

Proposed structure

Joe Marlo

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Introduction and research question

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Key findings

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Clustering process

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- clustering on the data
- why clustering

The data

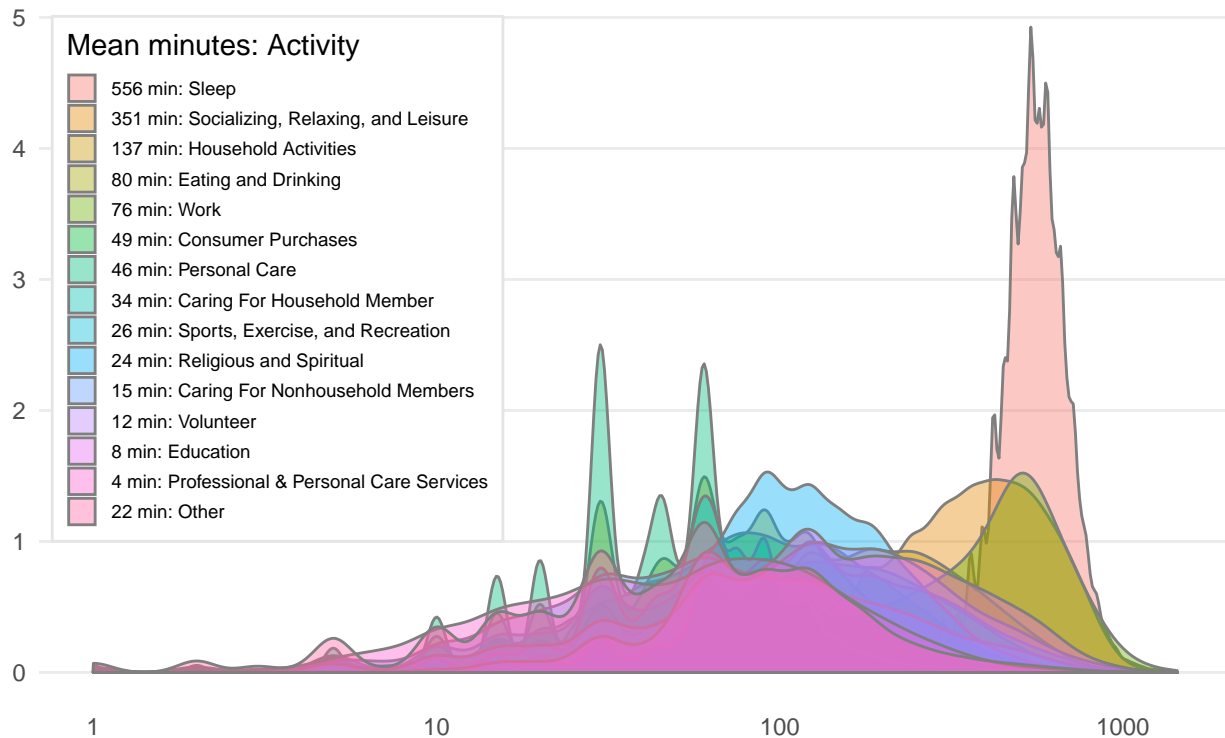
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key points - weekend only - going to examine a weighted sample of 25k

Activity	Type	Mean	Participation rate
Sleep	Continuous	556	1
Socializing, Relaxing, and Leisure	Continuous	351	0.96
Household Activities	Continuous	137	0.8
Eating and Drinking	Continuous	80	0.95
Work	Continuous	76	0.23
Consumer Purchases	Continuous	49	0.45
Personal Care	Continuous	46	0.76
Caring For Household Member	Continuous	34	0.26
Sports, Exercise, and Recreation	Continuous	26	0.18
Religious and Spiritual	Continuous	24	0.17
Other	Continuous	22	0.28
Caring For Nonhousehold Members	Continuous	15	0.14
Volunteer	Continuous	12	0.07
Education	Continuous	8	0.04
Professional & Personal Care Services	Continuous	4	0.04
Total	-	1440	-

