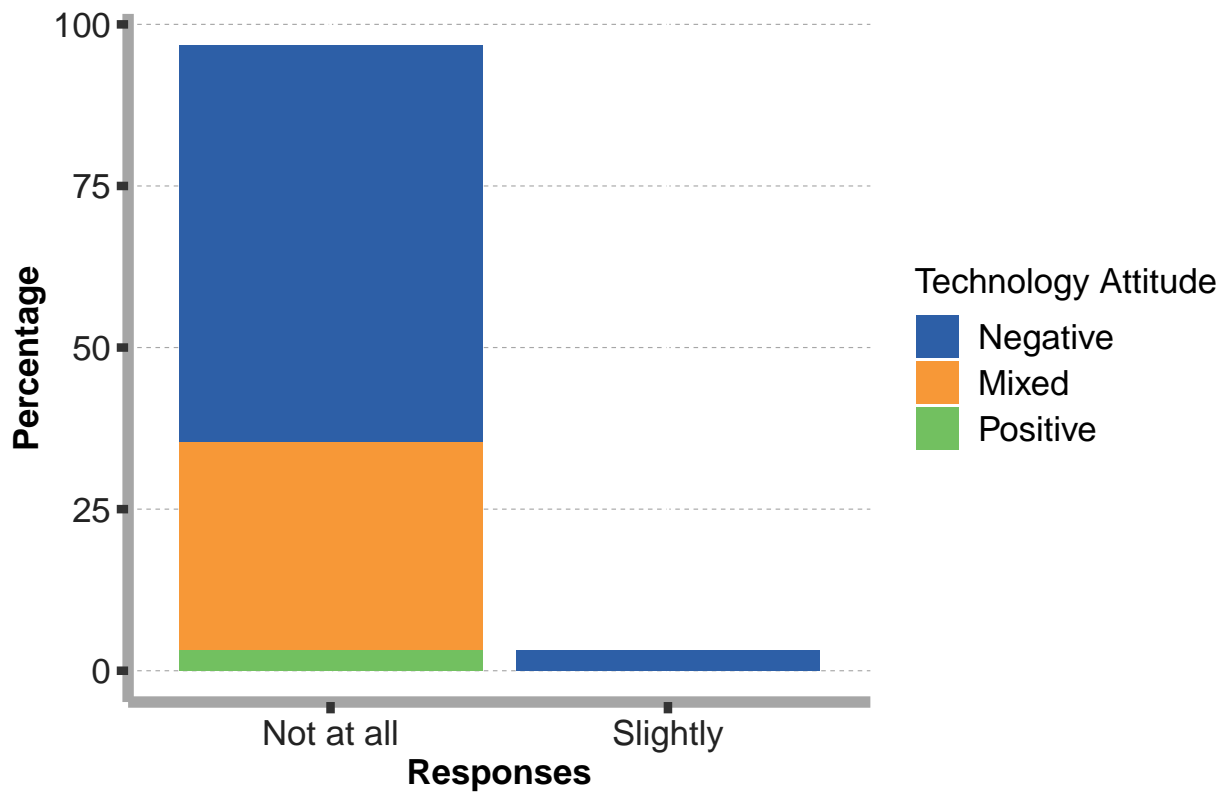
Q2. I felt bad

**Q3. I found it hard to get back to reality**

Q4. I felt guilty

Q5. It felt like a victory

Q6. I found it a waste of time

Q7. I felt energised

Q8. I felt satisfied

Q9. I felt disoriented

Q10. I felt exhausted

Q11. I felt that I could have done more useful things

