Analysis Report

This report is structured as follows.

Contents

Sample Characterization

The table below presents the sample characterization of the study participants across various demographic and lifestyle categories.

Category	Level	Count	Percentage
Age	18-34	318	26.5
	35-54	409	34.1
	55-69	325	27.1
	70+	148	12.3
Gender	Woman	621	51.8
	Man	576	48.0
	Non-binary	3	0.3
Region	Sydney metropolitan	716	59.7
	NSW (Not Sydney)	484	40.3
Income	Less than $50,000	251	20.9
	$50,000 to $80,000	221	18.4
	$80,001 to $120,000	287	23.9
	$120,001 - $170,000	222	18.5
	More than $170,000	219	18.3
Education	Year 11 of high school or less	136	11.3
	Year 12 of high school	181	15.1
	Technical college or trade courses	316	26.3
	University qualification	567	47.3
Language	No (English only)	1002	83.5
	Yes	198	16.5
Religion	No religion	510	42.5
	Yes	690	57.5
Attend Religious	Once per year or more	381	31.8
	Other	819	68.3
Employment	Full-time	581	48.4
	Part-time or casual	189	15.8
	Self-employed	62	5.2
	Unemployed	59	4.9
	Retired	221	18.4
	Other	37	3.1
	Pensioner	51	4.3
Vote	Liberal or National Party	409	34.1
	Australian Labor Party	400	33.3
	The Greens	116	9.7
	An independent or other party	147	12.3
	Don't know/undecided	128	10.7
Ever Taken illegal Drug	Yes	412	34.3
	No	772	64.3
	Prefer not to say	16	1.3
Friend/family ever taken illegal drug	Yes	579	48.3
	No	457	38.1

	Not sure	151	12.6
	Prefer not to say	13	1.1
Ever been stopped and searched	Yes	103	8.6
	No	1095	91.3
	Prefer not to say	2	0.2
Friend/family ever been stopped and searched	Yes	184	15.3
	No	817	68.1
	Not sure	195	16.3
	Prefer not to say	4	0.3
Friend/family ever been charged	Yes	124	10.3
	No	968	80.7
	Not sure	105	8.8
	Prefer not to say	3	0.3

The age distribution of the participants indicates a concentration in the middle age ranges, with 34.1% aged between 35 and 54 years, followed by 27.1% in the 55-69 age bracket. Young adults (18-34) constitute 26.5% of the sample, while older adults (70+) represent the smallest group at 12.3%. Regarding gender, the sample slightly leans towards women (51.8%), with men accounting for 48.0% and a minimal percentage identifying as non-binary (0.3%). Geographically, the majority of participants reside in the Sydney metropolitan area (59.7%), with the remainder from New South Wales outside of Sydney (40.3%).

Income levels among the participants are diverse, with 20.9% earning less than $50,000, and similar proportions distributed across higher income brackets, illustrating a broad economic representation within the sample. Educational attainment is notably high, with 47.3% holding a university qualification, and a further 26.3% having attended technical college or trade courses. The majority of the sample are English speakers only (83.5%), and a significant portion does not affiliate with any religion (42.5%), although a slight majority do (57.5%). Regular religious attendance is not common, with 31.8% attending at least once per year.

Employment status varies, with full-time employees making up nearly half of the sample (48.4%). The sample also includes part-time or casual workers (15.8%), self-employed individuals (5.2%), and those unemployed (4.9%). Political affiliations are evenly split between the Liberal or National Party (34.1%) and the Australian Labor Party (33.3%), with smaller proportions supporting The Greens (9.7%) or other parties (12.3%). The participants' experiences and attitudes towards illegal drugs reveal that 34.3% have taken illegal drugs, while 48.3% have friends or family who have done so. Encounters with law enforcement are relatively rare, with only 8.6% having been stopped and searched.

Media consumption habits (table below) show a preference for traditional news outlets over new media platforms, with the highest engagement reported with The Daily Telegraph (23.2%), The Sydney Morning Herald (25.4%), and The Guardian (11.8%). Television and radio retain significant audiences, particularly ABC TV (40.1%) and ABC Radio (20.2%). Social media usage is varied, with Facebook (32.3%), Instagram (18.5%), and TikTok (9.8%) being the most frequently mentioned platforms. Notably, a high percentage of the sample does not use platforms like WeChat (98.3%) and 2SM Radio (96.8%), indicating selective engagement with digital media.

Category	Level	Count	Percentage
The Daily Telegraph	No	922	76.8
	Yes	278	23.2
The Sydney Morning Herald	No	895	74.6
	Yes	305	25.4
The Guardian	No	1059	88.3
	Yes	141	11.8
ABC TV	No	719	59.9
	Yes	481	40.1
SBS TV	No	971	80.9
	Yes	229	19.1
Channel 7 TV	No	761	63.4
	Yes	439	36.6
Channel 9 TV	No	740	61.7
	Yes	460	38.3
Channel 10 TV	No	974	81.2
	Yes	226	18.8
Sky News TV	No	1067	88.9
	Yes	133	11.1
ABC Radio	No	958	79.8
	Yes	242	20.2
2GB Radio	No	1037	86.4
	Yes	163	13.6
2SM Radio	No	1162	96.8
	Yes	38	3.2
Facebook	No	812	67.7
	Yes	388	32.3
Instagram	No	978	81.5
	Yes	222	18.5
TikTok	No	1082	90.2
	Yes	118	9.8
X/Twitter	No	1093	91.1
	Yes	107	8.9
WeChat	No	1179	98.3
	Yes	21	1.8
YouTube	No	973	81.1
	Yes	227	18.9
None of the above	No	1087	90.6
	Yes	113	9.4

Descriptives – Attitudinal Variables

The table below presents the mean scores, standard errors of the mean, standard deviations, and Cronbach's alpha values for various attitudinal scales and their corresponding items.

