LDT Multiple-Set Canonical Correlation Report

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# Summary of Study

This report is for the Lexical Decision (LDT) task, in which participants were presented with strings of letters and had to determine whether each string was a real word. There were 2 groups: Controls, and Bipolar Patients. There were 4 conditions: HN, EN, HW, and EW. Subjects in the Hard Non-word (HN) condition were presented with non-words that looked like real words. Subjects in the Easy Non-word (EN) condition were presented with non-words that did not look like real words. Subjects in the Hard Word (HW) condition were presented with real but obscure words. Subjects in the Easy Word (EW) condition were presented with real and common words.

# Networks

C1\_Neg\_91\_TDMN\_0.77

C2\_Pos\_86\_LPN\_1.52

C3\_Pos\_71\_1RESP\_1.14

# Variables Included in Exploratory CCA

The increase to peak (ITP) and return to baseline (RTB) values for each network were included. The behavioural variables used in the analysis are Handedness, Sex, Gender\_Identity, TestAge, Marital\_status, Times\_married, Widowed, Children, Living\_Arrangements, City\_born, Country\_born, Birth\_complications, English, Adopted, Fathers\_ethnicity, Mothers\_ethnicity, Participant\_Education, Participant\_Education\_Years, Father\_Education, Mother\_Education, Parental\_Edu\_Sum, Spouse\_Education, Participant\_WorkStatus, Father\_WorkStatus, Mother\_WorkStatus, Spouse\_WorkStatus, Working\_or\_School, Months\_Unemployed, Present\_Occupation, Responsible\_Job, HeadofHousehold\_Occupation, Annual\_Income, Medications, Hospitalized, Head\_Injury, Unconscious, Seizure\_Convulsion, Neurological\_Problems, ECT, Vision\_Difficulties, Paralysis\_Arthritis\_BackPain, Chronic\_Illnesses, Cardio\_Condition, Smoking, Area\_Residence, Religion\_Importance, Spirituality\_Importance, Religious\_Groups, VAR\_GC, EN\_RT, HN\_RT, EW\_RT, HW\_RT, AccEN, AccHN, AccEW, AccHW, SCID\_01\_Lifetime, SCID\_01\_PastMonth, SCID\_01\_PastMonth\_Specify, SCID\_02\_Lifetime, SCID\_02\_PastMonth, SCID\_02\_PastMonth\_Specify, SCID\_03\_Past2Yrs, SCID\_04\_Lifetime, SCID\_04\_PastMonth, SCID\_05\_Lifetime, SCID\_05\_PastMonth, SCID\_05\_Specify, SCID\_06\_Lifetime, SCID\_06\_PastMonth, SCID\_06\_Specify, SCID\_07\_Lifetime, SCID\_07\_PastMonth, SCID\_08\_PriorPast2Yrs, SCID\_08\_Past2Yrs, SCID\_09\_Past12Months, SCID\_10\_Lifetime, SCID\_10\_PastMonth, SCID\_11\_Lifetime, SCID\_11\_PastMonth, SCID\_11\_Specify, SCID\_12\_Lifetime, SCID\_12\_PastMonth, SCID\_12\_Specify, SCID\_13\_Lifetime, SCID\_13\_PastMonth, SCID\_14\_Lifetime, SCID\_14\_PastMonth, SCID\_15\_Lifetime, SCID\_15\_PastMonth, SCID\_16\_Lifetime, SCID\_16\_PastMonth, SCID\_17\_Lifetime, SCID\_17\_PastMonth, SCID\_18\_Lifetime, SCID\_18\_PastMonth, SCID\_18\_Specify, SCID\_19\_Lifetime, SCID\_19\_PastMonth, SCID\_19\_Specify, SCID\_20\_Lifetime, SCID\_20\_PastMonth, SCID\_21\_PriorPast12Months, SCID\_21\_Past12Months, SCID\_22\_PriorPast12Months, SCID\_22\_Past12Months, SCID\_23\_PriorPast12Months, SCID\_23\_Past12Months, SCID\_24\_PriorPast12Months, SCID\_24\_Past12Months, SCID\_25\_PriorPast12Months, SCID\_25\_Past12Months, SCID\_26\_PriorPast12Months, SCID\_26\_Past12Months, SCID\_27\_PriorPast12Months, SCID\_27\_Past12Months, SCID\_28\_PriorPast12Months, SCID\_28\_Past12Months, SCID\_29\_PriorPast12Months, SCID\_29\_Past12Months, SCID\_30\_Lifetime, SCID\_30\_PastMonth, SCID\_32\_Lifetime, SCID\_32\_Past6Months, SCID\_34\_Lifetime, SCID\_34\_Past6Months, SCID\_36\_Lifetime, SCID\_36\_PastMonth, SCID\_37\_Lifetime, SCID\_37\_PastMonth, SCID\_37\_Specify, SCID\_38\_Lifetime, SCID\_38\_PastMonth, SCID\_38\_Specify, SCID\_64\_Lifetime, SCID\_64\_PastMonth, SCID\_64\_Specify, SOFAS\_Range, SOFAS\_Score, FAST\_Autonomy\_1, FAST\_Autonomy\_2, FAST\_Autonomy\_3, FAST\_Autonomy\_4, FAST\_Occupational\_5, FAST\_Occupational\_6, FAST\_Occupational\_7, FAST\_Occupational\_8, FAST\_Occupational\_9, FAST\_Cognitive\_10, FAST\_Cognitive\_11, FAST\_Cognitive\_12, FAST\_Cognitive\_13, FAST\_Cognitive\_14, FAST\_Financial\_15, FAST\_Financial\_16, FAST\_Interpersonal\_17, FAST\_Interpersonal\_18, FAST\_Interpersonal\_19, FAST\_Interpersonal\_20, FAST\_Interpersonal\_21, FAST\_Interpersonal\_22, FAST\_Leisure\_23, FAST\_Leisure\_24, FAST\_TOTAL\_SCORE, YMRS\_1, YMRS\_2, YMRS\_3, YMRS\_4, YMRS\_5, YMRS\_6, YMRS\_7, YMRS\_8, YMRS\_9, YMRS\_10, YMRS\_11, YMRS\_TOTAL\_SCORE, HAMD\_1, HAMD\_2, HAMD\_3, HAMD\_4, HAMD\_5, HAMD\_6, HAMD\_7, HAMD\_8, HAMD\_9, HAMD\_10, HAMD\_11, HAMD\_12, HAMD\_13, HAMD\_14, HAMD\_15, HAMD\_16, HAMD\_17, HAMD\_TOTAL, and WTAR\_Standard.