Weekend Time use activities

Non-zero values only



Demographics of the respondents

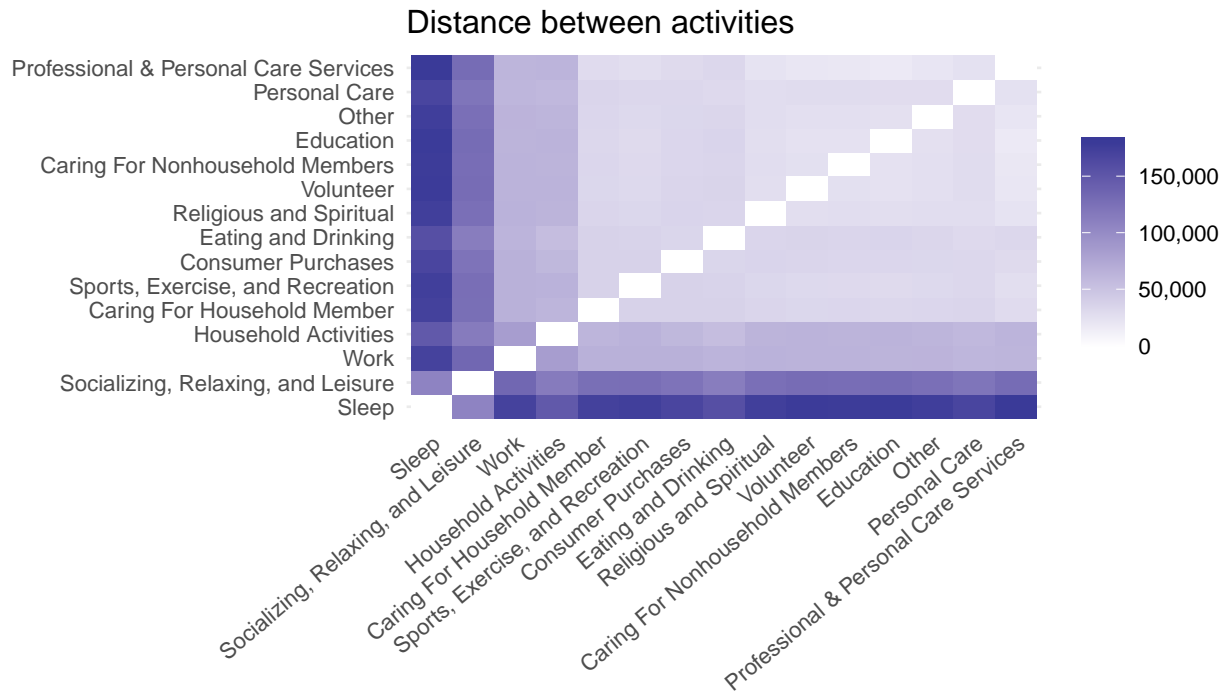
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drop race

Clustering

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Process - hierarchial - discuss but don't show: kmeans - discuss but don't show: c(g) and silhouette metrics - no need for transformations / scaling