Variable	M	SEM	SD	ITC	Alpha
Q23_1_rev	2.810	0.079	2.747	0.556	
Q23_2	4.383	0.082	2.830	0.511	
Q23_3_rev	3.385	0.091	3.162	0.808	
Q23_4_rev	4.745	0.093	3.214	0.801	
Q23_5	6.133	0.087	3.011	0.253	
Q23_6_rev	3.816	0.094	3.248	0.770	
Q23_7_rev	3.224	0.092	3.201	0.747	
Q23_8	3.284	0.090	3.125	0.648	
Q23_9_rev	5.881	0.096	3.316	0.721	
Q23_10_rev	7.727	0.084	2.897	0.387	
Q23_11_rev	3.583	0.105	3.631	0.811	
Attitudes_to_Drugs	4.452	0.058	2.022	0.811	0.860
Q21_1	4.925	0.106	3.689	0.675	
Q21_2	1.051	0.067	2.304	0.818	
Q21_3	1.192	0.070	2.412	0.822	
Q21_4	1.503	0.075	2.613	0.889	
Q21_5	1.630	0.080	2.755	0.905	
Q21_6	2.065	0.087	3.010	0.874	
Drug_Support	2.061	0.066	2.300	0.874	0.896
Q22_1	6.228	0.109	3.767	0.849	
Q22_2	5.290	0.110	3.818	0.853	
Policy_Support	5.759	0.093	3.228	0.853	0.620

The Attitudes to Drugs scale demonstrated a robust internal consistency with a Cronbach's alpha of 0.860, reflecting the cohesiveness of the items in measuring individuals' attitudes towards drugs. The composite mean score for this scale was 4.452, with a standard deviation of 2.022, indicating a moderate average attitude with considerable variability among the participants. The Drug Support scale further exemplified high internal consistency with a Cronbach's alpha of 0.896. Conversely, the Policy Support scale, despite exhibiting a lower Cronbach's alpha of 0.620, was still included in the analysis through the calculation of a composite scale. This decision ensures consistency in evaluating support for drug policy, acknowledging the importance of each construct despite the variability in internal consistency.

## Cluster Analysis – Finding the Optimal Number of Clusters

After describing the data and testing for reliability, the analysis proceeded to the clustering algorithms. A hierarchical clustering approach was adopted to establish initial centroids for subsequent k-means clustering. This approach began with the selection of relevant variables for clustering from the dataset. These variables were utilized to compute a dissimilarity matrix, suitable for handling mixed data types, using the daisy function.

Hierarchical clustering was conducted using the Ward.D2 method via the hclust function. The Ward.D2 method is particularly effective in minimizing the total within-cluster variance, thus ensuring more homogenous clusters. This method iteratively merges the pair of clusters that result in the smallest increase in total within-cluster variance after merging.

Once the hierarchical clustering was complete, the dendrogram was cut at various levels (ranging from 2 to 10 clusters) to obtain different cluster assignments. For each of these assignments, centroids were calculated by aggregating the data for each cluster and computing their mean values. These centroids, representing the center point of each cluster, served as initial seeds for the k-means clustering algorithm.

To determine the optimal number of clusters, we employed two distinct but complementary methods: the Elbow Method and the F-statistic.

Elbow Method: This method involved plotting the total within-cluster sum of squares (WSS) against the number of clusters. The 'elbow' point in this plot, where the rate of decrease sharply changes, signifies a suitable number of clusters. The rationale is that adding another cluster beyond this point does not provide much better modelling of the data. The plot is shown below.
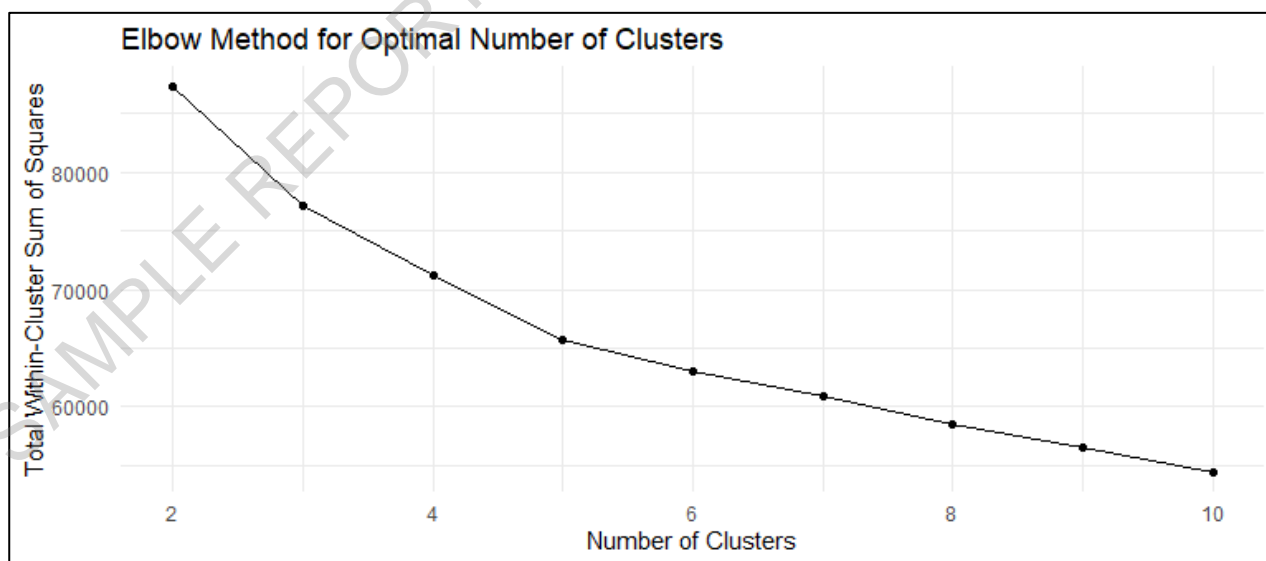
There is no clear 'elbow' in the plot and it suggests that the optimal solution might be between 3 or 8 clusters. It is also notable that any solution beyond 8 clusters might make interpretation difficult.