# Notes

1. Correlations (r values) were all made positive to ease interpretation, and loadings were adjusted accordingly.  
 e.g. if r = -0.43 and loadings = (0.32, 0.45, -0.11), then adjusted values would be r = 0.43  
 and loadings = (-0.32, -0.45 , 0.11).  
2. Loadings were bolded (equivalently, conditions were deemed significant) according to the following formula:  
 if abs(loading) >= abs(max(all\_loadings))/2, then loading is bolded.  
In words: a loading was bolded if its magnitude was at least half as large as the loading with the largest magnitude for the given interaction.

# Summary of Results for Controls

## Summary for Each Behavioural Variable

Only variables with significant results are reported.

### For Sex:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&LPN&RESP | RESP | 8 | 0.58 | HW\_up positive, EW\_up negative, EN\_down positive, EW\_down positive |

### For Gender\_Identity:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&LPN&RESP | RESP | 8 | 0.58 | HW\_up positive, EW\_up negative, EN\_down positive, EW\_down positive |

### For TestAge:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&RESP | DMN | 3 | 0.63 | HN\_up negative, HW\_up negative, EW\_up negative, HN\_down positive, HW\_down positive |
| DMN&LPN&RESP | DMN | 5 | 0.57 | HN\_up negative, HW\_up negative, EW\_up negative, HN\_down positive |
| DMN&RESP | RESP | 3 | 0.60 | EN\_up negative, HW\_up negative |

### For Times\_married:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&RESP | DMN | 1 | 0.61 | EW\_up negative, HN\_down negative |
| DMN&RESP | RESP | 1 | 0.58 | EN\_up positive, EW\_up positive, HN\_down positive, HW\_down positive |
| DMN&LPN&RESP | RESP | 1 | 0.55 | EN\_up positive, HW\_up negative, EW\_up positive, HN\_down positive, HW\_down positive |

### For Children:

|  |  |  |  |
| --- | --- | --- | --- |
| **PCA** | | | |
| **Network** | **PC #** | **r value** | **Conditions** |
| LPN | 1 | 0.55 | EN\_up negative, EW\_up negative, EN\_down positive, EW\_down positive |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| LPN&RESP | LPN | 4 | 0.62 | HN\_up positive, EN\_up negative, EW\_up negative, HW\_down negative |
| DMN&LPN&RESP | LPN | 8 | 0.55 | EW\_up negative, EN\_down positive |

### For Living\_Arrangements:

|  |  |  |  |
| --- | --- | --- | --- |
| **PCA** | | | |
| **Network** | **PC #** | **r value** | **Conditions** |
| RESP | 1 | 0.63 | HN\_up negative, HW\_up negative, EW\_up positive, HN\_down positive, EN\_down positive, HW\_down positive |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&LPN | DMN | 4 | 0.57 | HN\_down negative, EN\_down negative, HW\_down negative |
| DMN&LPN&RESP | DMN | 1 | 0.58 | EN\_up negative, HN\_down negative, EN\_down negative |
| LPN&RESP | LPN | 4 | 0.64 | HN\_up positive, EN\_up negative, EW\_up negative, HW\_down negative |
| DMN&LPN&RESP | LPN | 1 | 0.59 | EN\_up negative, EW\_up negative, EW\_down positive |
| DMN&RESP | RESP | 1 | 0.58 | EN\_up positive, EW\_up positive, HN\_down positive, HW\_down positive |
| DMN&LPN&RESP | RESP | 1 | 0.63 | EN\_up positive, HW\_up negative, EW\_up positive, HN\_down positive, HW\_down positive |

### For Country\_born:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&LPN | LPN | 7 | 0.58 | EW\_up positive, HN\_down positive |