Q12. I felt powerful

Q13. I felt weary

Q14. I felt regret
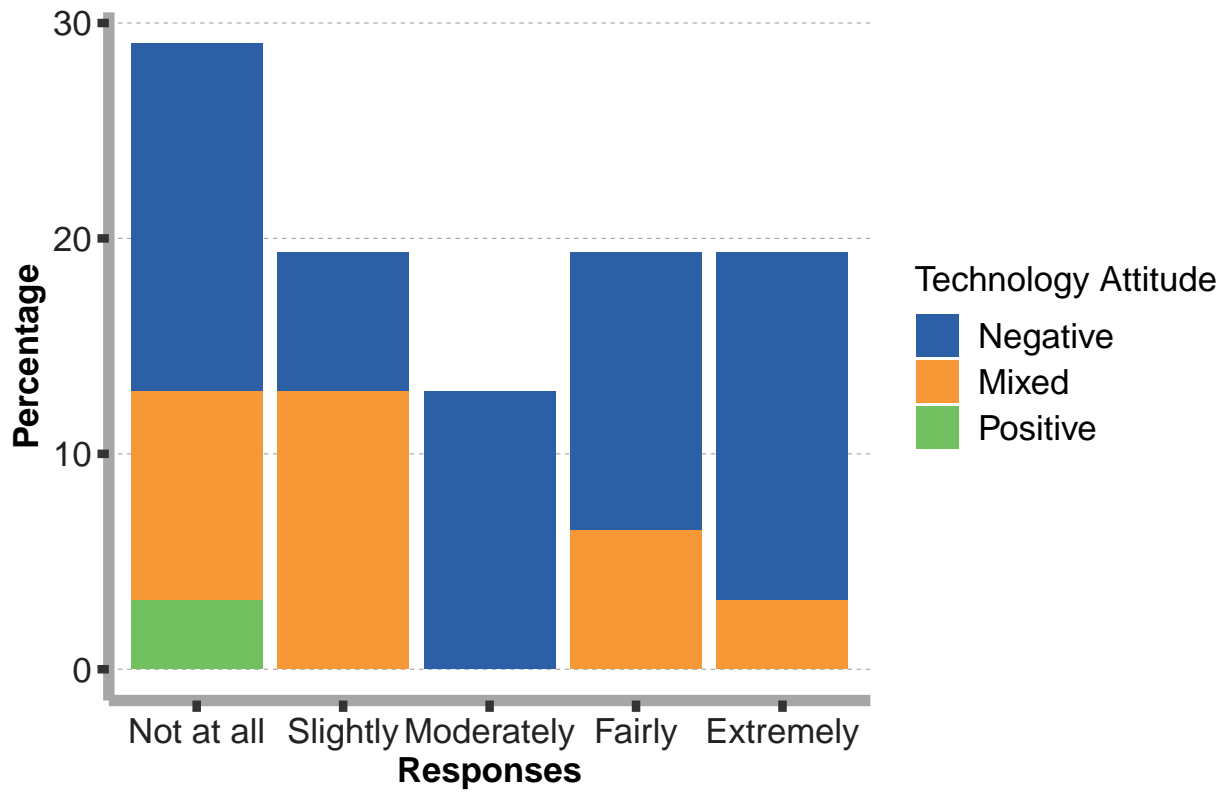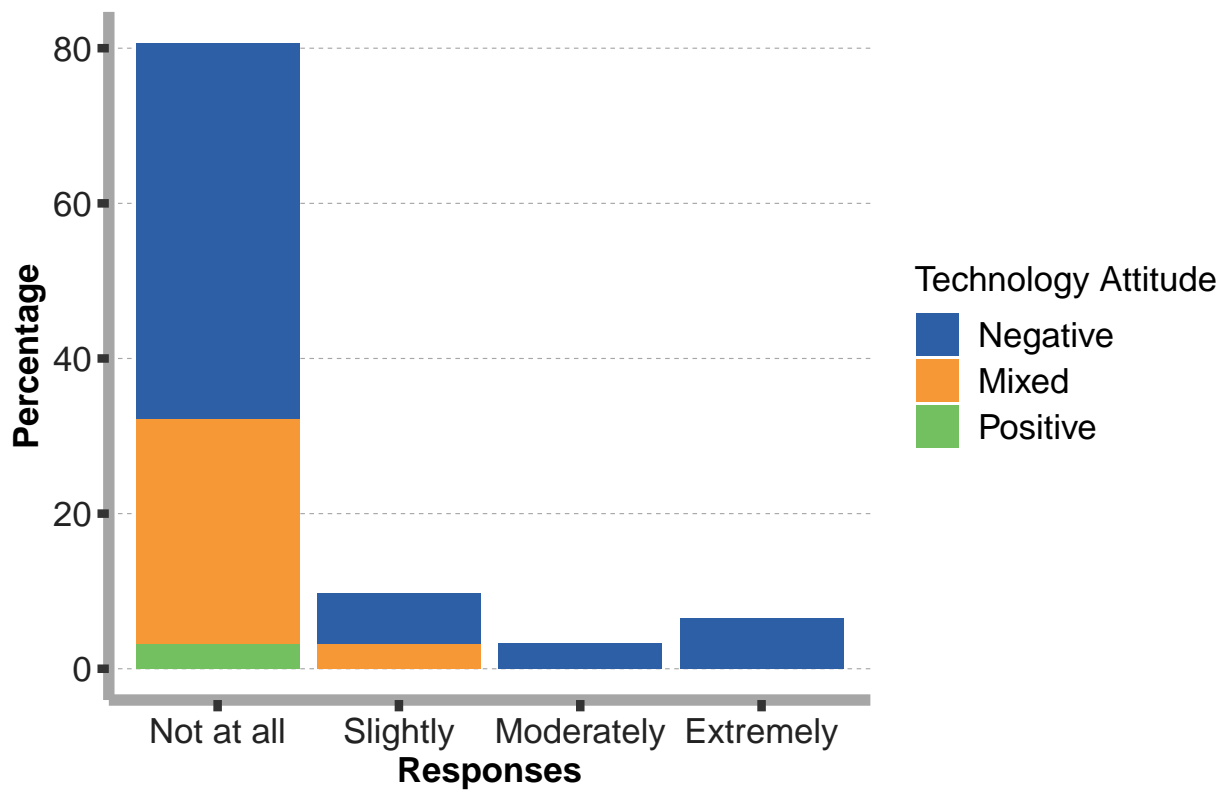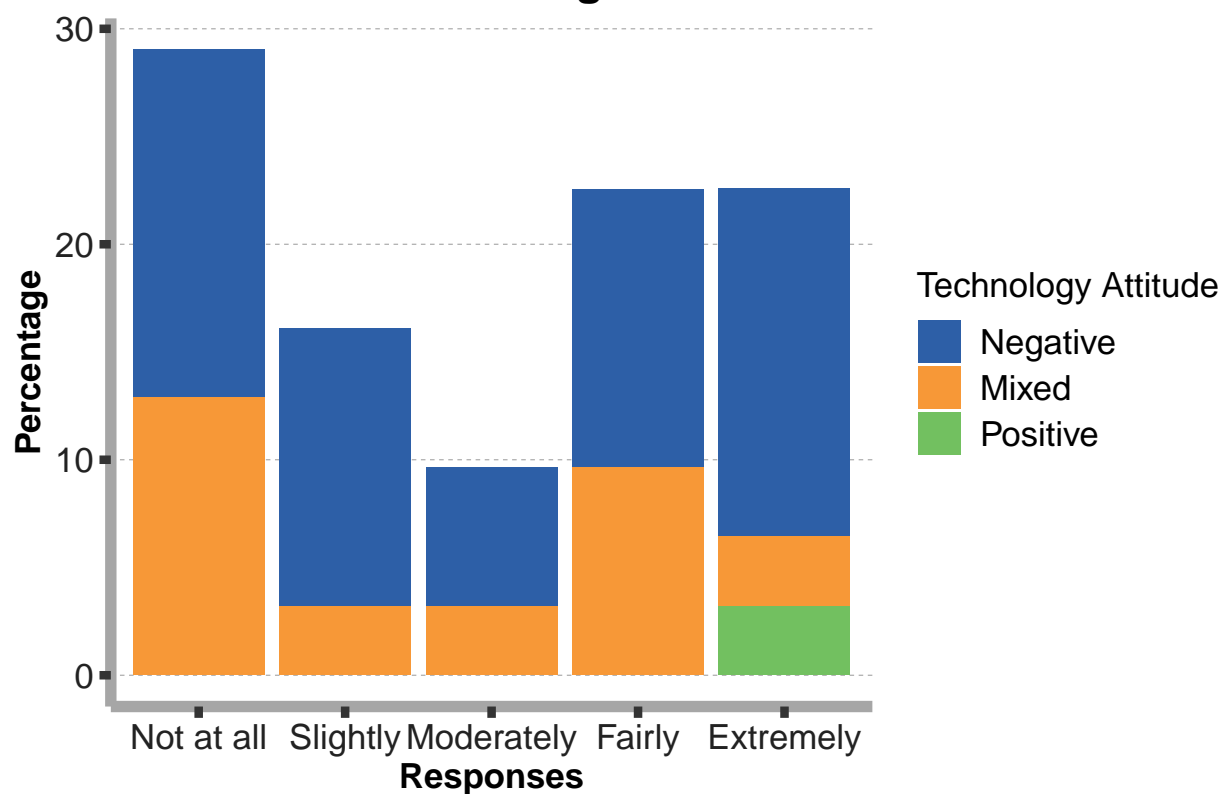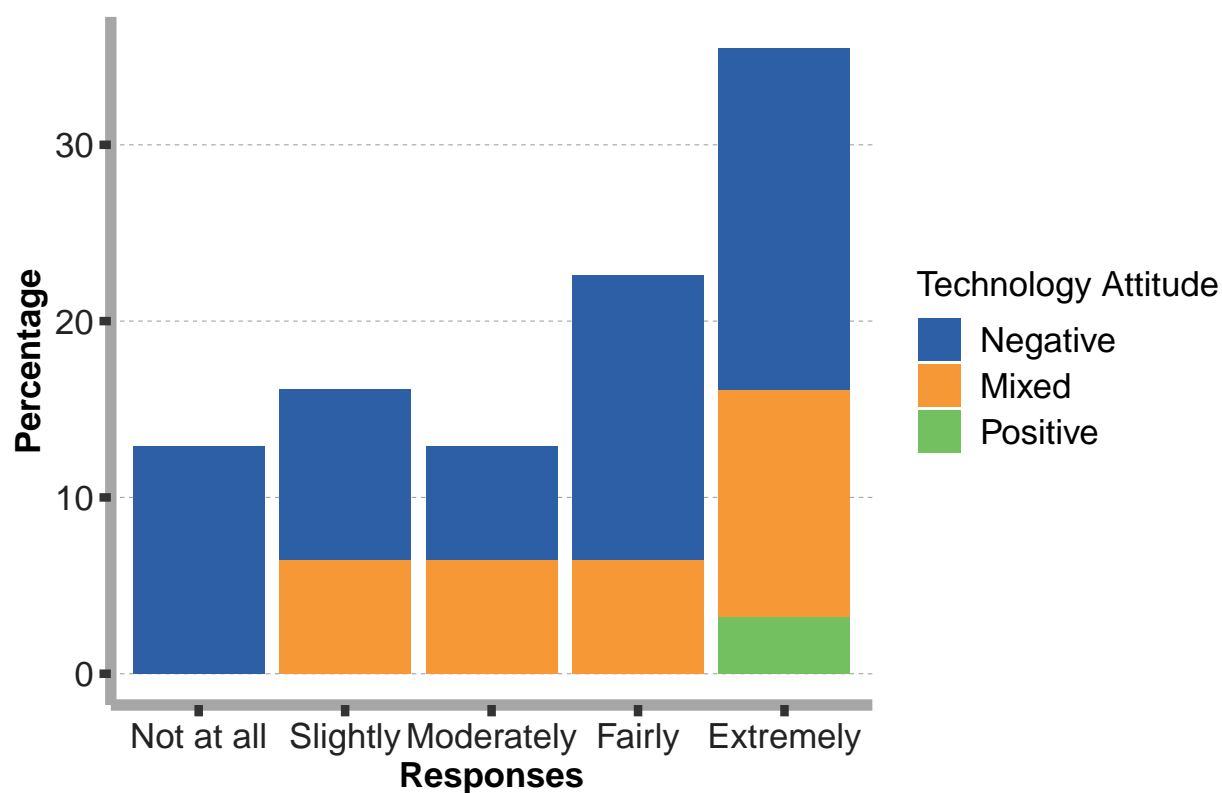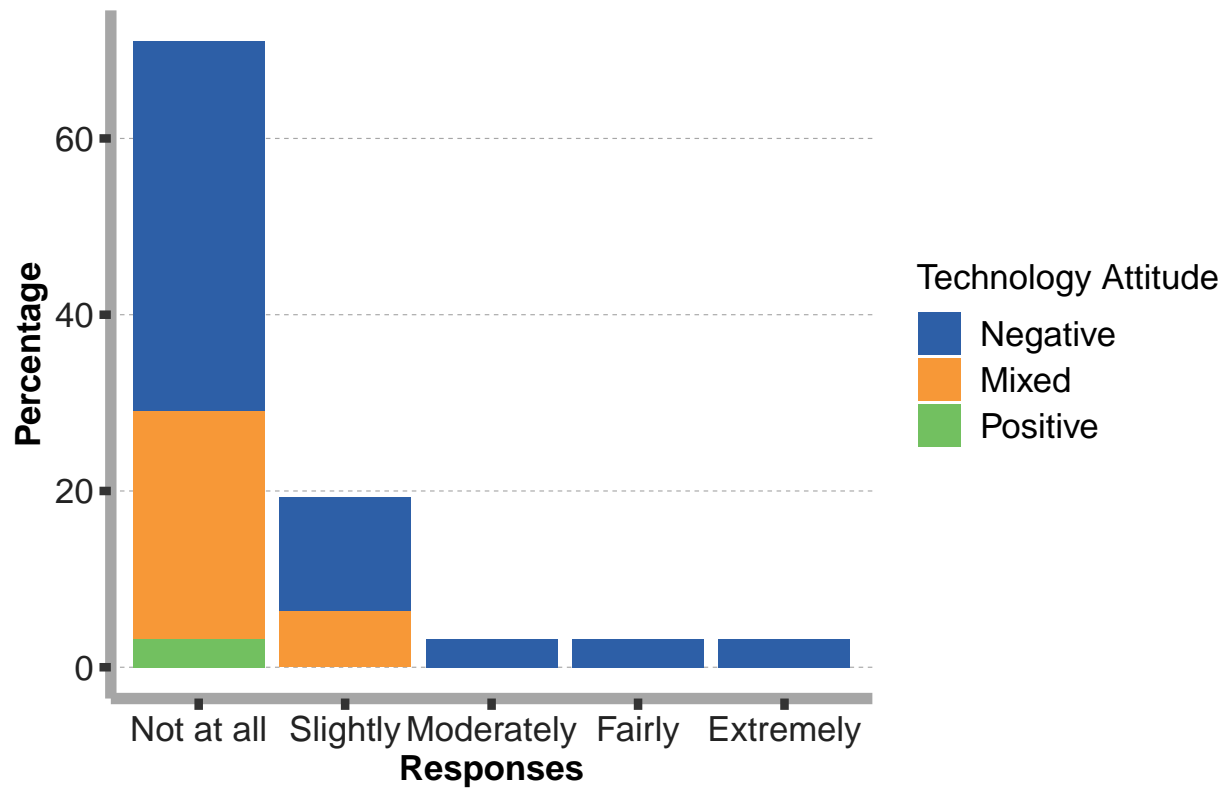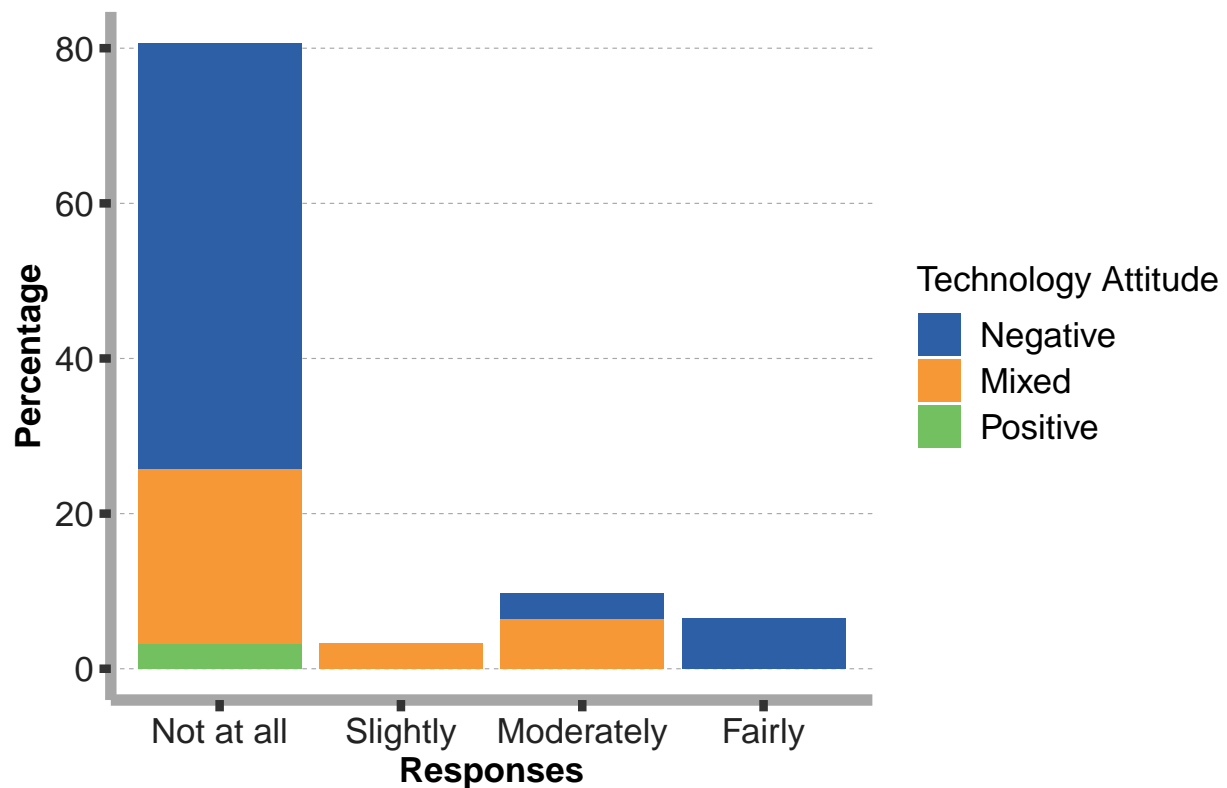