In order to make a final decision, ANOVAs were executed on the clustering variables to evaluate the solution with the highest degree of differentiation, indicated by largest F-statistics. A single F-statistic is generated for each clustering variable (attitudes to drugs – Q23). It is assumed that the highest sum of all statistics represents the cluster solution with the highest degree of cluster differentiation. The results are shown below.

N. Of Clusters	Sum of F	N. Significant
3	1146.352	10
4	999.100	9
5	3748.496	10
6	6635.062	11
7	2001.409	11
8	1991.113	10

The table shows that when summing up all F's, the 6-cluster solution shows the highest number, which indicates that this solution is best. It also shows that the F-test was statistically significant for all the eleven variables included in the solution.

Cluster Profiling

The solution led to the following cluster sizes (table below). The larges cluster was Cluster 3 with 281 individuals.

Cluster	N
1	116
2	224
3	281
4	250
5	241
6	88

The table below presents mean (M) and standard deviation (SD) values for various activities across five clusters. Notable differences among clusters are observed in several activities.

Variable	Cluster											
	1		2		3		4		5		6	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Q21. To what extent would you support or oppose the personal use of the following drugs being made legal? - Marijuana/Cannabis	9.353	1.428	6.607	3.226	3.530	3.292	5.504	2.809	1.934	2.795	5.807	3.591
Q21. To what extent would you support or oppose the personal use of the following drugs being made legal? - Heroin	2.707	3.531	0.804	1.677	0.302	1.215	1.328	2.224	0.129	0.767	3.625	3.749
Q21. To what extent would you support or oppose the personal use of the following drugs being made legal? - Amphetamines and Methamphetamine/Ice	2.897	3.629	0.960	1.813	0.356	1.304	1.588	2.255	0.224	1.099	3.727	3.891
Q21. To what extent would you support or oppose the personal use of the following drugs being made legal? - Cocaine	4.534	3.689	1.652	2.262	0.331	1.231	1.840	2.366	0.112	0.713	3.727	3.644
Q21. To what extent would you support or oppose the personal use of the following drugs being made legal? - Ecstasy/MDMA	5.379	3.736	1.920	2.461	0.317	1.190	1.904	2.438	0.129	0.756	3.477	3.613
Q21. To what extent would you support or oppose the personal use of the following drugs being made legal? - Hallucinogens like LSD or Magic Mushrooms	6.276	3.425	2.705	2.835	0.491	1.412	2.440	2.620	0.228	1.065	3.875	3.716
Q22. To what extent would you support or oppose each of the following statements: - The government should allow pill testing services at places like music festivals.	8.724	2.573	6.902	3.353	5.819	3.960	6.412	3.025	4.357	4.316	7.125	3.051
Q22. To what extent would you support or oppose each of the following statements: - The government should legalise and regulate recreational Marijuana/Cannabis in much the same way as tobacco, alcohol and prescription drugs.	9.422	1.384	6.973	3.321	3.786	3.560	6.048	2.805	2.290	3.295	6.420	3.403
Q23. How much do you agree or disagree with each of the following statements? - Using Methamphetamine/Ice always makes people crazy and violent	4.991	3.319	5.826	2.848	7.794	2.410	6.584	2.148	9.079	1.841	8.182	1.752
Q23. How much do you agree or disagree with each of the following statements? - Most people who use drugs are healthy and functioning members of society	7.595	1.943	4.442	2.317	3.740	2.598	4.804	1.915	2.124	2.569	7.045	2.062
Q23. How much do you agree or disagree with each of the following statements? - Using drugs is totally irresponsible	1.517	1.707	4.259	2.400	8.338	2.090	5.764	2.007	9.606	1.083	8.057	1.677
Q23. How much do you agree or disagree with each of the following statements? - People who use drugs should be punished for it	0.672	1.148	2.438	1.990	5.473	2.420	5.392	1.799	8.855	1.734	7.523	2.084