### For Adopted:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&LPN | DMN | 4 | 0.55 | HN\_down negative, EN\_down negative, HW\_down negative |

### For Fathers\_ethnicity:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&RESP | RESP | 8 | 0.65 | HN\_down positive, EW\_down negative |
| LPN&RESP | RESP | 3 | 0.63 | HN\_up positive, EN\_up positive, HW\_up positive, HW\_down negative, EW\_down negative |
| DMN&LPN&RESP | RESP | 7 | 0.66 | HN\_down positive, EW\_down negative |

### For Mothers\_ethnicity:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&LPN&RESP | DMN | 5 | 0.55 | HN\_up positive, HW\_up positive, EW\_up positive, HN\_down negative |

### For Participant\_Education\_Years:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| LPN&RESP | LPN | 6 | 0.60 | HN\_up negative, EN\_down positive, HW\_down positive |

### For Responsible\_Job:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&LPN | LPN | 3 | 0.62 | HN\_up positive, HW\_up positive, EN\_down positive, HW\_down positive |
| LPN&RESP | LPN | 2 | 0.57 | EN\_up positive, EW\_down negative |
| DMN&LPN&RESP | LPN | 1 | 0.60 | EN\_up positive, EW\_up positive, EW\_down negative |

### For Medications:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| LPN&RESP | LPN | 5 | 0.55 | HW\_up positive, HW\_down positive, EW\_down positive |
| DMN&LPN&RESP | RESP | 8 | 0.71 | HW\_up negative, EW\_up positive, EN\_down negative, EW\_down negative |

### For Head\_Injury:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&LPN&RESP | LPN | 1 | 0.58 | EN\_up negative, EW\_up negative, EW\_down positive |

### For Neurological\_Problems:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&LPN | DMN | 3 | 0.65 | HW\_up positive, EN\_down positive, HW\_down positive |

### For Smoking:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| LPN&RESP | LPN | 5 | 0.55 | HW\_up negative, HW\_down negative, EW\_down negative |

### For Religious\_Groups:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&LPN | LPN | 2 | 0.66 | EW\_up positive, EN\_down negative, HW\_down positive, EW\_down positive |
| LPN&RESP | LPN | 8 | 0.68 | EW\_up positive, EN\_down negative |

### For VAR\_GC:

|  |  |  |  |
| --- | --- | --- | --- |
| **PCA** | | | |
| **Network** | **PC #** | **r value** | **Conditions** |
| LPN | 1 | 0.55 | EN\_up positive, EW\_up positive, EN\_down negative, EW\_down negative |

No significant results with CCA.

### For AccEN:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&RESP | DMN | 4 | 0.59 | EW\_up negative, EN\_down negative, HW\_down negative |
| DMN&LPN | LPN | 3 | 0.61 | HN\_up positive, HW\_up positive, EN\_down positive, HW\_down positive |

### For AccHN:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| LPN&RESP | LPN | 7 | 0.57 | HN\_up positive, HW\_up positive |

### For AccHW:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&LPN | DMN | 7 | 0.56 | HW\_up negative, EW\_down negative |
| DMN&RESP | DMN | 4 | 0.58 | EW\_up negative, EN\_down negative, HW\_down negative |

### For YMRS\_6:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&LPN&RESP | RESP | 4 | 0.65 | HN\_down negative, HW\_down negative, EW\_down negative |

### For HAMD\_10:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&LPN&RESP | RESP | 4 | 0.65 | HN\_down negative, HW\_down negative, EW\_down negative |

### For HAMD\_14:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&LPN&RESP | RESP | 4 | 0.65 | HN\_down negative, HW\_down negative, EW\_down negative |

## Multiple-Set Canonical Correlation Analysis and Principal Component Analysis

### Significant Correlation with Sex

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between RESP and Sex

|  |  |  |  |
| --- | --- | --- | --- |
| CCA |  |  |  |
| Network Group | RESP & DMN & LPN | | |
| CV # | 8 |  |  |
| r | 0.58 |  |  |
| Network | RESP | DMN | LPN |
| Condition | **Loadings** | | |
| HN\_up | -0.07 | -0.29 | -0.13 |
| EN\_up | 0.12 | 0.17 | 0.13 |
| HW\_up | **0.28** | 0.25 | -0.14 |
| EW\_up | **-0.29** | **-0.56** | **0.78** |
| HN\_down | -0.10 | 0.10 | 0.18 |
| EN\_down | **0.27** | **0.49** | **-0.55** |
| HW\_down | 0.14 | **0.35** | -0.30 |
| EW\_down | **0.26** | **0.65** | -0.32 |

### Significant Correlation with Gender\_Identity

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between RESP and Gender\_Identity

|  |  |  |  |
| --- | --- | --- | --- |
| CCA |  |  |  |
| Network Group | RESP & DMN & LPN | | |
| CV # | 8 |  |  |
| r | 0.58 |  |  |
| Network | RESP | DMN | LPN |
| Condition | **Loadings** | | |
| HN\_up | -0.07 | -0.29 | -0.13 |
| EN\_up | 0.12 | 0.17 | 0.13 |
| HW\_up | **0.28** | 0.25 | -0.14 |
| EW\_up | **-0.29** | **-0.56** | **0.78** |
| HN\_down | -0.10 | 0.10 | 0.18 |
| EN\_down | **0.27** | **0.49** | **-0.55** |
| HW\_down | 0.14 | **0.35** | -0.30 |
| EW\_down | **0.26** | **0.65** | -0.32 |