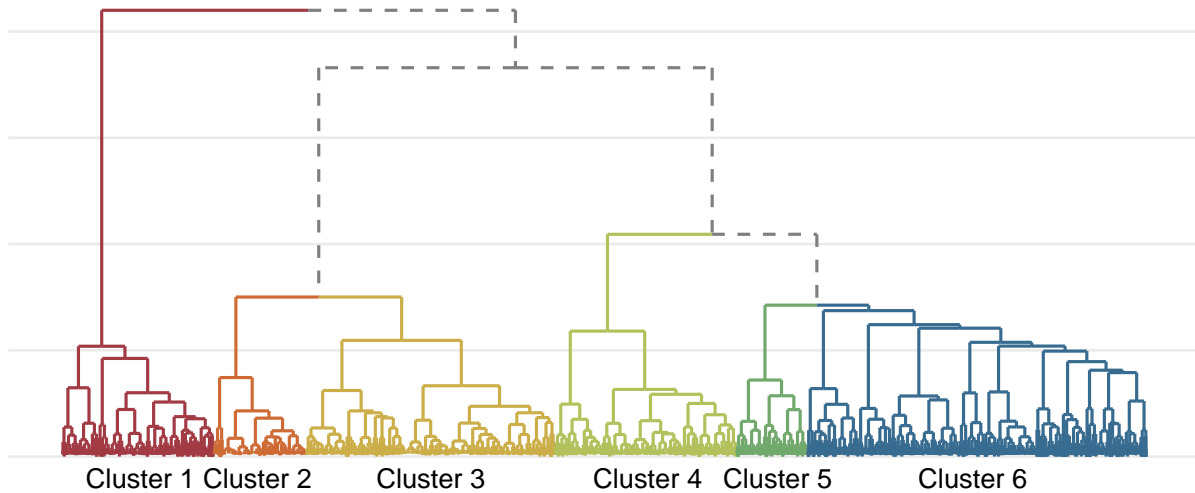
	PC1	PC2	PC3	PC4	PC5	PC6
Standard deviation	238.7	188.7	151.9	113.6	85.37	80.97
Proportion of Variance	0.33	0.21	0.14	0.08	0.04	0.04
Cumulative Proportion	0.33	0.54	0.68	0.75	0.8	0.84