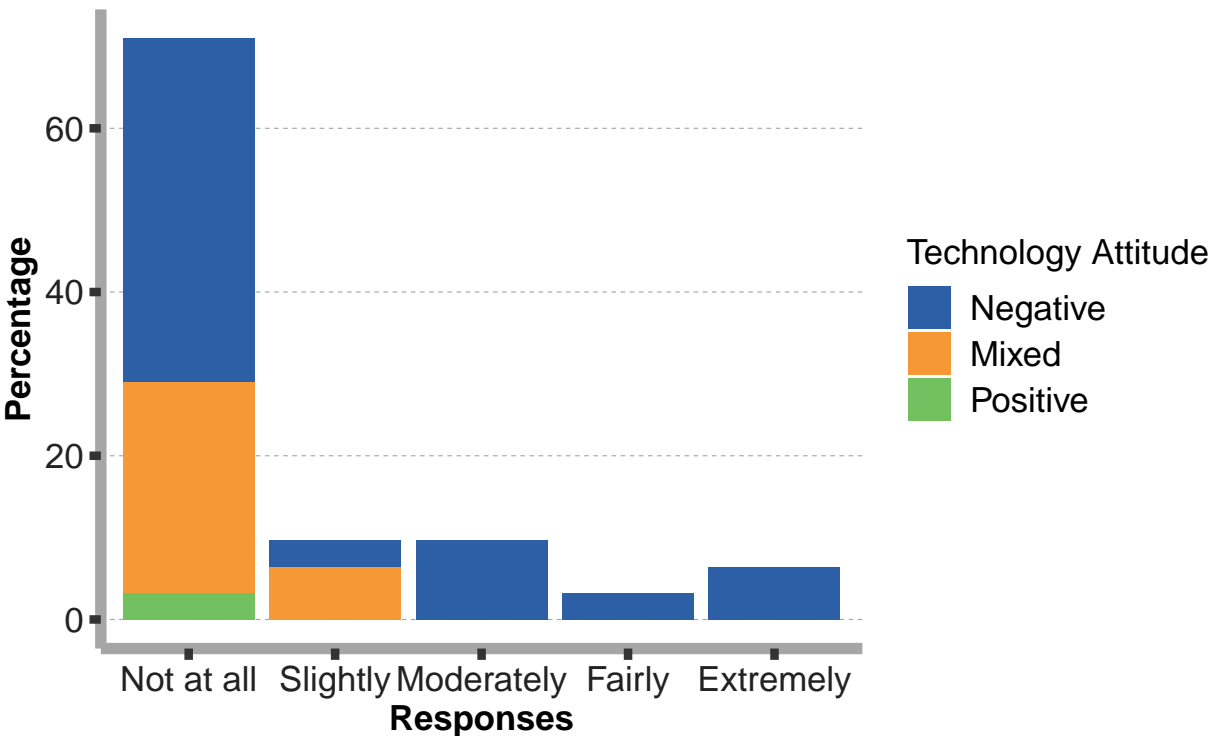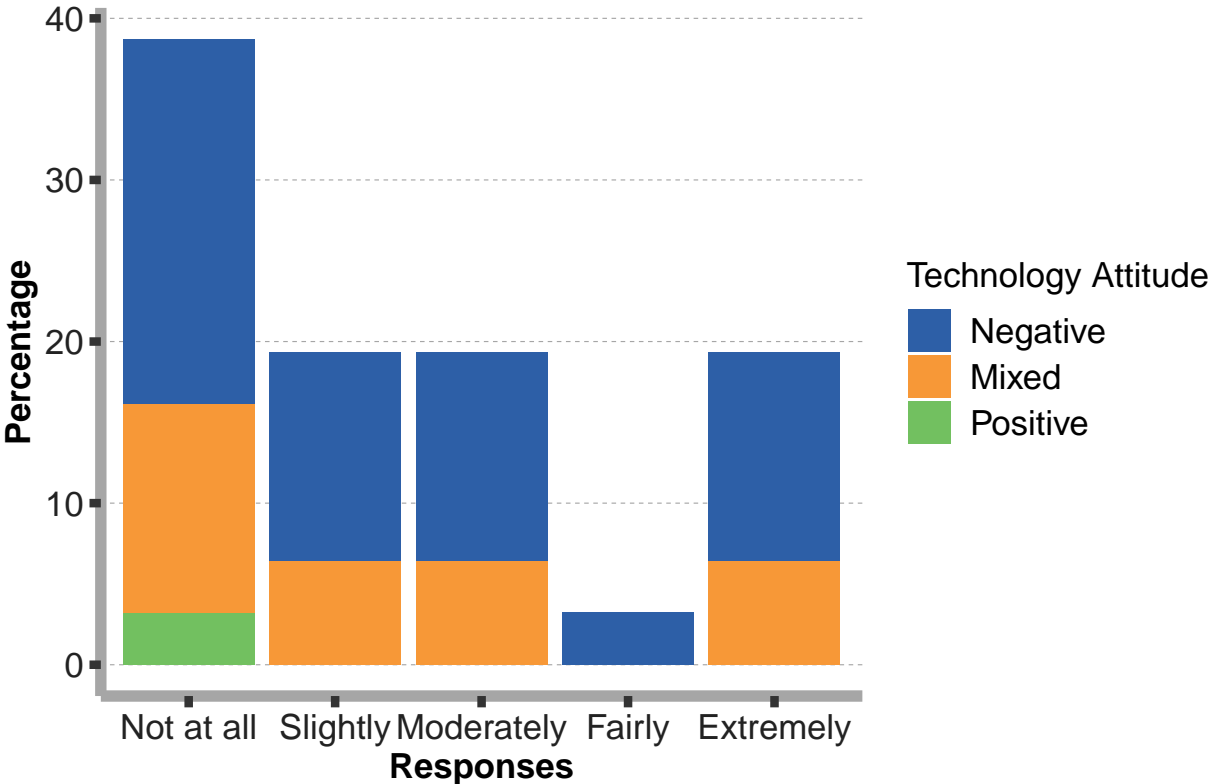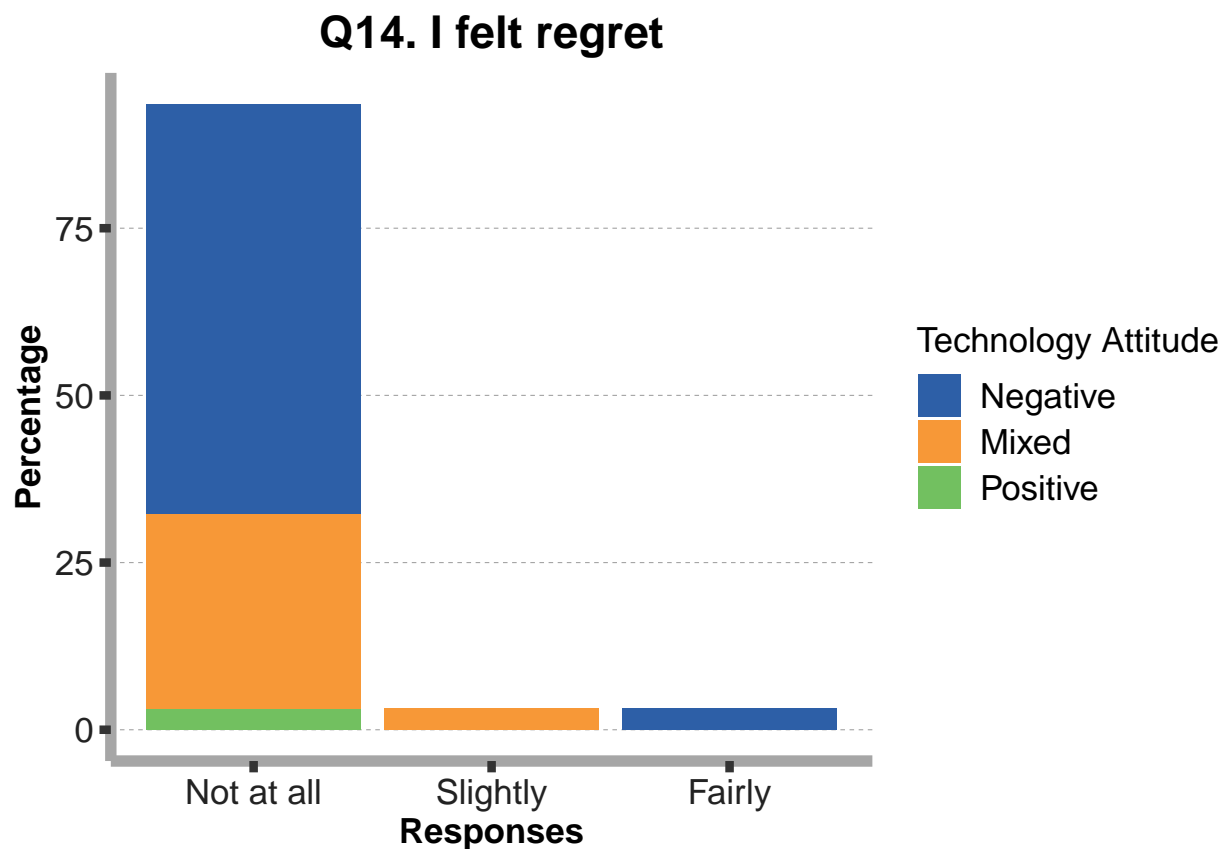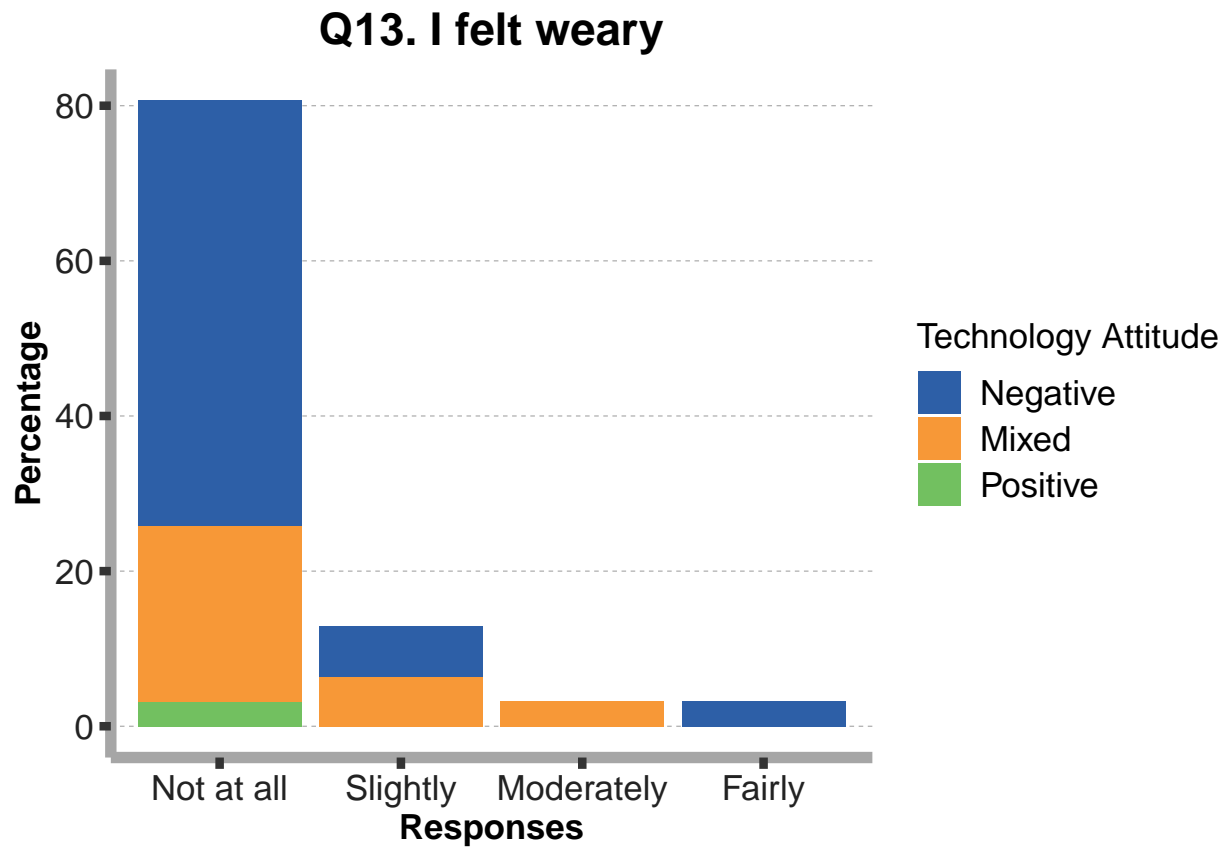
Q15. I felt ashamed
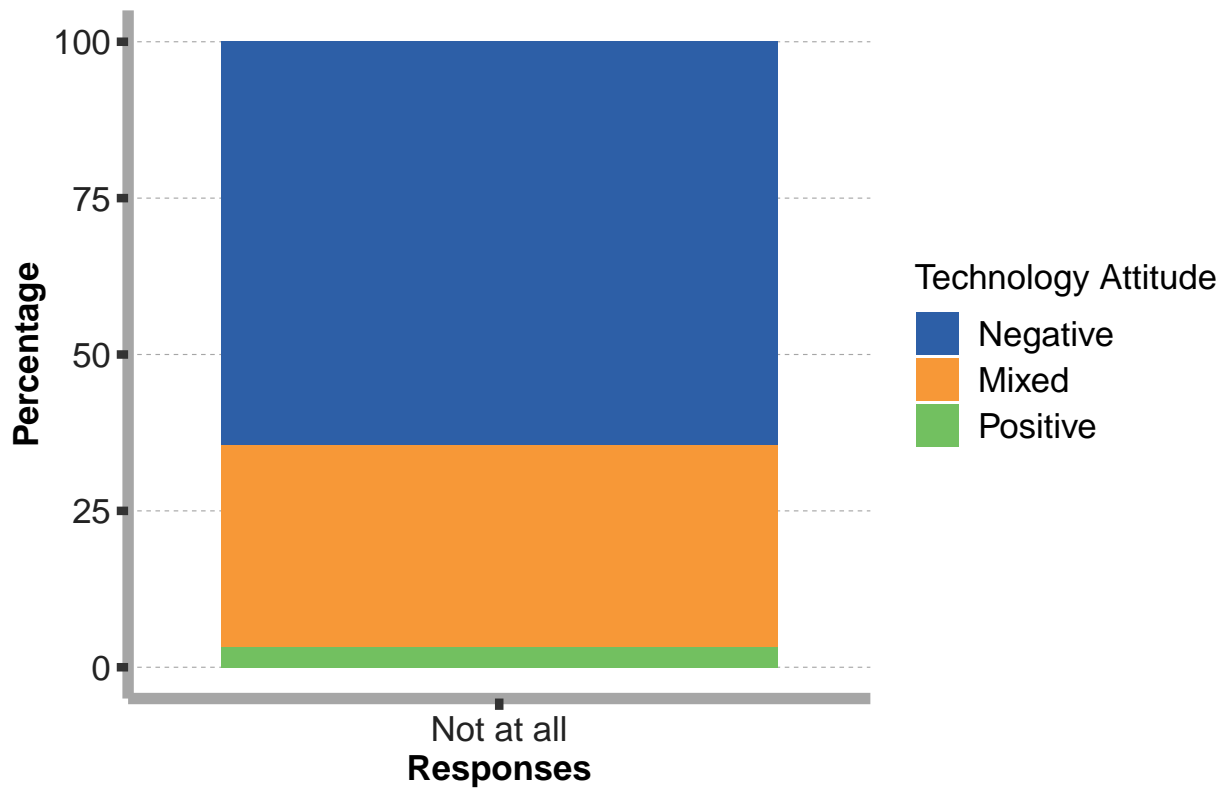
Q16. I felt proud
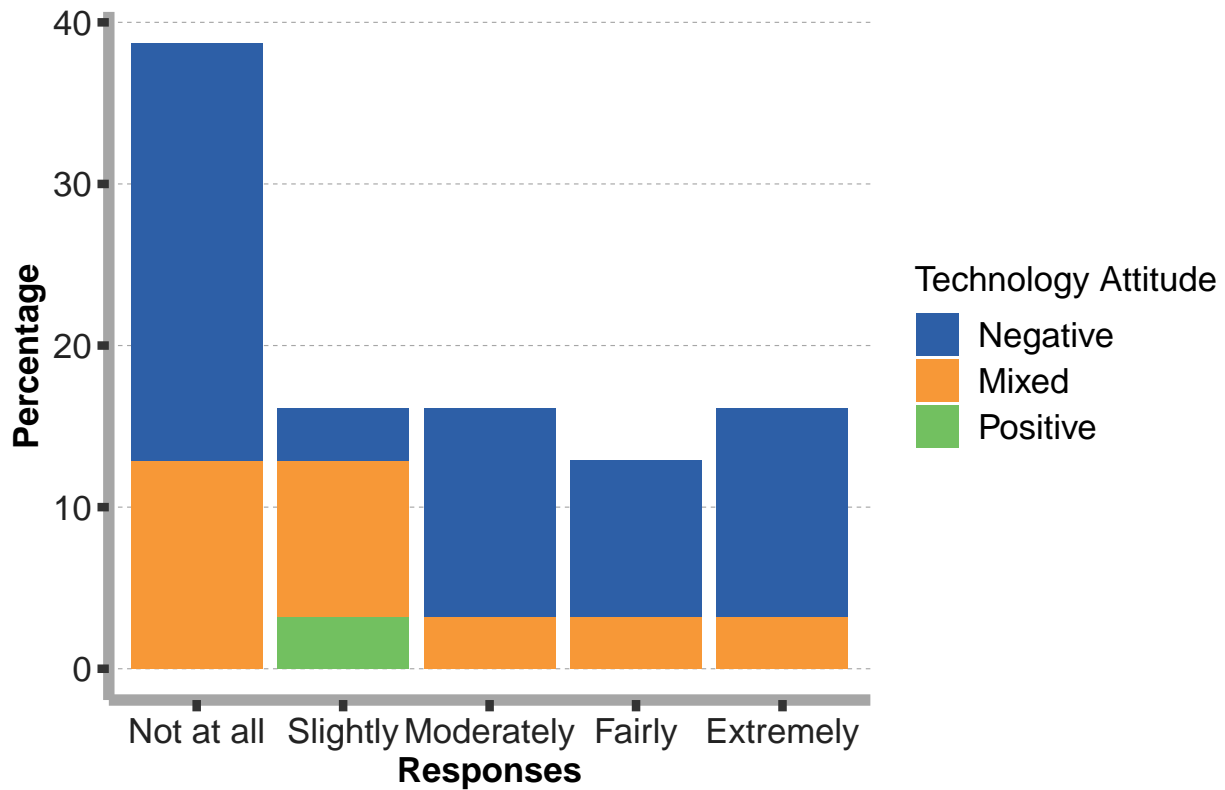
Q17. I had a sense that I had returned from a journey