### Significant Correlation with TestAge

#### C1\_Neg\_91\_TDMN\_0.77 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between DMN and TestAge

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | DMN & RESP | |
| CV # | 3 |  |
| r | 0.63 |  |
| Network | DMN | RESP |
| Condition | **Loadings** | |
| HN\_up | **0.66** | 0.16 |
| EN\_up | 0.23 | **0.48** |
| HW\_up | **0.65** | **0.38** |
| EW\_up | **0.34** | 0.23 |
| HN\_down | **-0.49** | -0.07 |
| EN\_down | -0.15 | -0.01 |
| HW\_down | **-0.48** | -0.23 |
| EW\_down | 0.05 | -0.15 |

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between DMN and TestAge

|  |  |  |  |
| --- | --- | --- | --- |
| CCA |  |  |  |
| Network Group | DMN & LPN & RESP | | |
| CV # | 5 |  |  |
| r | 0.57 |  |  |
| Network | DMN | LPN | RESP |
| Condition | **Loadings** | | |
| HN\_up | **0.60** | -0.29 | **0.31** |
| EN\_up | 0.21 | 0.02 | **0.49** |
| HW\_up | **0.81** | **-0.64** | **0.38** |
| EW\_up | **0.54** | -0.20 | 0.12 |
| HN\_down | **-0.47** | 0.21 | 0.17 |
| EN\_down | -0.26 | **0.54** | 0.05 |
| HW\_down | -0.19 | 0.08 | -0.15 |
| EW\_down | 0.24 | **-0.57** | **0.46** |

#### C1\_Neg\_91\_TDMN\_0.77 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between RESP and TestAge

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | RESP & DMN | |
| CV # | 3 |  |
| r | 0.60 |  |
| Network | RESP | DMN |
| Condition | **Loadings** | |
| HN\_up | -0.16 | **-0.66** |
| EN\_up | **-0.48** | -0.23 |
| HW\_up | **-0.38** | **-0.65** |
| EW\_up | -0.23 | **-0.34** |
| HN\_down | 0.07 | **0.49** |
| EN\_down | 0.01 | 0.15 |
| HW\_down | 0.23 | **0.48** |
| EW\_down | 0.15 | -0.05 |

### Significant Correlation with Times\_married

#### C1\_Neg\_91\_TDMN\_0.77 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between DMN and Times\_married

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | DMN & RESP | |
| CV # | 1 |  |
| r | 0.61 |  |
| Network | DMN | RESP |
| Condition | **Loadings** | |
| HN\_up | 0.25 | -0.26 |
| EN\_up | -0.24 | **0.50** |
| HW\_up | -0.13 | -0.21 |
| EW\_up | **-0.36** | **0.80** |
| HN\_down | **-0.68** | **0.53** |
| EN\_down | -0.27 | 0.33 |
| HW\_down | -0.15 | **0.85** |
| EW\_down | -0.10 | -0.08 |

#### C1\_Neg\_91\_TDMN\_0.77 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between RESP and Times\_married

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | RESP & DMN | |
| CV # | 1 |  |
| r | 0.58 |  |
| Network | RESP | DMN |
| Condition | **Loadings** | |
| HN\_up | -0.26 | 0.25 |
| EN\_up | **0.50** | -0.24 |
| HW\_up | -0.21 | -0.13 |
| EW\_up | **0.80** | **-0.36** |
| HN\_down | **0.53** | **-0.68** |
| EN\_down | 0.33 | -0.27 |
| HW\_down | **0.85** | -0.15 |
| EW\_down | -0.08 | -0.10 |

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between RESP and Times\_married

|  |  |  |  |
| --- | --- | --- | --- |
| CCA |  |  |  |
| Network Group | RESP & DMN & LPN | | |
| CV # | 1 |  |  |
| r | 0.55 |  |  |
| Network | RESP | DMN | LPN |
| Condition | **Loadings** | | |
| HN\_up | 0.35 | 0.13 | -0.25 |
| EN\_up | **-0.56** | **0.39** | **0.76** |
| HW\_up | **0.52** | 0.08 | 0.14 |
| EW\_up | **-0.60** | 0.29 | **0.54** |
| HN\_down | **-0.51** | **0.78** | -0.29 |
| EN\_down | -0.36 | **0.39** | -0.27 |
| HW\_down | **-0.88** | 0.10 | 0.36 |
| EW\_down | 0.19 | 0.28 | **-0.57** |

### Significant Correlation with Children

Significant correlation between LPN and Children

|  |  |
| --- | --- |
| PCA | |
| Network | LPN |
| PCA component | 1 |
| Correlated with | Demo |
| Condition | Children |
| r | **0.55** |
| p | 0.01 |
| HN\_up | 0.19 |
| EN\_up | **-0.72** |
| HW\_up | 0.15 |
| EW\_up | **-0.84** |
| HN\_down | 0.10 |
| EN\_down | **0.65** |
| HW\_down | 0.15 |
| EW\_down | **0.74** |