Variable	Cluster											
	1		2		3		4		5		6	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Q23. How much do you agree or disagree with each of the following statements? - The government has a responsibility to help people who use drugs stay healthy, safe and well	7.793	2.566	6.188	2.858	6.057	3.023	5.628	2.466	5.544	3.580	7.091	2.603
Q23. How much do you agree or disagree with each of the following statements? - Drug use always leads to addiction	1.526	2.236	3.571	2.573	7.612	2.447	5.640	1.998	9.037	1.687	8.148	1.699
Q23. How much do you agree or disagree with each of the following statements? - There is no safe level of drug use	2.172	2.562	4.388	2.498	9.114	1.654	5.648	2.131	9.282	1.755	7.795	1.883
Q23. How much do you agree or disagree with each of the following statements? - It's ok for people to use drugs if they are careful about it	7.897	2.036	4.027	2.217	1.214	1.758	4.184	2.167	0.373	0.895	7.341	2.191
Q23. How much do you agree or disagree with each of the following statements? - We should shame people for using drugs	0.328	0.863	1.357	1.877	3.135	2.275	4.404	1.750	8.274	2.066	7.102	2.310
Q23. How much do you agree or disagree with each of the following statements? - People only take drugs if their parents didn't bring them up right	0.440	1.372	0.670	1.245	1.039	1.687	3.280	2.463	3.349	3.421	6.909	2.549
Q23. How much do you agree or disagree with each of the following statements? - I am 100% against drug use	0.767	1.726	3.103	2.558	9.004	1.847	5.356	2.258	9.693	1.139	8.080	1.895

Cluster were also profiled according to the composite scales and the results are below.

Variable	Cluster											
	1		2		3		4		5		6	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Attitudes_to_Drugs	8.261	0.808	6.277	0.632	3.591	0.733	4.777	0.667	1.897	0.751	3.607	0.687
Drug Support	5.191	2.592	2.441	1.688	0.888	1.174	2.434	1.884	0.459	0.872	4.040	3.272
Policy Support	9.073	1.520	6.938	2.770	4.802	3.051	6.230	2.407	3.324	3.120	6.773	2.873

Cluster 1 is characterized by relatively liberal attitudes towards drugs, with notably high support for the legalization of marijuana/cannabis (M=9.353, SD=1.428) and government-endorsed pill testing services at music festivals (M=8.724, SD=2.573). This cluster exhibits a strong belief in the responsibility of the government to ensure the health and safety of drug users (M=7.793, SD=2.566) and is more open to the personal use of drugs being made legal, as evidenced by their attitudes towards the legalization of substances like LSD or Magic Mushrooms (M=6.276, SD=3.425).