GEQ Post-game - Oculus Rift
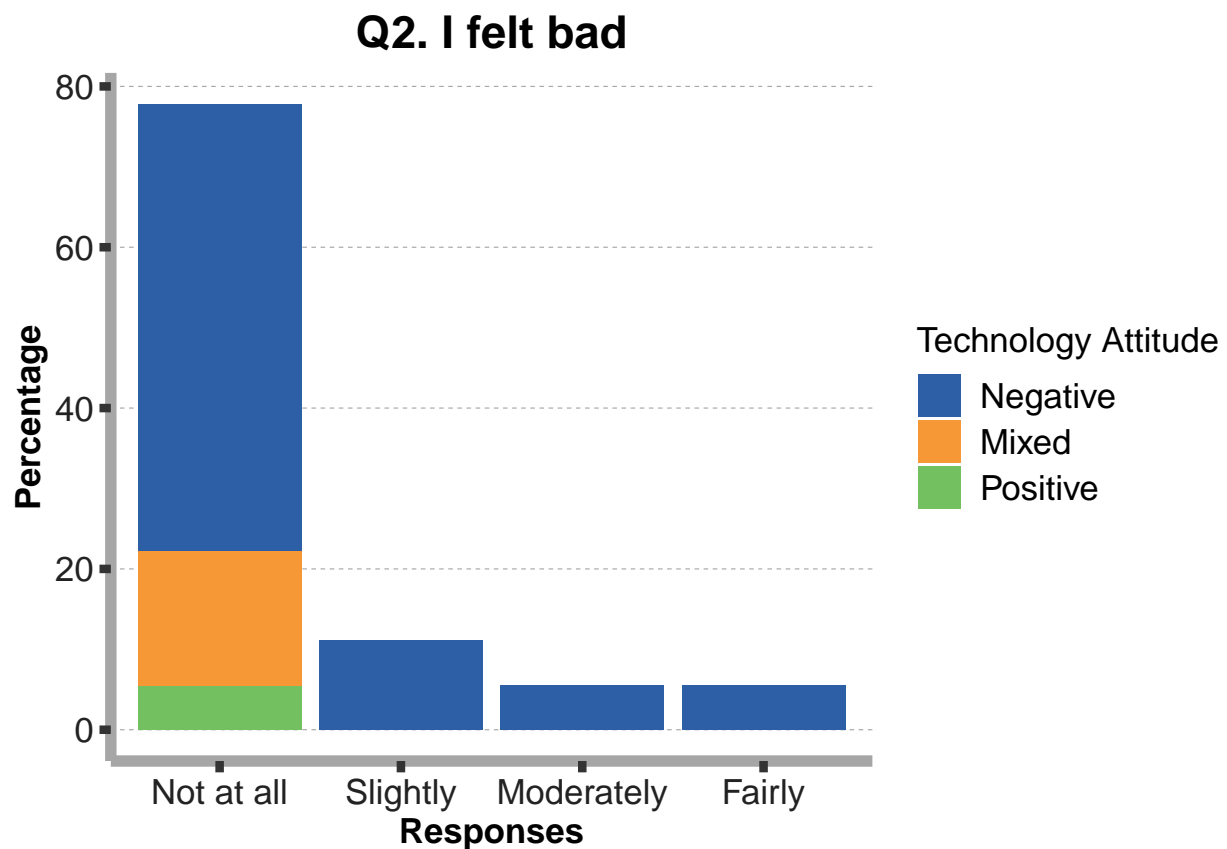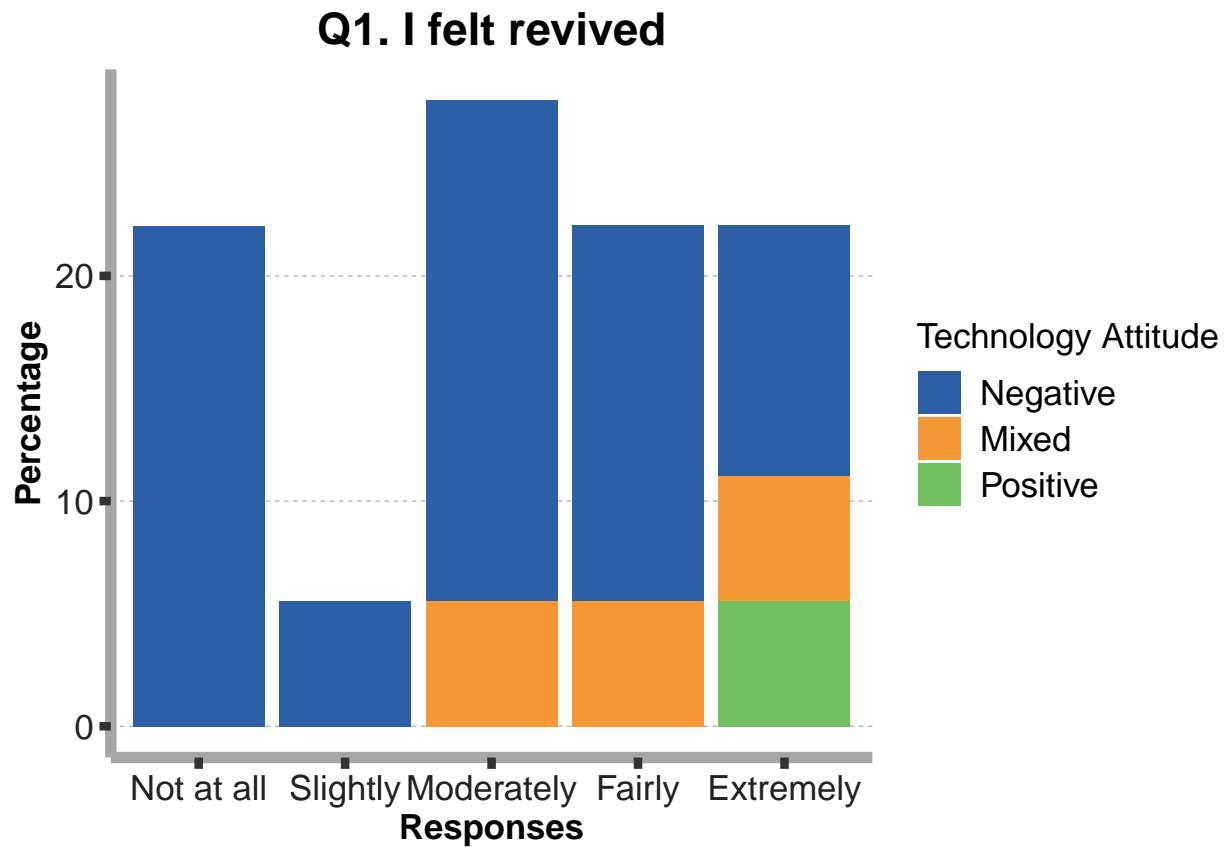
Q1. I felt revived
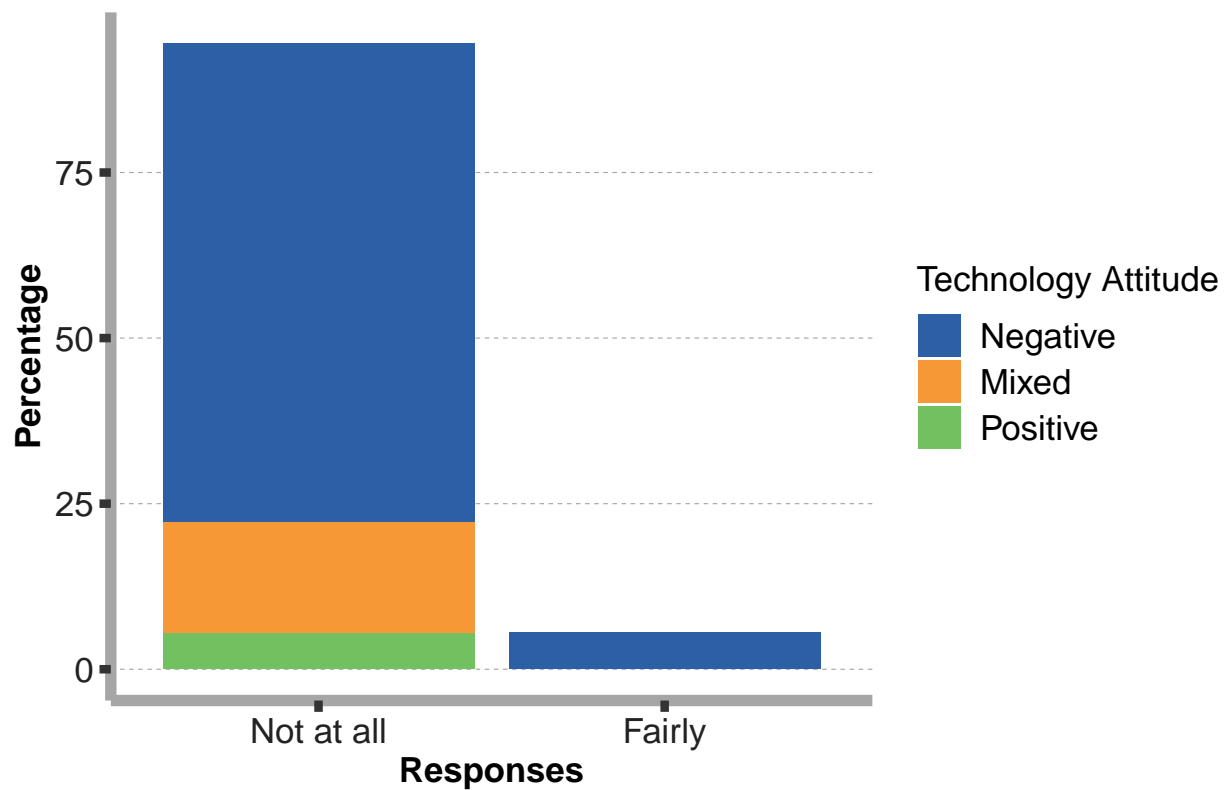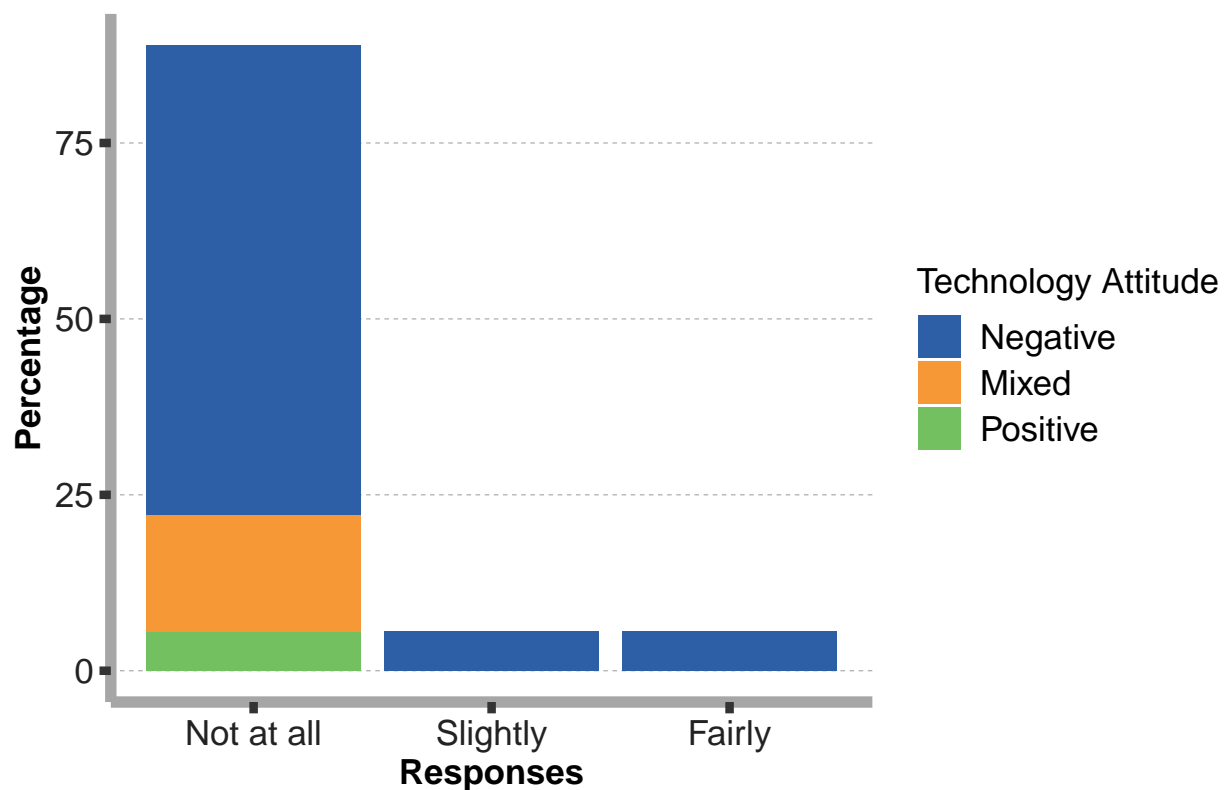
Q2. I felt bad