#### C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between LPN and Children

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | LPN & RESP | |
| CV # | 4 |  |
| r | 0.62 |  |
| Network | LPN | RESP |
| Condition | **Loadings** | |
| HN\_up | **-0.48** | 0.29 |
| EN\_up | **0.71** | -0.06 |
| HW\_up | 0.07 | **0.76** |
| EW\_up | **0.60** | -0.09 |
| HN\_down | 0.33 | **-0.73** |
| EN\_down | -0.20 | -0.21 |
| HW\_down | **0.37** | **-0.42** |
| EW\_down | -0.24 | -0.10 |

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between LPN and Children

|  |  |  |  |
| --- | --- | --- | --- |
| CCA |  |  |  |
| Network Group | LPN & DMN & RESP | | |
| CV # | 8 |  |  |
| r | 0.55 |  |  |
| Network | LPN | DMN | RESP |
| Condition | **Loadings** | | |
| HN\_up | -0.13 | -0.29 | -0.07 |
| EN\_up | 0.13 | 0.17 | 0.12 |
| HW\_up | -0.14 | 0.25 | **0.28** |
| EW\_up | **0.78** | **-0.56** | **-0.29** |
| HN\_down | 0.18 | 0.10 | -0.10 |
| EN\_down | **-0.55** | **0.49** | **0.27** |
| HW\_down | -0.30 | **0.35** | 0.14 |
| EW\_down | -0.32 | **0.65** | **0.26** |

### Significant Correlation with Living\_Arrangements

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52

Significant correlation between DMN and Living\_Arrangements

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | DMN & LPN | |
| CV # | 4 |  |
| r | 0.57 |  |
| Network | DMN | LPN |
| Condition | **Loadings** | |
| HN\_up | -0.39 | 0.02 |
| EN\_up | 0.22 | **0.48** |
| HW\_up | -0.16 | **0.45** |
| EW\_up | 0.17 | 0.32 |
| HN\_down | **0.91** | **-0.56** |
| EN\_down | **0.62** | **-0.65** |
| HW\_down | **0.64** | -0.19 |
| EW\_down | 0.27 | **-0.47** |

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between DMN and Living\_Arrangements

|  |  |  |  |
| --- | --- | --- | --- |
| CCA |  |  |  |
| Network Group | DMN & LPN & RESP | | |
| CV # | 1 |  |  |
| r | 0.58 |  |  |
| Network | DMN | LPN | RESP |
| Condition | **Loadings** | | |
| HN\_up | -0.13 | 0.25 | -0.35 |
| EN\_up | **-0.39** | **-0.76** | **0.56** |
| HW\_up | -0.08 | -0.14 | **-0.52** |
| EW\_up | -0.29 | **-0.54** | **0.60** |
| HN\_down | **-0.78** | 0.29 | **0.51** |
| EN\_down | **-0.39** | 0.27 | 0.36 |
| HW\_down | -0.10 | -0.36 | **0.88** |
| EW\_down | -0.28 | **0.57** | -0.19 |

#### C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between LPN and Living\_Arrangements

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | LPN & RESP | |
| CV # | 4 |  |
| r | 0.64 |  |
| Network | LPN | RESP |
| Condition | **Loadings** | |
| HN\_up | **0.48** | -0.29 |
| EN\_up | **-0.71** | 0.06 |
| HW\_up | -0.07 | **-0.76** |
| EW\_up | **-0.60** | 0.09 |
| HN\_down | -0.33 | **0.73** |
| EN\_down | 0.20 | 0.21 |
| HW\_down | **-0.37** | **0.42** |
| EW\_down | 0.24 | 0.10 |

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between LPN and Living\_Arrangements

|  |  |  |  |
| --- | --- | --- | --- |
| CCA |  |  |  |
| Network Group | LPN & DMN & RESP | | |
| CV # | 1 |  |  |
| r | 0.59 |  |  |
| Network | LPN | DMN | RESP |
| Condition | **Loadings** | | |
| HN\_up | -0.25 | 0.13 | 0.35 |
| EN\_up | **0.76** | **0.39** | **-0.56** |
| HW\_up | 0.14 | 0.08 | **0.52** |
| EW\_up | **0.54** | 0.29 | **-0.60** |
| HN\_down | -0.29 | **0.78** | **-0.51** |
| EN\_down | -0.27 | **0.39** | -0.36 |
| HW\_down | 0.36 | 0.10 | **-0.88** |
| EW\_down | **-0.57** | 0.28 | 0.19 |

Significant correlation between RESP and Living\_Arrangements

|  |  |
| --- | --- |
| PCA | |
| Network | RESP |
| PCA component | 1 |
| Correlated with | Demo |
| Condition | Living\_Arrangements |
| r | **0.63** |
| p | 0.002 |
| HN\_up | **-0.47** |
| EN\_up | 0.31 |
| HW\_up | **-0.60** |
| EW\_up | **0.50** |
| HN\_down | **0.80** |
| EN\_down | **0.55** |
| HW\_down | **0.91** |
| EW\_down | -0.02 |