Cluster 2, in contrast, holds more conservative views, particularly evident in their lower support for the legalization of drugs across the board, including marijuana/cannabis (M=6.607, SD=3.226) and heroin (M=0.804, SD=1.677). This group also shows restrained support for pill testing (M=6.902, SD=3.353) and the legalization of recreational marijuana/cannabis (M=6.973, SD=3.321).
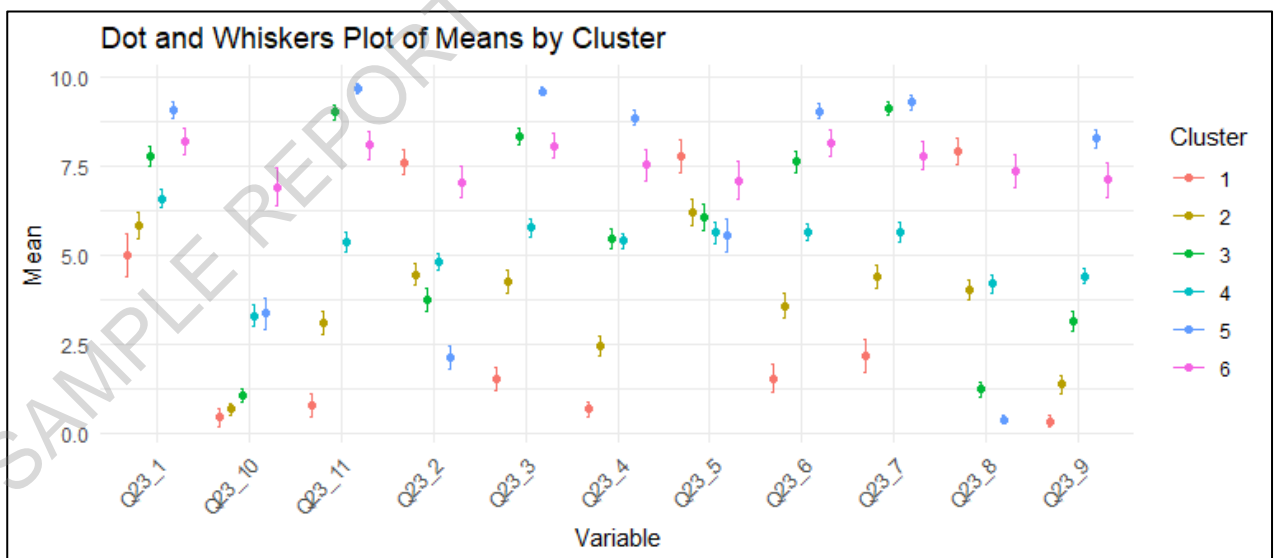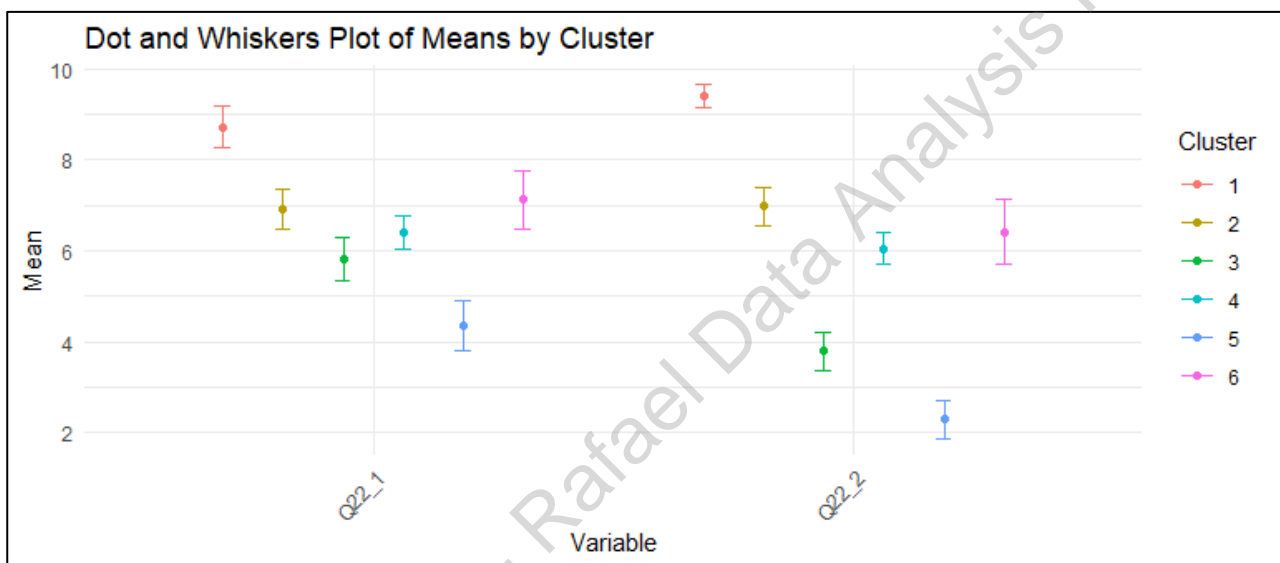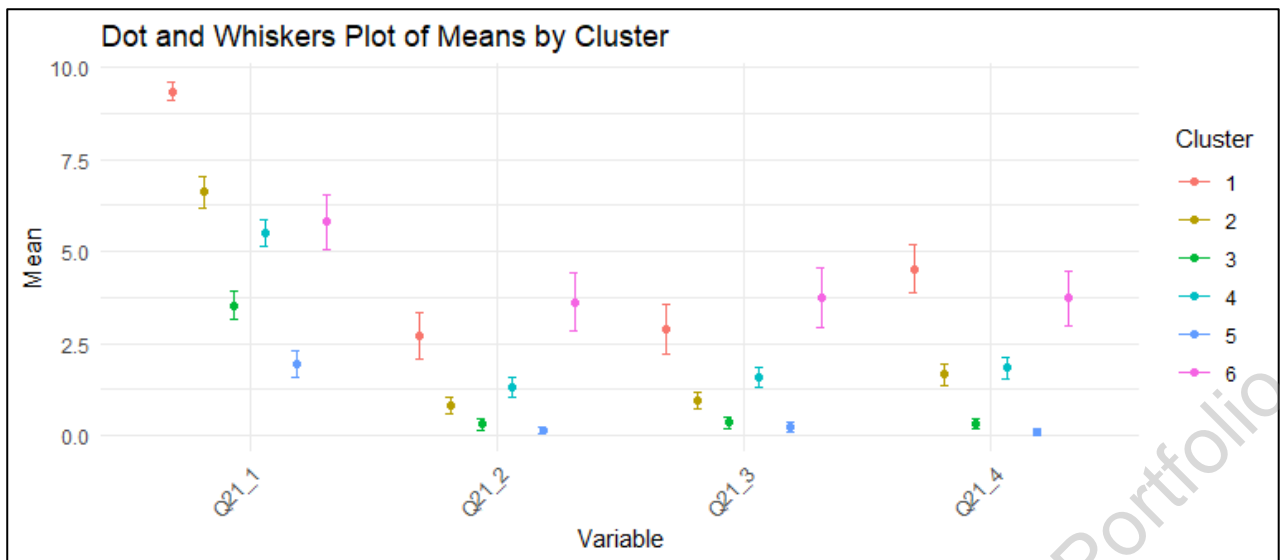
Cluster 3 represents the most conservative stance towards drug use among the clusters, with minimal support for the legalization of any drugs and a strong tendency to agree with statements that portray drug use negatively, such as "Using drugs is totally irresponsible" (M=8.338, SD=2.090) and "There is no safe level of drug use" (M=9.114, SD=1.654).

Cluster 4 showcases moderate views, with middling scores in support for drug legalization and policies. This cluster, similar to Cluster 3, shows concern for the consequences of drug use but is somewhat more open to interventions like pill testing (M=6.412, SD=3.025).

Cluster 5 is marked by the lowest support for the legalization of drugs and the highest agreement with punitive and stigmatizing views on drug use, indicating a very conservative outlook towards drugs and drug users.

Cluster 6 exhibits a mixed stance, with moderate support for certain legalizations such as marijuana/cannabis (M=5.807, SD=3.591) and policy support (M=6.773, SD=2.873), suggesting a nuanced perspective on drug-related issues.

The figures below were created to illustrate the mean differences across clusters.