Q3. I found it hard to get back to reality
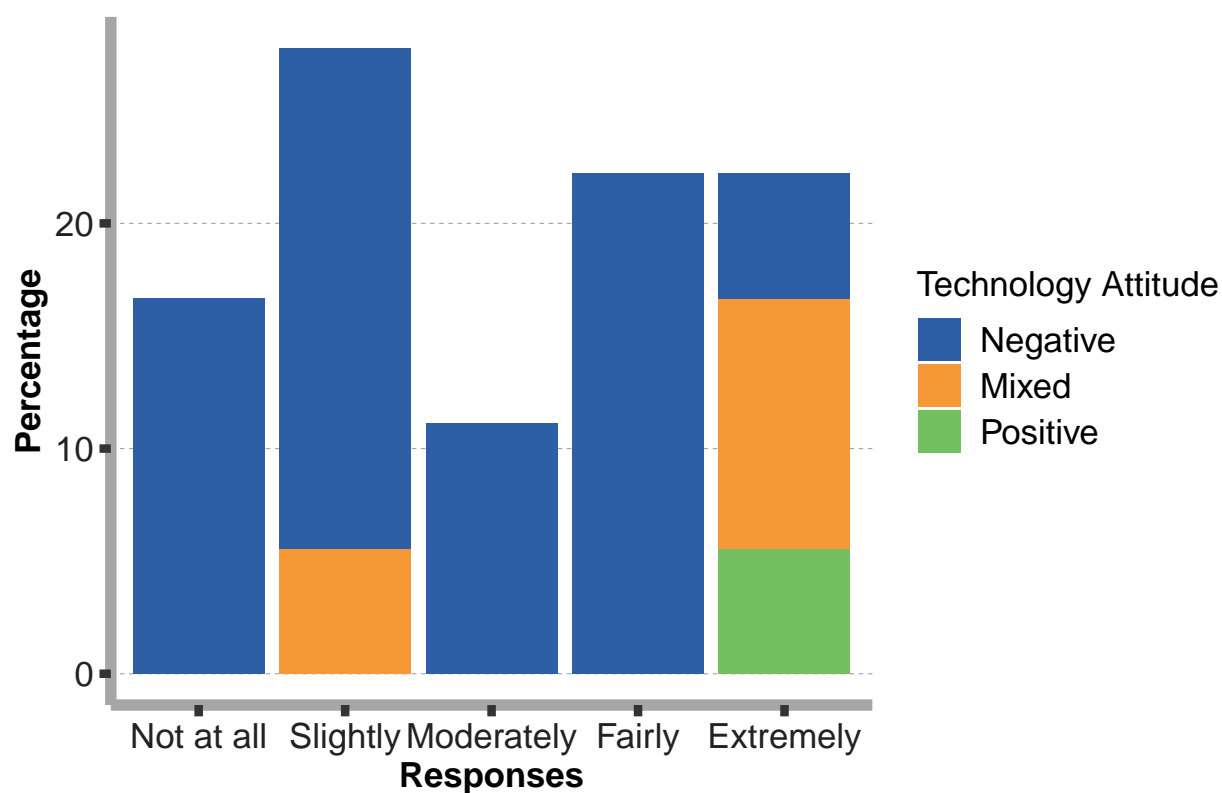
Q4. I felt guilty