#### C1\_Neg\_91\_TDMN\_0.77 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between RESP and Living\_Arrangements

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | RESP & DMN | |
| CV # | 1 |  |
| r | 0.58 |  |
| Network | RESP | DMN |
| Condition | **Loadings** | |
| HN\_up | 0.26 | -0.25 |
| EN\_up | **-0.50** | 0.24 |
| HW\_up | 0.21 | 0.13 |
| EW\_up | **-0.80** | **0.36** |
| HN\_down | **-0.53** | **0.68** |
| EN\_down | -0.33 | 0.27 |
| HW\_down | **-0.85** | 0.15 |
| EW\_down | 0.08 | 0.10 |

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between RESP and Living\_Arrangements

|  |  |  |  |
| --- | --- | --- | --- |
| CCA |  |  |  |
| Network Group | RESP & DMN & LPN | | |
| CV # | 1 |  |  |
| r | 0.63 |  |  |
| Network | RESP | DMN | LPN |
| Condition | **Loadings** | | |
| HN\_up | -0.35 | -0.13 | 0.25 |
| EN\_up | **0.56** | **-0.39** | **-0.76** |
| HW\_up | **-0.52** | -0.08 | -0.14 |
| EW\_up | **0.60** | -0.29 | **-0.54** |
| HN\_down | **0.51** | **-0.78** | 0.29 |
| EN\_down | 0.36 | **-0.39** | 0.27 |
| HW\_down | **0.88** | -0.10 | -0.36 |
| EW\_down | -0.19 | -0.28 | **0.57** |

### Significant Correlation with Country\_born

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52

Significant correlation between LPN and Country\_born

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | LPN & DMN | |
| CV # | 7 |  |
| r | 0.58 |  |
| Network | LPN | DMN |
| Condition | **Loadings** | |
| HN\_up | 0.23 | -0.03 |
| EN\_up | -0.17 | 0.02 |
| HW\_up | -0.08 | **-0.34** |
| EW\_up | **-0.28** | -0.09 |
| HN\_down | **-0.51** | 0.14 |
| EN\_down | 0.04 | -0.20 |
| HW\_down | 0.14 | -0.24 |
| EW\_down | 0.25 | **-0.52** |

### Significant Correlation with Adopted

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52

Significant correlation between DMN and Adopted

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | DMN & LPN | |
| CV # | 4 |  |
| r | 0.55 |  |
| Network | DMN | LPN |
| Condition | **Loadings** | |
| HN\_up | -0.39 | 0.02 |
| EN\_up | 0.22 | **0.48** |
| HW\_up | -0.16 | **0.45** |
| EW\_up | 0.17 | 0.32 |
| HN\_down | **0.91** | **-0.56** |
| EN\_down | **0.62** | **-0.65** |
| HW\_down | **0.64** | -0.19 |
| EW\_down | 0.27 | **-0.47** |

### Significant Correlation with Fathers\_ethnicity

#### C1\_Neg\_91\_TDMN\_0.77 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between RESP and Fathers\_ethnicity

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | RESP & DMN | |
| CV # | 8 |  |
| r | 0.65 |  |
| Network | RESP | DMN |
| Condition | **Loadings** | |
| HN\_up | 0.02 | -0.17 |
| EN\_up | -0.04 | 0.26 |
| HW\_up | -0.25 | 0.35 |
| EW\_up | -0.07 | **-0.61** |
| HN\_down | **0.53** | 0.12 |
| EN\_down | 0.16 | **0.56** |
| HW\_down | -0.19 | 0.33 |
| EW\_down | **-0.38** | **0.73** |

#### C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between RESP and Fathers\_ethnicity

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | RESP & LPN | |
| CV # | 3 |  |
| r | 0.63 |  |
| Network | RESP | LPN |
| Condition | **Loadings** | |
| HN\_up | **-0.44** | **0.49** |
| EN\_up | **-0.37** | **0.41** |
| HW\_up | **-0.23** | -0.08 |
| EW\_up | 0.18 | 0.22 |
| HN\_down | -0.15 | **0.68** |
| EN\_down | -0.16 | 0.29 |
| HW\_down | **0.28** | 0.04 |
| EW\_down | **0.32** | 0.09 |

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between RESP and Fathers\_ethnicity

|  |  |  |  |
| --- | --- | --- | --- |
| CCA |  |  |  |
| Network Group | RESP & DMN & LPN | | |
| CV # | 7 |  |  |
| r | 0.66 |  |  |
| Network | RESP | DMN | LPN |
| Condition | **Loadings** | | |
| HN\_up | -0.18 | -0.07 | -0.31 |
| EN\_up | 0.03 | **-0.47** | **-0.48** |
| HW\_up | -0.30 | **0.36** | -0.18 |
| EW\_up | -0.27 | **-0.51** | -0.06 |
| HN\_down | **0.61** | **-0.27** | **-0.75** |
| EN\_down | 0.22 | 0.26 | -0.18 |
| HW\_down | -0.13 | -0.16 | 0.12 |
| EW\_down | **-0.38** | **0.53** | 0.04 |