Dot and Whiskers Plot of Means by Cluster

Dot and Whiskers Plot of Means by Cluster

Dot and Whiskers Plot of Means by Cluster

The following table present the proportion of individuals regarding sociodemographic variables disaggregated by each cluster

Variable	Level	Cluster (%)					
		1	2	3	4	5	6
Age	18-34	35.3	32.1	16.0	27.2	20.7	47.7
	35-54	40.5	36.2	31.3	32.4	34.4	33.0
	55-69	22.4	23.2	34.9	27.2	28.6	13.6
	70+	1.7	8.5	17.8	13.2	16.2	5.7
Gender	Woman	46.6	51.8	56.2	54.0	47.7	48.9
	Man	51.7	48.2	43.8	46.0	51.9	51.1
	Non-binary	1.7	0.0	0.0	0.0	0.4	0.0
Region	Sydney metropolitan	66.4	52.7	56.2	59.2	60.2	79.5
	NSW (Not Sydney)	33.6	47.3	43.8	40.8	39.8	20.5
Income	Less than $50,000	12.9	21.0	23.8	23.6	22.0	11.4
	$50,000 to $80,000	22.4	15.2	17.8	21.2	17.4	18.2
	$80,001 to $120,000	25.0	19.2	24.9	23.2	25.3	29.5
	$120,001 - $170,000	19.0	19.6	21.0	17.6	16.6	14.8
	More than $170,000	20.7	25.0	12.5	14.4	18.7	26.1
Education	Year 11 of high school or less	7.8	8.5	17.4	10.0	12.0	5.7
	Year 12 of high school	10.3	17.4	12.5	17.6	14.9	17.0
	Technical college or trade courses	30.2	27.2	29.2	25.6	23.2	20.5
	University qualification	51.7	46.9	40.9	46.8	49.8	56.8
Language	No (English only)	92.2	90.6	81.9	81.6	77.6	80.7
	Yes	7.8	9.4	18.1	18.4	22.4	19.3
Religion	No religion	74.1	52.2	29.9	46.4	31.1	36.4
	Yes	25.9	47.8	70.1	53.6	68.9	63.6
Attend Religious	Once per year or more	15.5	21.0	37.4	30.4	38.2	48.9
	Other	84.5	79.0	62.6	69.6	61.8	51.1
Employment	Full-time	60.3	47.8	39.5	44.4	46.9	78.4
	Part-time or casual	14.7	17.4	17.8	16.8	14.5	6.8
	Self-employed	6.9	6.7	3.6	6.4	3.7	4.5
	Unemployed	6.0	8.0	4.6	6.0	2.5	0.0
	Retired	7.8	12.5	26.0	19.2	23.2	8.0
	Other	0.9	4.0	3.2	4.0	2.9	1.1
	Pensioner	3.4	3.6	5.3	3.2	6.2	1.1
Vote	Liberal or National Party	14.7	24.6	36.3	30.0	47.7	51.1
	Australian Labor Party	30.2	39.3	34.9	36.0	29.0	21.6
	The Greens	19.8	11.2	7.5	10.0	5.0	11.4
	An independent or other party	24.1	13.4	9.3	10.0	12.0	10.2
	Don't know/undecided	11.2	11.6	12.1	14.0	6.2	5.7
Ever Taken illegal Drug	Yes	84.5	50.4	19.6	33.2	7.5	51.1
	No	14.7	46.9	80.1	65.2	91.7	46.6
	Prefer not to say	0.9	2.7	0.4	1.6	0.8	2.3
Friend/family ever taken illegal drug	Yes	87.9	63.4	42.0	44.8	22.8	56.8
	No	8.6	23.7	44.8	37.2	61.0	31.8
	Not sure	3.4	11.6	12.8	14.8	16.2	10.2

Variable	Level	Cluster (%)					
		1	2	3	4	5	6
	Prefer not to say	0.0	1.3	0.4	3.2	0.0	1.1
Ever been stopped and searched	Yes	19.8	9.4	3.6	2.8	5.8	31.8
	No	80.2	90.6	96.4	97.2	94.2	65.9
	Prefer not to say	0.0	0.0	0.0	0.0	0.0	2.3
Friend/family ever been stopped and searched	Yes	25.9	20.1	12.1	10.4	8.7	31.8
	No	54.3	63.4	67.6	72.4	78.4	59.1
	Not sure	19.8	15.6	19.9	17.2	12.9	8.0
	Prefer not to say	0.0	0.9	0.4	0.0	0.0	1.1
Friend/family ever been charged	Yes	17.2	12.1	8.5	6.8	5.8	25.0
	No	73.3	79.9	81.1	81.6	86.7	71.6
	Not sure	9.5	7.6	10.0	11.6	7.1	3.4
	Prefer not to say	0.0	0.4	0.4	0.0	0.4	0.0

Age Distribution presents a notable variance with a significant presence of younger adults (18-34) in Cluster 6 (47.7%), suggesting this group may be more open to progressive drug policies or use. In contrast, the representation of older adults (70+) is substantially higher in Cluster 3 (17.8%), indicating a tendency towards more conservative views on drug use among the oldest demographics.

Region demonstrates significant differences, with the Sydney metropolitan area being overwhelmingly represented in Cluster 6 (79.5%). This suggests that urban residents may have more liberal views on drugs, contrasting with participants from NSW (Not Sydney), who are more evenly distributed across clusters, showing no particular skew towards liberal or conservative drug policies.

Income reveals interesting patterns; participants with incomes of more than $170,000 are notably prevalent in Cluster 6 (26.1%), suggesting that higher income individuals may lean towards more progressive views on drug use and policy. This contrasts with lower-income participants (less than $50,000), who do not show a strong skew towards any particular cluster.

Religion and Attend Religious Services categories show significant variation, with those identifying with no religion most strongly represented in Cluster 1 (74.1%) and those attending religious services once per year or more being most significantly clustered in Cluster 6 (48.9%).

Ever Taken Illegal Drug shows a stark contrast, with 84.5% of Cluster 1 participants having used illegal drugs, compared to only 14.7% and 0.9% respectively denying or preferring not to say. This high percentage contrasts with Cluster 3, where 80.1% have not used illegal drugs.