Discuss dendrogram

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Ward (D2) linkage

6 cluster solution

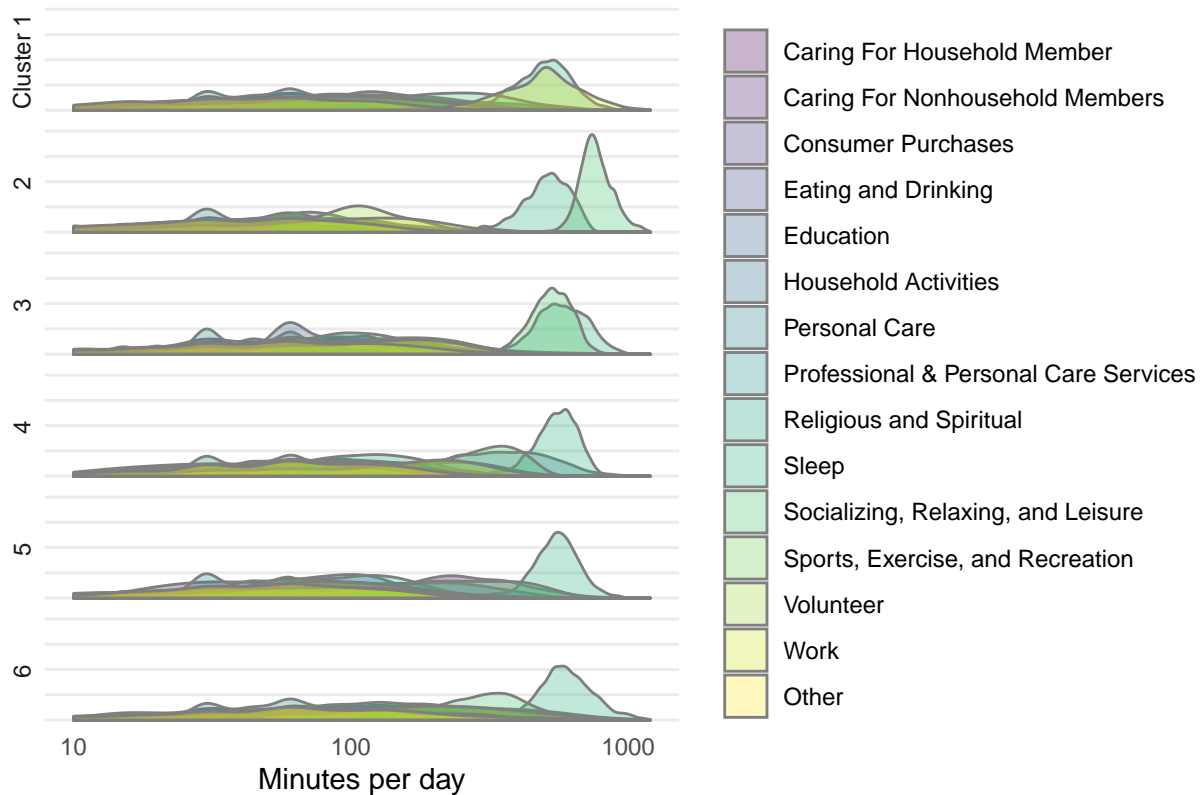


Breaking down the clusters

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- Cluster 1:
- Cluster 2
- Cluster 3
- Cluster 4
- Cluster 5
- Cluster 6: Catch all 'Other'

Weekend activities split by cluster

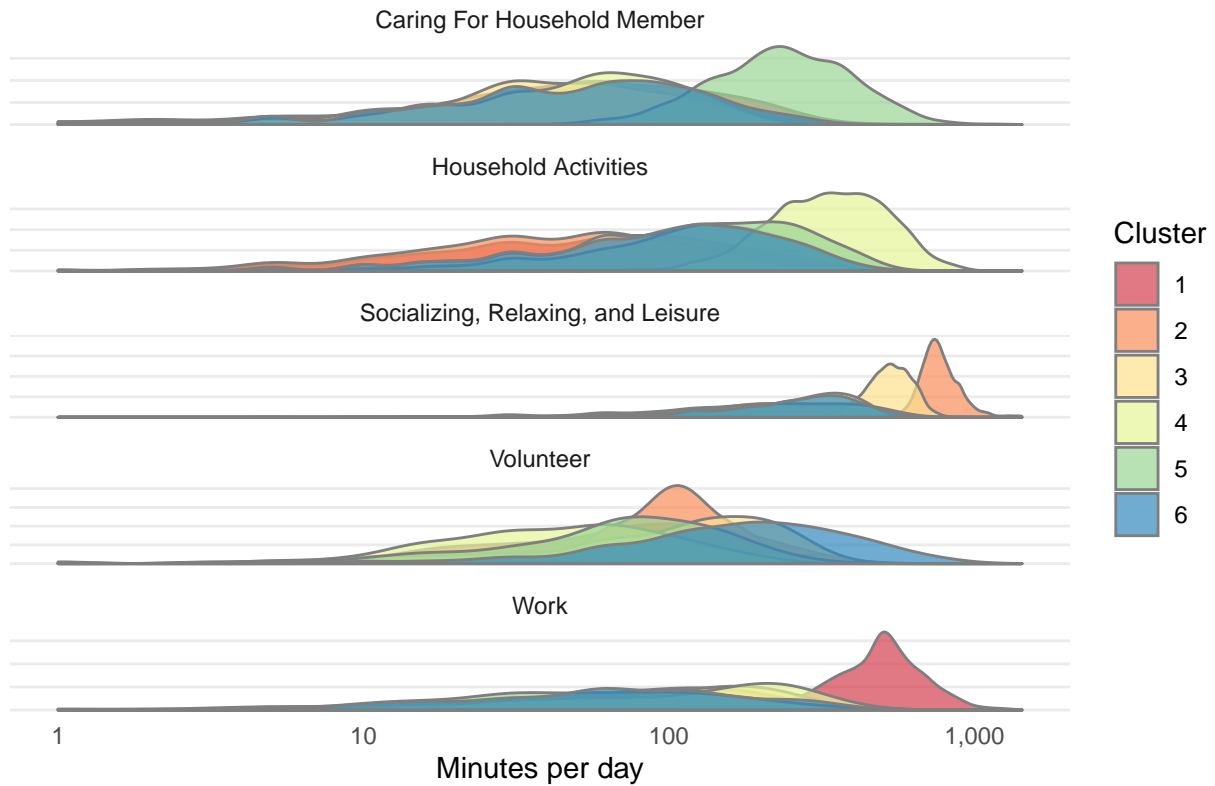


Zoom on on specific activities

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Discuss how this cluster split this activities the most