### Significant Correlation with Mothers\_ethnicity

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between DMN and Mothers\_ethnicity

|  |  |  |  |
| --- | --- | --- | --- |
| CCA |  |  |  |
| Network Group | DMN & LPN & RESP | | |
| CV # | 5 |  |  |
| r | 0.55 |  |  |
| Network | DMN | LPN | RESP |
| Condition | **Loadings** | | |
| HN\_up | **0.60** | -0.29 | **0.31** |
| EN\_up | 0.21 | 0.02 | **0.49** |
| HW\_up | **0.81** | **-0.64** | **0.38** |
| EW\_up | **0.54** | -0.20 | 0.12 |
| HN\_down | **-0.47** | 0.21 | 0.17 |
| EN\_down | -0.26 | **0.54** | 0.05 |
| HW\_down | -0.19 | 0.08 | -0.15 |
| EW\_down | 0.24 | **-0.57** | **0.46** |

### Significant Correlation with Participant\_Education\_Years

#### C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between LPN and Participant\_Education\_Years

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | LPN & RESP | |
| CV # | 6 |  |
| r | 0.60 |  |
| Network | LPN | RESP |
| Condition | **Loadings** | |
| HN\_up | **0.43** | **0.19** |
| EN\_up | 0.23 | **-0.18** |
| HW\_up | 0.22 | 0.04 |
| EW\_up | -0.12 | **0.24** |
| HN\_down | -0.16 | -0.02 |
| EN\_down | **-0.39** | 0.06 |
| HW\_down | **-0.68** | **0.29** |
| EW\_down | -0.12 | **0.17** |

### Significant Correlation with Responsible\_Job

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52

Significant correlation between LPN and Responsible\_Job

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | LPN & DMN | |
| CV # | 3 |  |
| r | 0.62 |  |
| Network | LPN | DMN |
| Condition | **Loadings** | |
| HN\_up | **0.29** | -0.15 |
| EN\_up | 0.20 | -0.11 |
| HW\_up | **0.48** | **-0.36** |
| EW\_up | **0.24** | 0.08 |
| HN\_down | -0.04 | 0.20 |
| EN\_down | **0.40** | **-0.53** |
| HW\_down | **0.39** | **-0.38** |
| EW\_down | 0.02 | -0.13 |

#### C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between LPN and Responsible\_Job

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | LPN & RESP | |
| CV # | 2 |  |
| r | 0.57 |  |
| Network | LPN | RESP |
| Condition | **Loadings** | |
| HN\_up | 0.03 | **0.52** |
| EN\_up | **0.40** | -0.24 |
| HW\_up | 0.11 | **0.34** |
| EW\_up | 0.13 | **-0.48** |
| HN\_down | -0.18 | **-0.36** |
| EN\_down | -0.20 | **-0.31** |
| HW\_down | -0.08 | **-0.59** |
| EW\_down | **-0.63** | **0.59** |

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between LPN and Responsible\_Job

|  |  |  |  |
| --- | --- | --- | --- |
| CCA |  |  |  |
| Network Group | LPN & DMN & RESP | | |
| CV # | 1 |  |  |
| r | 0.60 |  |  |
| Network | LPN | DMN | RESP |
| Condition | **Loadings** | | |
| HN\_up | -0.25 | 0.13 | 0.35 |
| EN\_up | **0.76** | **0.39** | **-0.56** |
| HW\_up | 0.14 | 0.08 | **0.52** |
| EW\_up | **0.54** | 0.29 | **-0.60** |
| HN\_down | -0.29 | **0.78** | **-0.51** |
| EN\_down | -0.27 | **0.39** | -0.36 |
| HW\_down | 0.36 | 0.10 | **-0.88** |
| EW\_down | **-0.57** | 0.28 | 0.19 |

### Significant Correlation with Medications

#### C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between LPN and Medications

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | LPN & RESP | |
| CV # | 5 |  |
| r | 0.55 |  |
| Network | LPN | RESP |
| Condition | **Loadings** | |
| HN\_up | 0.08 | 0.07 |
| EN\_up | 0.06 | **-0.31** |
| HW\_up | **0.55** | -0.17 |
| EW\_up | -0.26 | -0.15 |
| HN\_down | -0.15 | **-0.33** |
| EN\_down | 0.03 | **-0.27** |
| HW\_down | **0.52** | **-0.42** |
| EW\_down | **0.58** | **-0.50** |

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between RESP and Medications

|  |  |  |  |
| --- | --- | --- | --- |
| CCA |  |  |  |
| Network Group | RESP & DMN & LPN | | |
| CV # | 8 |  |  |
| r | 0.71 |  |  |
| Network | RESP | DMN | LPN |
| Condition | **Loadings** | | |
| HN\_up | -0.07 | -0.29 | -0.13 |
| EN\_up | 0.12 | 0.17 | 0.13 |
| HW\_up | **0.28** | 0.25 | -0.14 |
| EW\_up | **-0.29** | **-0.56** | **0.78** |
| HN\_down | -0.10 | 0.10 | 0.18 |
| EN\_down | **0.27** | **0.49** | **-0.55** |
| HW\_down | 0.14 | **0.35** | -0.30 |
| EW\_down | **0.26** | **0.65** | -0.32 |