Focusing on media consumption patterns across the clusters, particularly emphasizing variables with higher variations, offers insights into how different groups engage with various media outlets (table below)

Variable	Level	Cluster (%)					
		1	2	3	4	5	6
The Daily Telegraph	No	87.9	84.4	70.1	80.0	71.8	69.3
	Yes	12.1	15.6	29.9	20.0	28.2	30.7
The Sydney Morning Herald	No	69.8	77.2	75.1	73.2	75.9	72.7
	Yes	30.2	22.8	24.9	26.8	24.1	27.3
The Guardian	No	72.4	83.5	89.3	93.2	91.3	95.5
	Yes	27.6	16.5	10.7	6.8	8.7	4.5
ABC TV	No	55.2	61.6	56.2	56.4	66.0	67.0
	Yes	44.8	38.4	43.8	43.6	34.0	33.0
SBS TV	No	83.6	81.3	80.1	83.6	79.7	75.0
	Yes	16.4	18.8	19.9	16.4	20.3	25.0
Channel 7 TV	No	81.9	70.5	54.1	61.6	58.9	68.2
	Yes	18.1	29.5	45.9	38.4	41.1	31.8
Channel 9 TV	No	79.3	69.6	50.9	59.6	57.3	70.5
	Yes	20.7	30.4	49.1	40.4	42.7	29.5
Channel 10 TV	No	87.1	83.0	74.0	84.4	80.5	84.1
	Yes	12.9	17.0	26.0	15.6	19.5	15.9
Sky News TV	No	95.7	92.4	87.5	89.2	83.0	90.9
	Yes	4.3	7.6	12.5	10.8	17.0	9.1
ABC Radio	No	81.0	80.8	78.6	79.2	82.6	73.9
	Yes	19.0	19.2	21.4	20.8	17.4	26.1
2GB Radio	No	94.8	90.2	85.4	88.0	80.9	79.5
	Yes	5.2	9.8	14.6	12.0	19.1	20.5
2SM Radio	No	97.4	99.1	96.8	96.4	97.5	89.8
	Yes	2.6	0.9	3.2	3.6	2.5	10.2
Facebook	No	72.4	66.5	68.3	67.2	69.7	58.0
	Yes	27.6	33.5	31.7	32.8	30.3	42.0
Instagram	No	75.0	79.0	86.8	82.4	87.1	61.4
	Yes	25.0	21.0	13.2	17.6	12.9	38.6
TikTok	No	89.7	89.7	94.7	90.8	92.9	68.2
	Yes	10.3	10.3	5.3	9.2	7.1	31.8
X/Twitter	No	88.8	89.3	94.3	91.2	91.3	87.5
	Yes	11.2	10.7	5.7	8.8	8.7	12.5
WeChat	No	97.4	99.6	99.3	98.0	98.3	93.2
	Yes	2.6	0.4	0.7	2.0	1.7	6.8
YouTube	No	81.0	84.4	85.8	76.8	76.8	81.8
	Yes	19.0	15.6	14.2	23.2	23.2	18.2
None of the above	No	85.3	87.5	91.5	93.6	90.0	95.5
	Yes	14.7	12.5	8.5	6.4	10.0	4.5

The Daily Telegraph sees a notable increase in readership from Cluster 1 (12.1%) to Cluster 6 (30.7%), suggesting that those with more conservative or traditional views on drug use and policy may prefer this outlet.

The Guardian presents a contrasting trend, with its readership decreasing significantly from Cluster 1 (27.6%) to Cluster 6 (4.5%). This pattern might reflect The Guardian's progressive editorial stance, appealing more to those with liberal views on drugs, which are predominant in Cluster 1.

ABC TV shows relatively high viewership in Cluster 1 (44.8%) and decreases slightly in Cluster 6 (33.0%).

Channel 7 TV and Channel 9 TV both exhibit a peak in viewership in the middle clusters (45.9% and 49.1%, respectively, in Cluster 3).

Sky News TV has the lowest engagement in Cluster 1 (4.3%) and sees a slight increase by Cluster 6 (9.1%), suggesting that its viewership might align more with conservative views, although the overall engagement remains low across all clusters.

2GB Radio displays an increasing trend from Cluster 1 (5.2%) to Cluster 6 (20.5%), indicating its appeal to a demographic that might hold more traditional or conservative views.

Social Media Platforms like Facebook and Instagram show increased engagement in Cluster 6 (42.0% for Facebook and 38.6% for Instagram), highlighting the significant role of social media in influencing or reflecting the attitudes of younger or more liberal demographics toward drug policies.

TikTok engagement jumps dramatically in Cluster 6 (31.8%), suggesting its platform is particularly popular among the cluster with more progressive views on drug use.

Finally, one-way ANOVAs were conducted to identify the scales that exhibited the greatest level of differentiation across the clusters. Subsequent post-hoc analyses were carried out to examine the specific pairwise differences between the clusters in detail (table below).