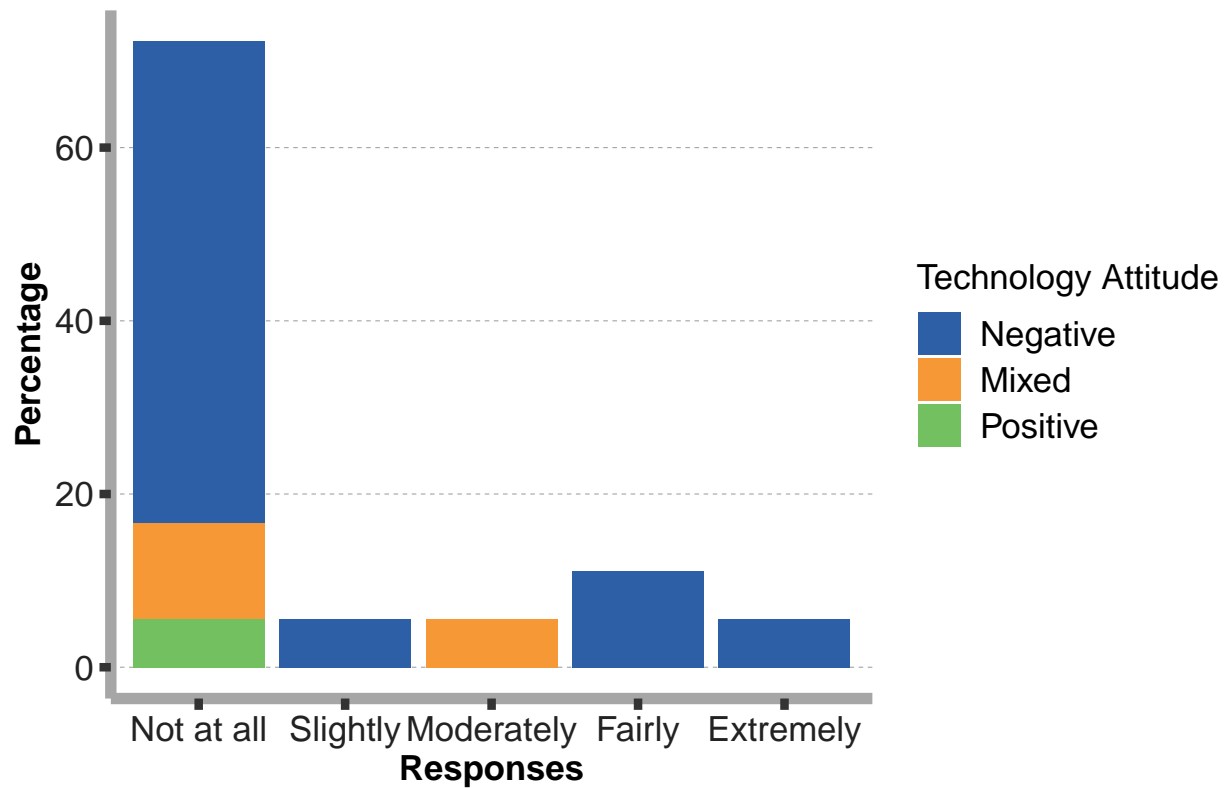**Q5. It felt like a victory**

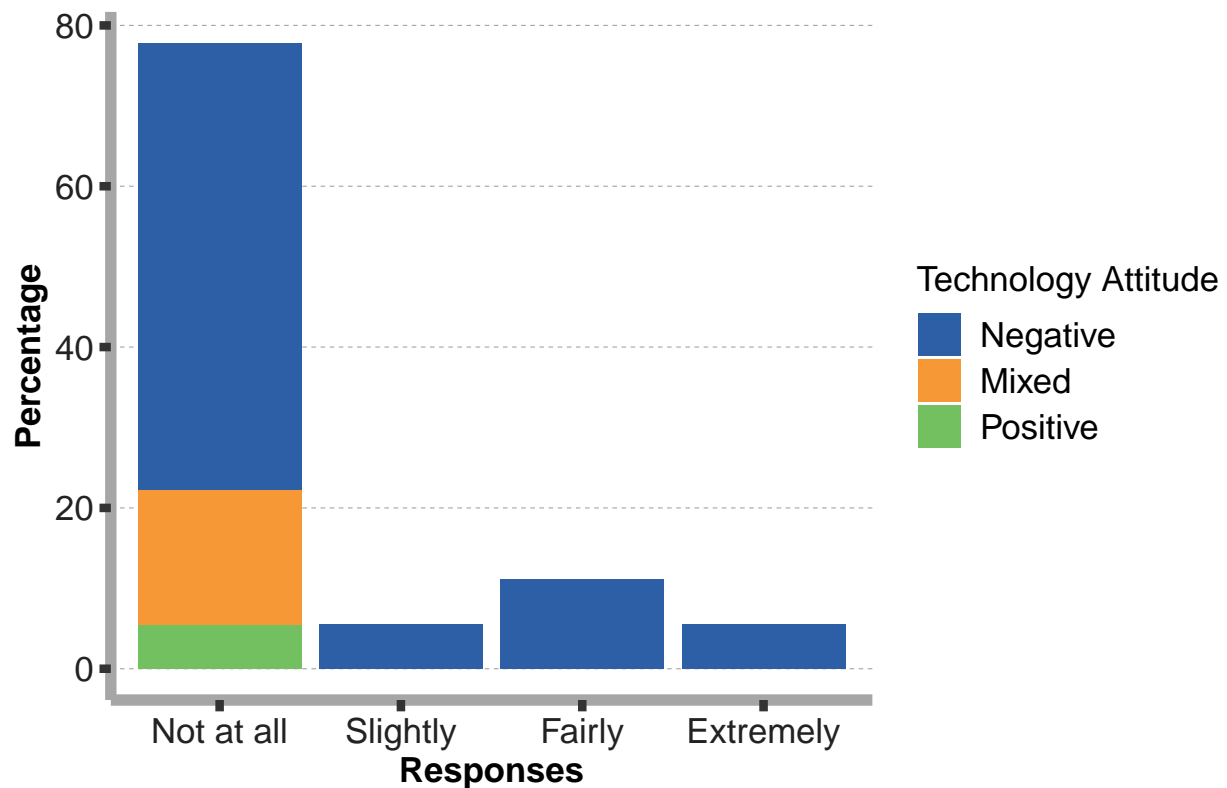**Q6. I found it a waste of time**

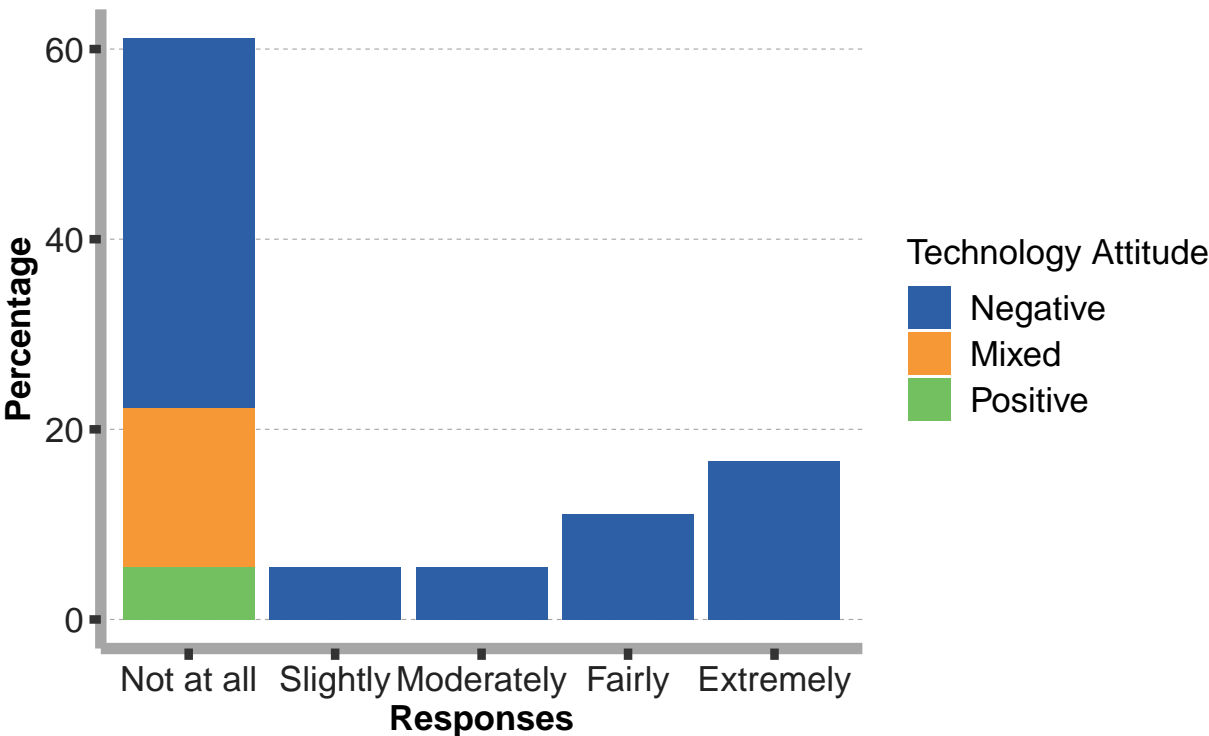# Q7. I felt energised

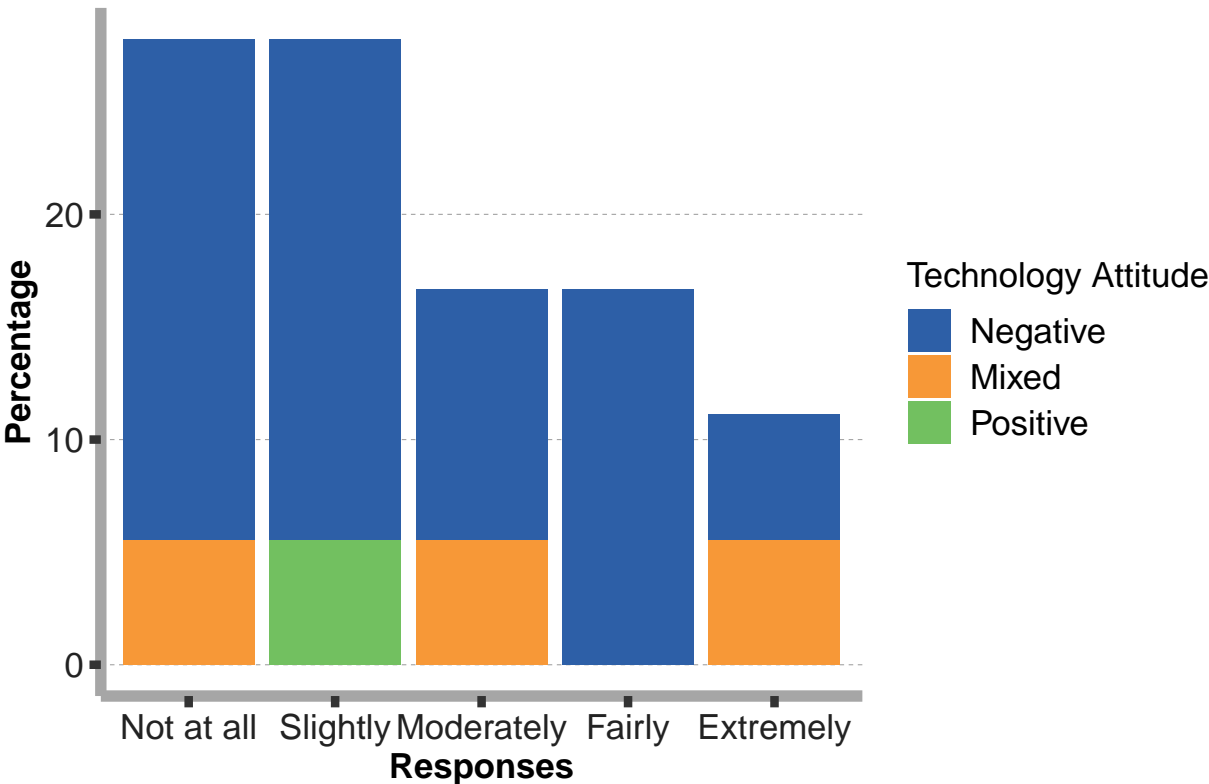# Q8. I felt satisfied