Least similar activities after cut by cluster

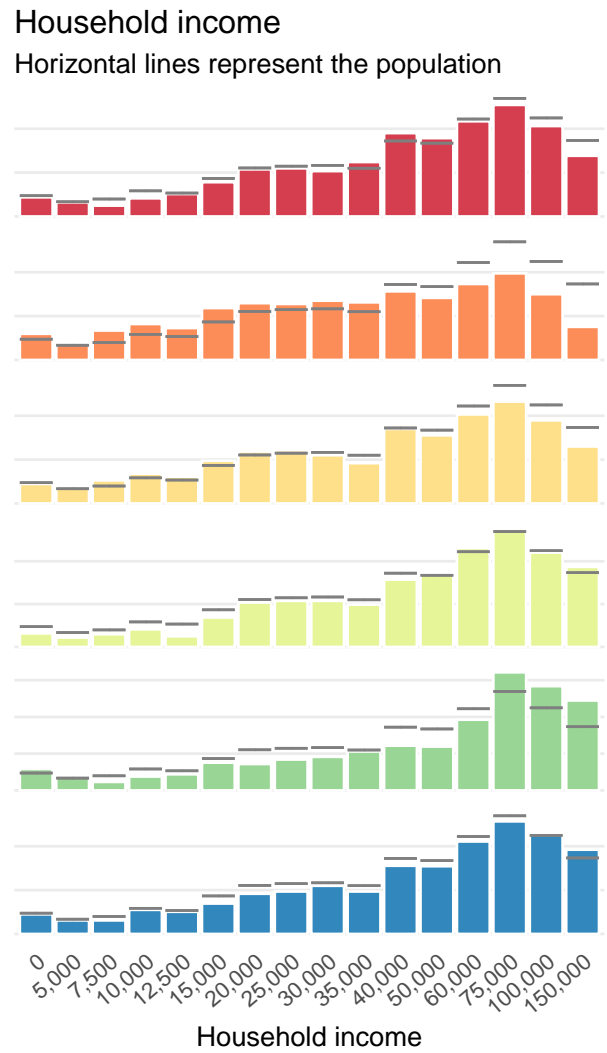
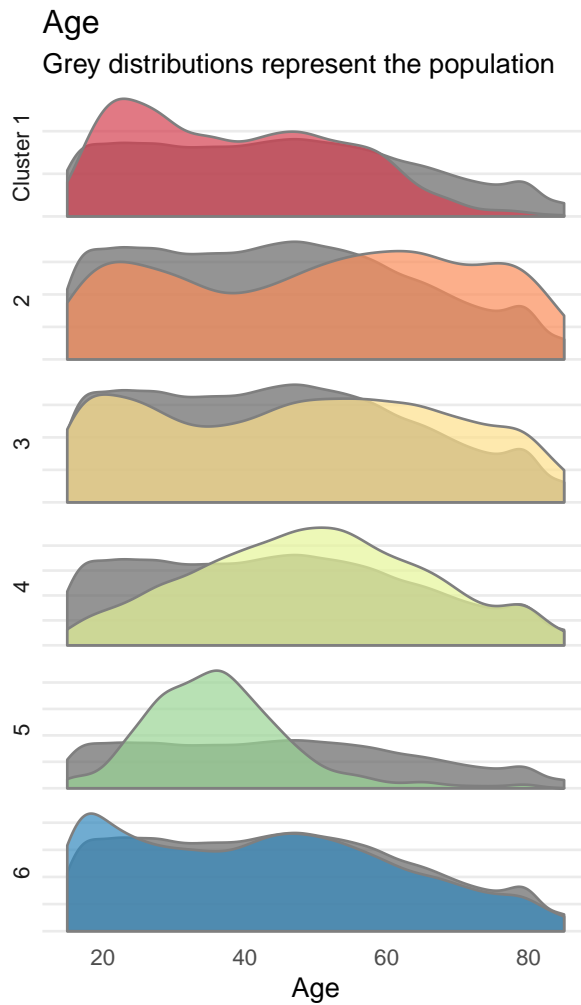