Variable	sumsq	meansq	F	p
To what extent would you support or oppose the personal use of the following drugs being made legal? - Marijuana/Cannabis	2486.125	2486.125	215.370	0.000
To what extent would you support or oppose the personal use of the following drugs being made legal? - Heroin	0.244	0.244	0.046	0.830
To what extent would you support or oppose the personal use of the following drugs being made legal? - Amphetamines and Methamphetamine/Ice	0.703	0.703	0.121	0.728
To what extent would you support or oppose the personal use of the following drugs being made legal? - Cocaine	220.890	220.890	33.215	0.000
To what extent would you support or oppose the personal use of the following drugs being made legal? - Ecstasy/MDMA	495.653	495.653	68.997	0.000
To what extent would you support or oppose the personal use of the following drugs being made legal? - Hallucinogens like LSD or Magic Mushrooms	839.104	839.104	100.266	0.000
The government should allow pill testing services at places like music festivals.	742.308	742.308	54.649	0.000
The government should legalise and regulate recreational Marijuana/Cannabis in much the same way as tobacco, alcohol and prescription drugs.	2146.308	2146.308	167.720	0.000
Using Methamphetamine/Ice always makes people crazy and violent	1375.914	1375.914	214.831	0.000

Most people who use drugs are healthy and functioning members of society	440.441	440.441	57.608	0.000
Using drugs is totally irresponsible	4496.832	4496.832	719.513	0.000
People who use drugs should be punished for it	6732.877	6732.877	1426.323	0.000
The government has a responsibility to help people who use drugs stay healthy, safe and well	125.469	125.469	13.992	0.000
Drug use always leads to addiction	4782.005	4782.005	728.092	0.000
There is no safe level of drug use	3194.241	3194.241	420.958	0.000
It's ok for people to use drugs if they are careful about it	736.376	736.376	80.419	0.000
We should shame people for using drugs	7754.610	7754.610	1711.705	0.000
People only take drugs if their parents didn't bring them up right	3149.533	3149.533	545.976	0.000
I am 100% against drug use	5910.092	5910.092	715.645	0.000

The following insights were identified based on this analysis:

Notably, the scale assessing support or opposition to the legalization of marijuana/cannabis revealed the most substantial differentiation among clusters (F=215.370, p<0.000), underscoring the polarized views on this specific drug's legal status. Similarly, significant differentiation was observed in attitudes toward the legalization and regulation of recreational marijuana/cannabis, akin to tobacco, alcohol, and prescription drugs (F=167.720, p<0.001).

Views on the necessity of government-endorsed pill testing services at music festivals also showed notable variation across clusters (F=54.649, <0.001), suggesting divergent opinions on harm reduction strategies. The perspective that using methamphetamine/ice always results in craziness and violence further differentiated the clusters significantly (F=214.831, <0.001).

Attitudes toward the use of ecstasy/MDMA, LSD, or magic mushrooms showed strong differentiation (F=68.997 and F=100.266, respectively, both <0.001). Statements related to the irresponsibility of drug use (F=719.513, p<0.000), the punishment of drug users (F=1426.323, <0.001), and the notion that drug use leads to addiction (F=728.092, <0.001) also exhibited significant variance among the clusters.

The assertion that there is no safe level of drug use (F=420.958, <0.001) and the belief in shaming drug users (F=1711.705, <0.001) were among the variables with the highest levels of differentiation.

<u>**Discriminant Analysis**</u>

Discriminant functions are the core of Linear Discriminant Analysis (LDA), serving as the mathematical constructs that allow for the differentiation between multiple groups (or clusters) based on a set of predictor variables. In our context, each discriminant function (LD1, LD2, ..., LD5) represents a specific combination of our clustering variables (Q23_1, Q23_2, ..., Q23_11) that maximizes the separation between your clusters.

Variable	LD1	LD2	LD3	LD4	LD5
Q23_1	0.030	-0.022	0.029	0.132	0.103
Q23_2	-0.065	0.105	-0.158	0.054	-0.211
Q23_3	0.158	-0.010	-0.069	-0.110	0.289
Q23_4	0.147	0.139	0.074	-0.038	-0.219
Q23_5	-0.028	0.006	0.001	0.183	0.063
Q23_6	0.146	0.031	-0.052	-0.034	-0.043
Q23_7	0.144	-0.070	-0.166	0.034	0.085
Q23_8	-0.156	0.322	-0.180	0.065	0.132
Q23_9	0.199	0.211	0.263	0.222	0.019
Q23_10	0.042	0.213	-0.050	-0.265	0.072
Q23_11	0.231	-0.038	-0.214	0.066	-0.168

Understanding Discriminant Functions

Coefficients: The values provided for each variable across LD1 to LD5 are the coefficients that define how each predictor variable contributes to that specific discriminant function. A positive coefficient indicates that higher values of that variable push the discriminant function's score up, favoring one or more specific clusters, while a negative coefficient suggests the opposite.

Function Composition: Each discriminant function can be thought of as a line (or, in higher dimensions, a plane or hyperplane) that best separates the clusters based on the data. For instance, LD1 is the line that provides the greatest separation between the clusters, LD2 provides the second greatest, and so on, with each subsequent function being orthogonal (i.e., at right angles) to the previous ones.

Making Future Predictions

To use these discriminant functions for predicting the cluster membership of future observations, you would:

Calculate Discriminant Scores: For a new observation, you calculate its score on each discriminant function based on the coefficients. This involves multiplying each predictor variable's value by its

respective coefficient in the function and summing these products. You'll do this for each discriminant function.

Class Assignment: The observation is then assigned to the cluster whose centroid (mean discriminant scores across all functions) is closest to the observation's discriminant scores, typically using Euclidean or Mahalanobis distance. This assignment can also take into account prior probabilities of cluster membership if they were specified in the LDA model.

Posterior Probabilities: More refined than just class assignment, the model can also compute the posterior probability of membership in each cluster for the observation. This probability is a more nuanced outcome, indicating not just the most likely cluster but how likely the observation is to belong to each cluster.

Cluster prediction can be accomplished using built-in functions in R such as the *lda* library.