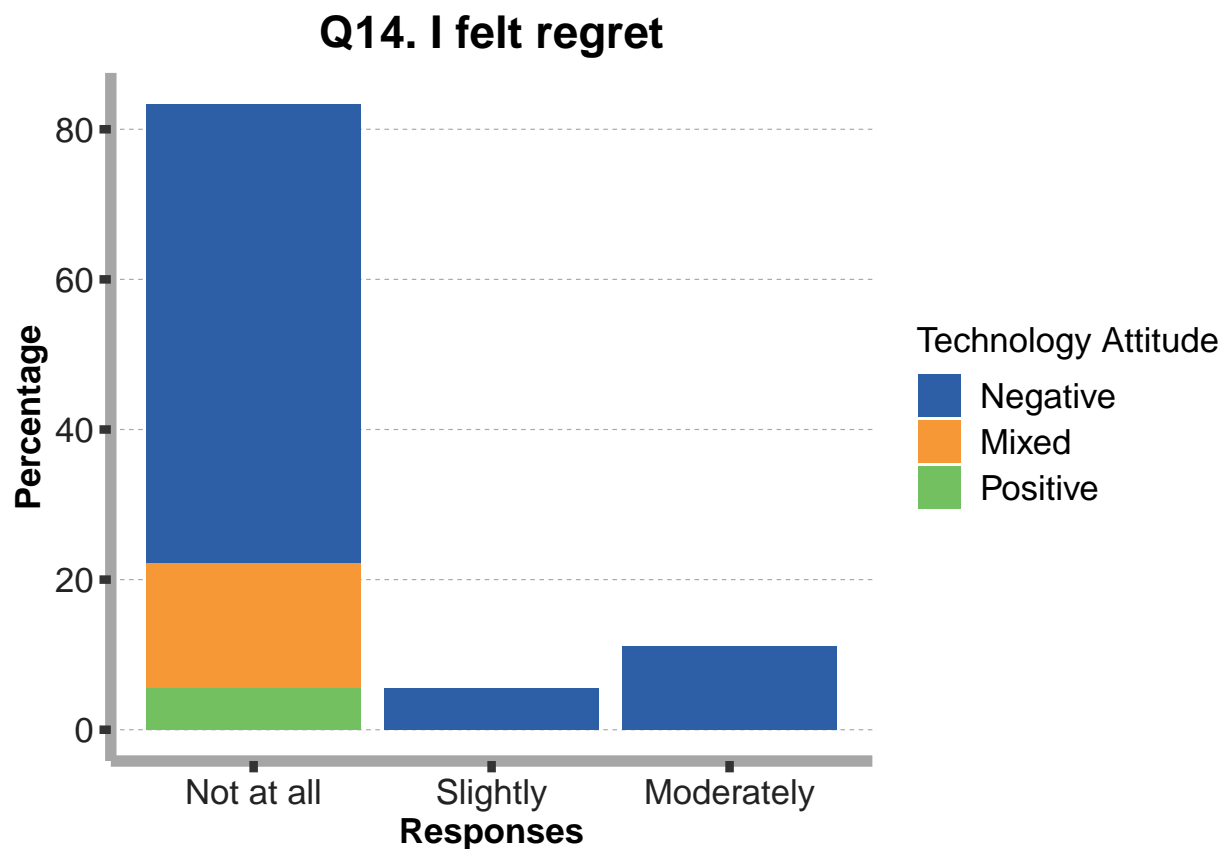**Q9. I felt disoriented**
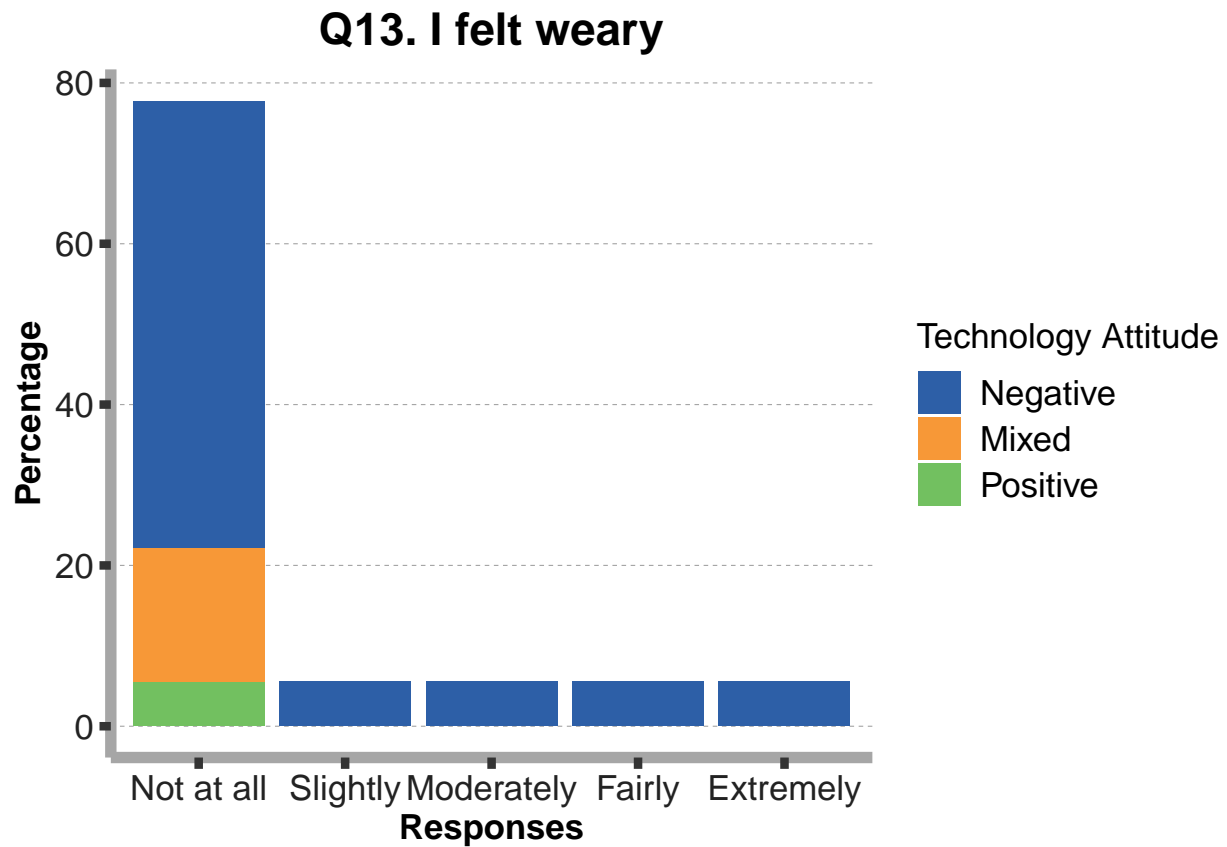
Q10. I felt exhausted

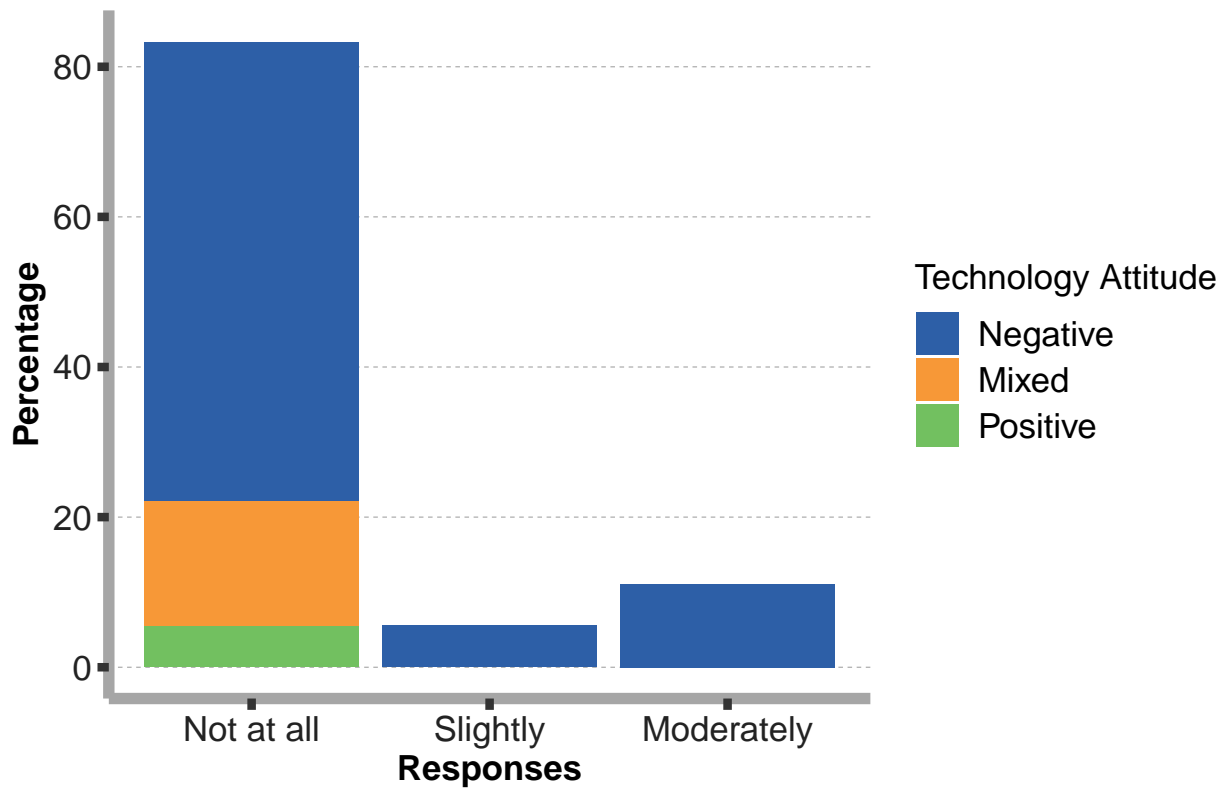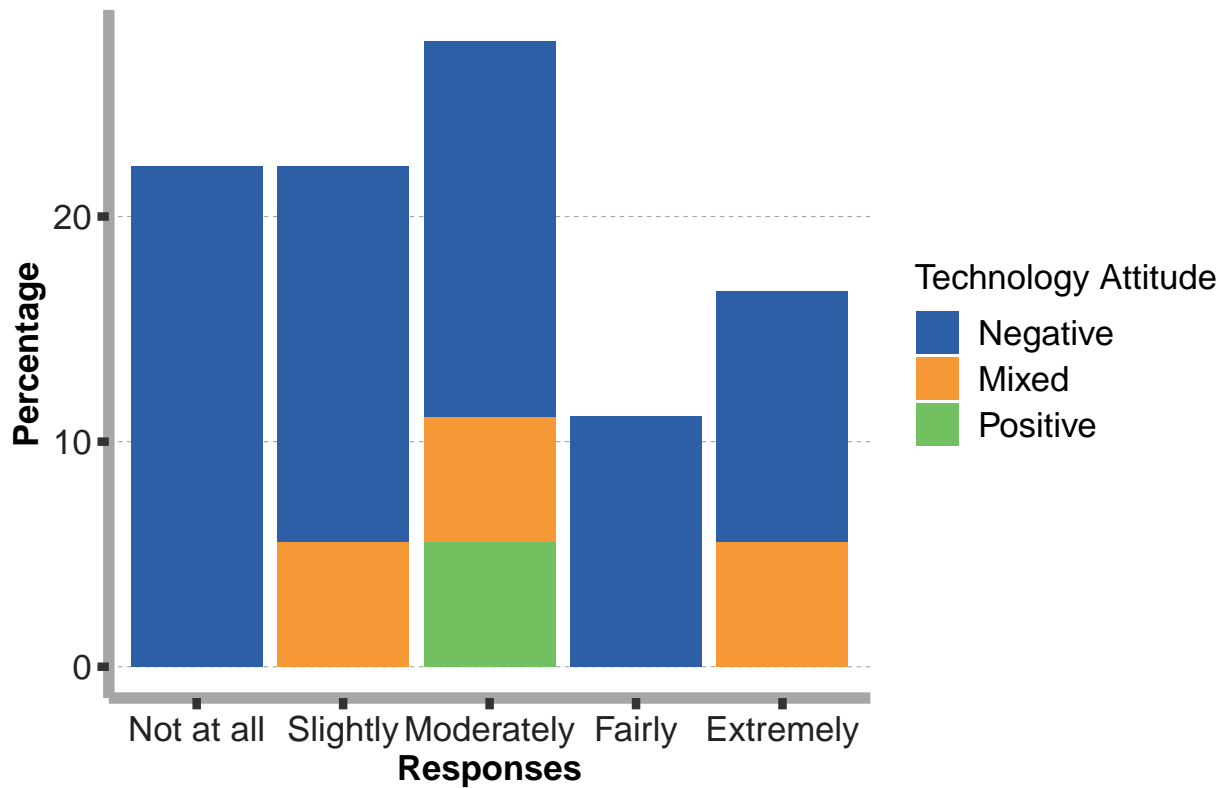# Q11. I felt that I could have done more useful things
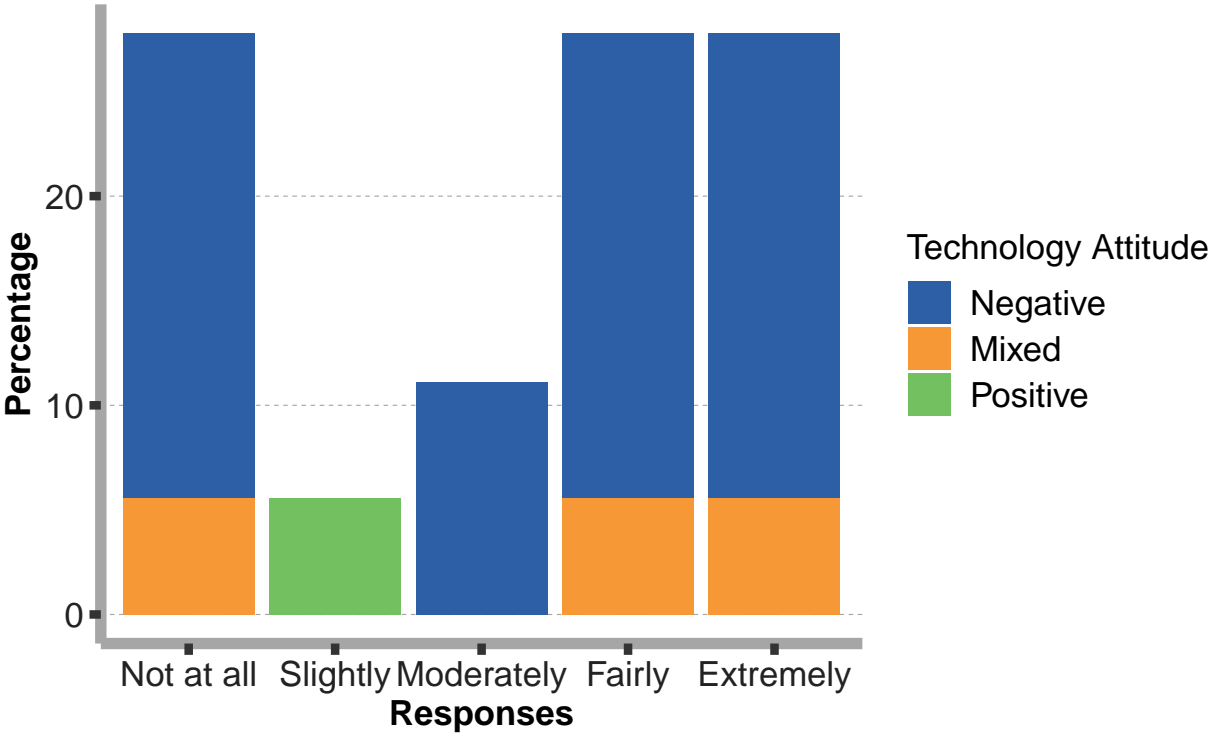