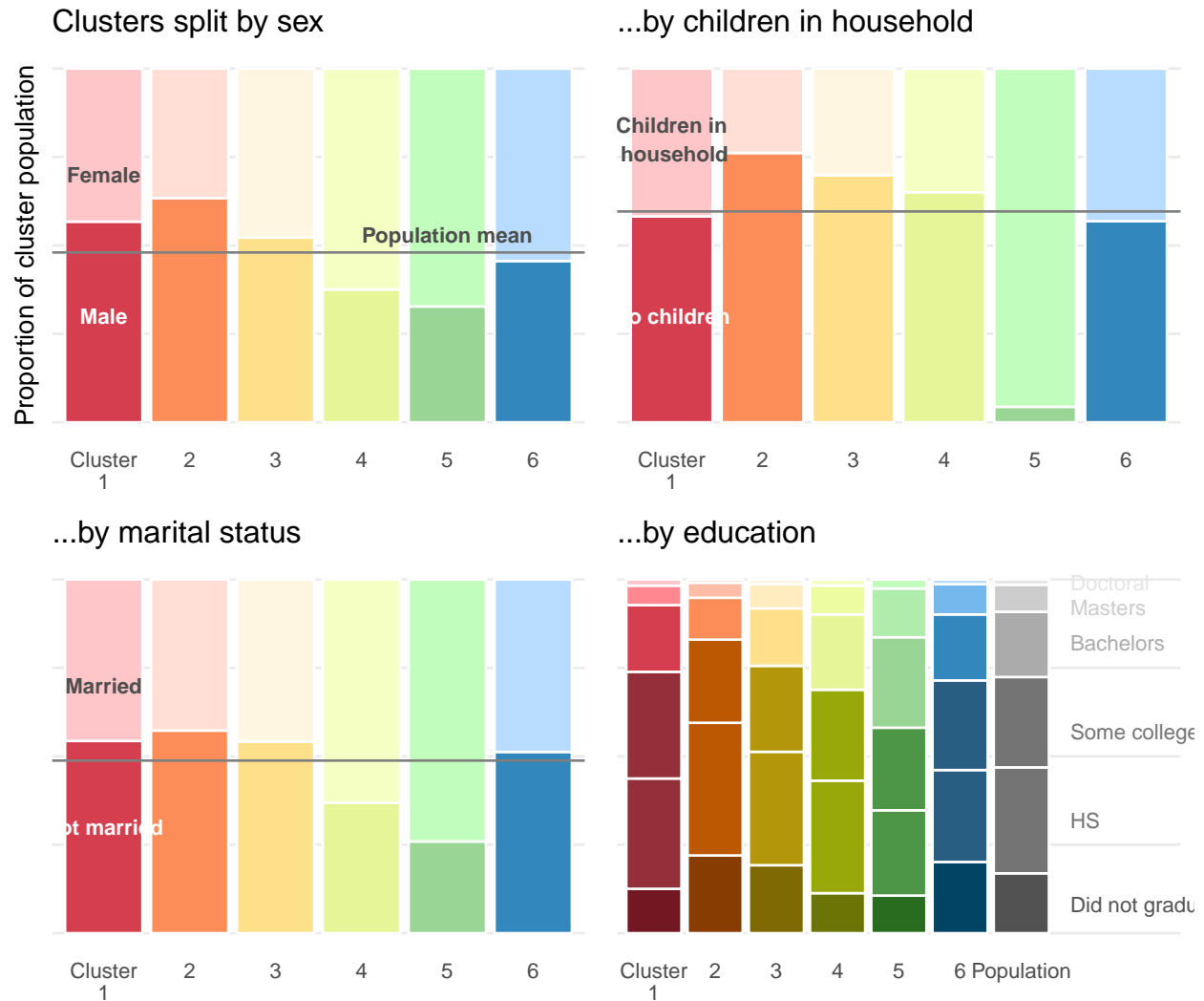
Discuss demographics

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discuss how some of the cluster difference are associated with different demographics

Age, income, married, child, educate, gender





Conclusion

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