Q12. I felt powerful

Q13. I felt weary

Q14. I felt regret
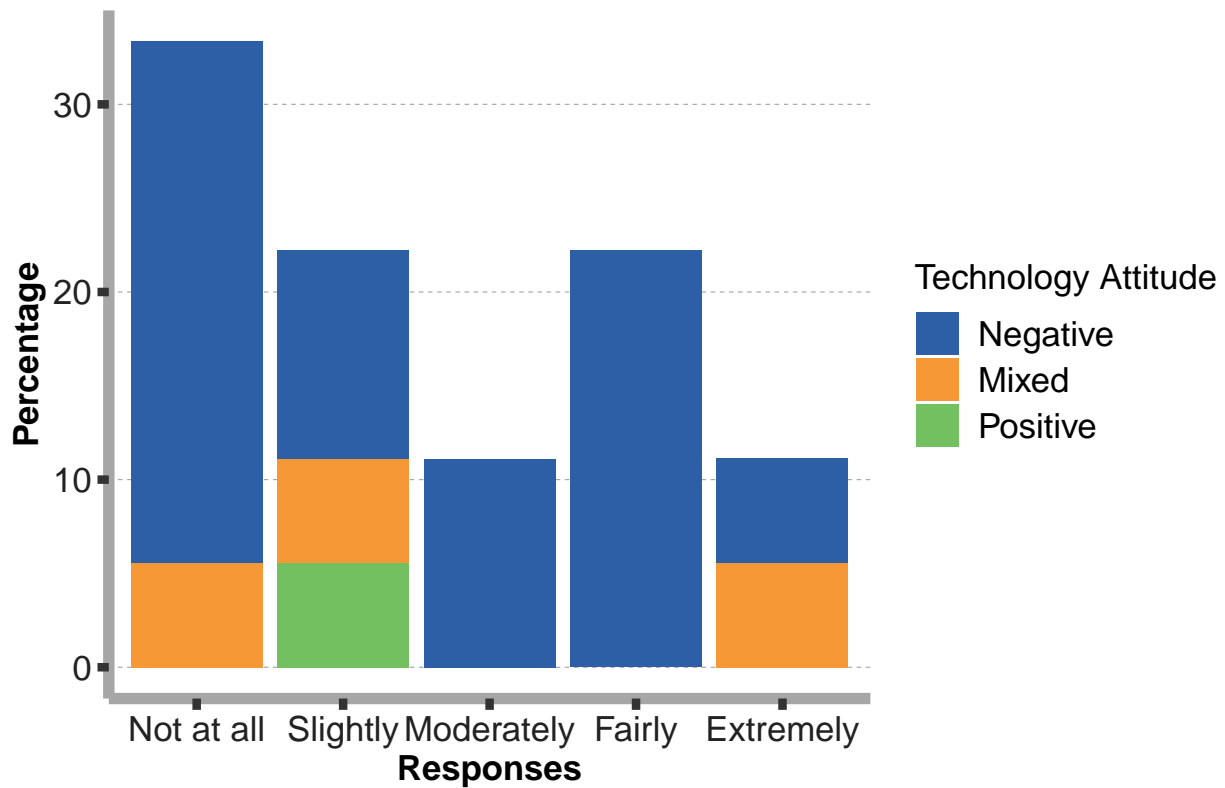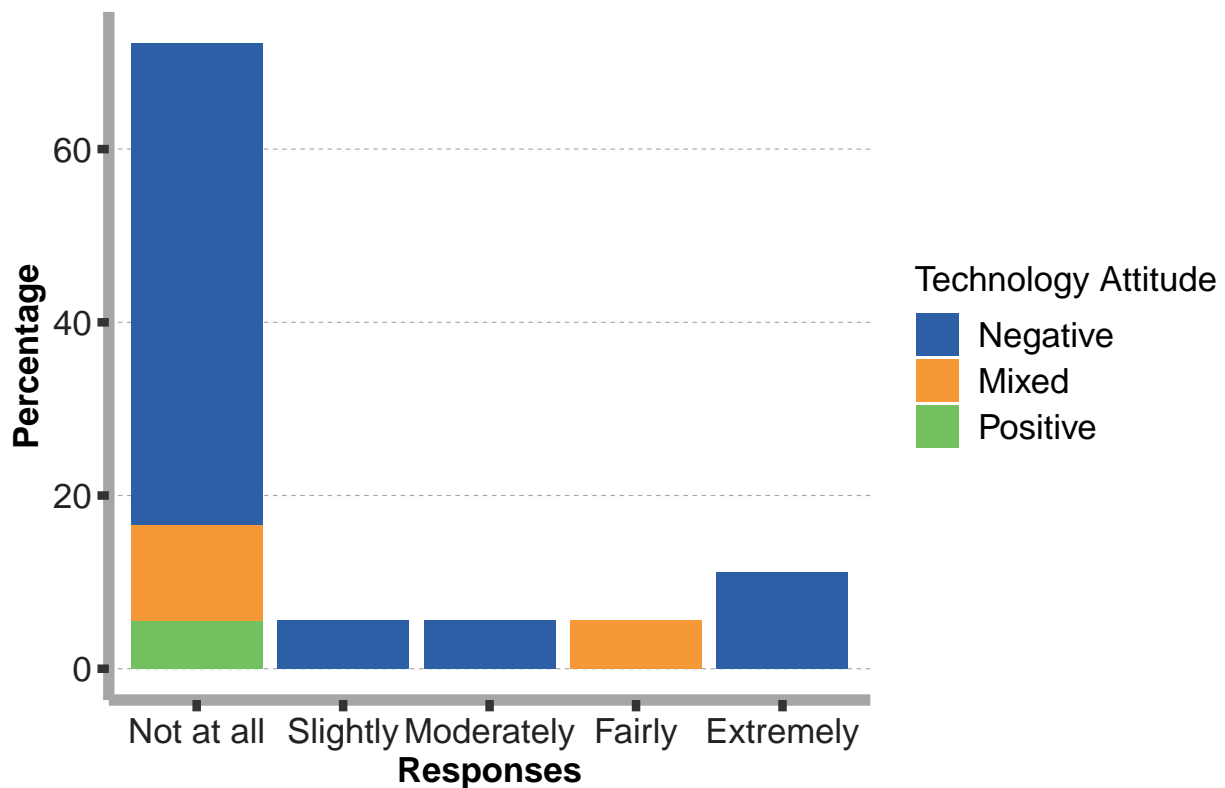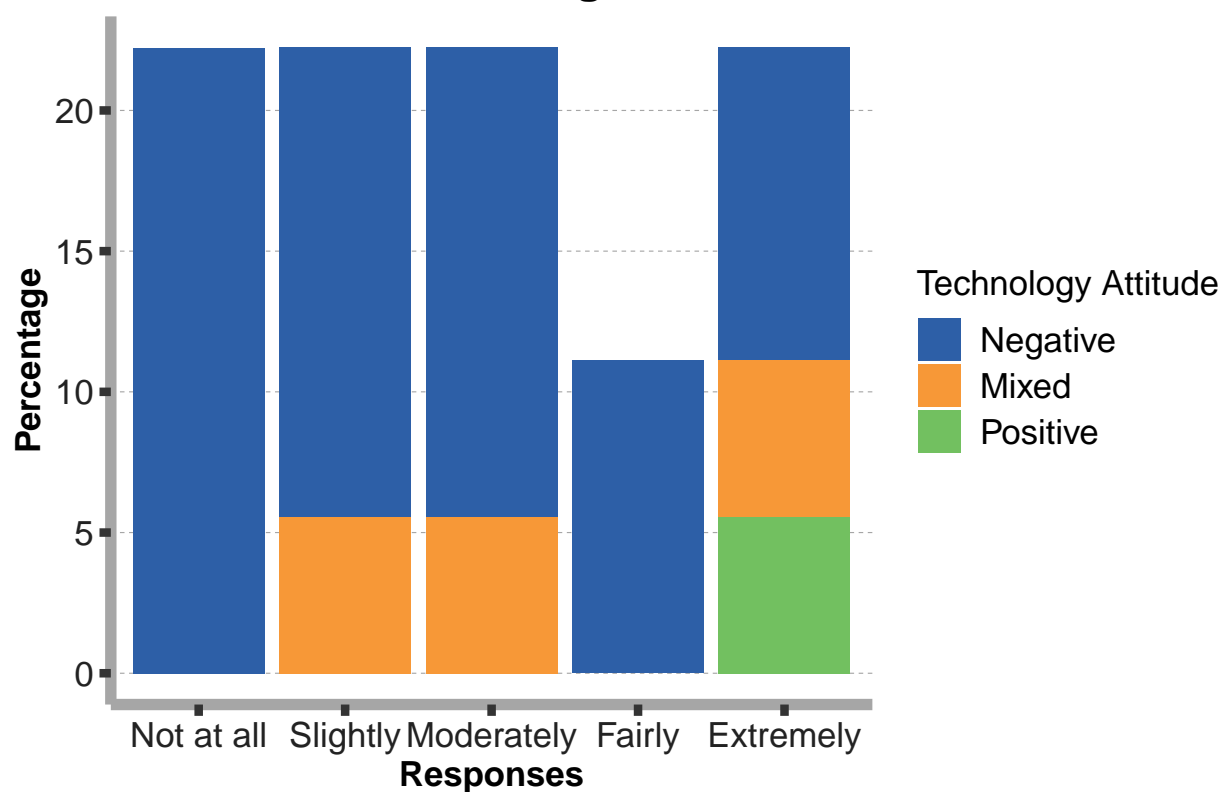
Q15. I felt ashamed

Q16. I felt proud

Q17. I had a sense that I had returned from a journey

Appendix

3.3 Technology Attitude

Table 16: Technology Attitude Breakdown for Oculus Go VR Headset Users

Technology Attitude	Count	Percentage
Negative	7	22.6
Mixed	24	77.4

Table 17: Technology Attitude Breakdown for Oculus Rift VR Headset Users

Technology Attitude	Count	Percentage
Negative	5	27.8
Mixed	13	72.2

3.4 VR Game Experience

Table 18: VR Game Experience Breakdown for Oculus Go VR Headset Users

VR Game Experience	Count	Percentage
Negative	1	3.2
Mixed	14	45.2
Positive	16	51.6

Table 19: VR Game Experience Breakdown for Oculus Rift VR Headset Users

VR Game Experience	Count	Percentage
Negative	2	11.1
Mixed	9	50.0
Positive	7	38.9

Contingency Table

Table 20: Contingency Table for Oculus Go VR Users

Chi-square test p-value: NaN		VR Game Experience		
		Negative	Mixed	Positive
	Negative	0	3	4
Technology Attitude	Mixed	1	11	12
	Positive	0	0	0

Table 21: Contingency Table for Oculus Rift VR Users

Chi-square test p-value: NaN		VR Game Experience		
		Negative	Mixed	Positive
	Negative	0	3	2
Technology Attitude	Mixed	2	6	5
	Positive	0	0	0