### Significant Correlation with Head\_Injury

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between LPN and Head\_Injury

|  |  |  |  |
| --- | --- | --- | --- |
| CCA |  |  |  |
| Network Group | LPN & DMN & RESP | | |
| CV # | 1 |  |  |
| r | 0.58 |  |  |
| Network | LPN | DMN | RESP |
| Condition | **Loadings** | | |
| HN\_up | 0.25 | -0.13 | -0.35 |
| EN\_up | **-0.76** | **-0.39** | **0.56** |
| HW\_up | -0.14 | -0.08 | **-0.52** |
| EW\_up | **-0.54** | -0.29 | **0.60** |
| HN\_down | 0.29 | **-0.78** | **0.51** |
| EN\_down | 0.27 | **-0.39** | 0.36 |
| HW\_down | -0.36 | -0.10 | **0.88** |
| EW\_down | **0.57** | -0.28 | -0.19 |

### Significant Correlation with Neurological\_Problems

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52

Significant correlation between DMN and Neurological\_Problems

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | DMN & LPN | |
| CV # | 3 |  |
| r | 0.65 |  |
| Network | DMN | LPN |
| Condition | **Loadings** | |
| HN\_up | -0.15 | **0.29** |
| EN\_up | -0.11 | 0.20 |
| HW\_up | **-0.36** | **0.48** |
| EW\_up | 0.08 | **0.24** |
| HN\_down | 0.20 | -0.04 |
| EN\_down | **-0.53** | **0.40** |
| HW\_down | **-0.38** | **0.39** |
| EW\_down | -0.13 | 0.02 |

### Significant Correlation with Smoking

#### C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between LPN and Smoking

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | LPN & RESP | |
| CV # | 5 |  |
| r | 0.55 |  |
| Network | LPN | RESP |
| Condition | **Loadings** | |
| HN\_up | 0.08 | 0.07 |
| EN\_up | 0.06 | **-0.31** |
| HW\_up | **0.55** | -0.17 |
| EW\_up | -0.26 | -0.15 |
| HN\_down | -0.15 | **-0.33** |
| EN\_down | 0.03 | **-0.27** |
| HW\_down | **0.52** | **-0.42** |
| EW\_down | **0.58** | **-0.50** |

### Significant Correlation with Religious\_Groups

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52

Significant correlation between LPN and Religious\_Groups

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | LPN & DMN | |
| CV # | 2 |  |
| r | 0.66 |  |
| Network | LPN | DMN |
| Condition | **Loadings** | |
| HN\_up | -0.19 | **-0.41** |
| EN\_up | -0.14 | -0.08 |
| HW\_up | 0.20 | **-0.29** |
| EW\_up | **0.38** | **-0.53** |
| HN\_down | 0.14 | 0.15 |
| EN\_down | **-0.51** | **0.35** |
| HW\_down | **0.30** | -0.08 |
| EW\_down | **0.57** | -0.18 |

#### C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between LPN and Religious\_Groups

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | LPN & RESP | |
| CV # | 8 |  |
| r | 0.68 |  |
| Network | LPN | RESP |
| Condition | **Loadings** | |
| HN\_up | -0.09 | **-0.60** |
| EN\_up | -0.05 | **-0.38** |
| HW\_up | -0.02 | **-0.44** |
| EW\_up | **0.57** | **-0.47** |
| HN\_down | -0.08 | -0.22 |
| EN\_down | **-0.82** | **-0.42** |
| HW\_down | -0.12 | -0.08 |
| EW\_down | 0.15 | **-0.43** |

### Significant Correlation with VAR\_GC

Significant correlation between LPN and VAR\_GC

|  |  |
| --- | --- |
| PCA | |
| Network | LPN |
| PCA component | 1 |
| Correlated with | Demo |
| Condition | VAR\_GC |
| r | **0.55** |
| p | 0.01 |
| HN\_up | -0.19 |
| EN\_up | **0.72** |
| HW\_up | -0.15 |
| EW\_up | **0.84** |
| HN\_down | -0.10 |
| EN\_down | **-0.65** |
| HW\_down | -0.15 |
| EW\_down | **-0.74** |

### Significant Correlation with AccEN

#### C1\_Neg\_91\_TDMN\_0.77 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between DMN and AccEN

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | DMN & RESP | |
| CV # | 4 |  |
| r | 0.59 |  |
| Network | DMN | RESP |
| Condition | **Loadings** | |
| HN\_up | 0.13 | **-0.51** |
| EN\_up | 0.01 | **-0.68** |
| HW\_up | -0.25 | -0.28 |
| EW\_up | **-0.35** | -0.10 |
| HN\_down | -0.00 | -0.00 |
| EN\_down | **-0.44** | 0.12 |
| HW\_down | **-0.60** | 0.11 |
| EW\_down | -0.14 | -0.02 |

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52

Significant correlation between LPN and AccEN

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | LPN & DMN | |
| CV # | 3 |  |
| r | 0.61 |  |
| Network | LPN | DMN |
| Condition | **Loadings** | |
| HN\_up | **0.29** | -0.15 |
| EN\_up | 0.20 | -0.11 |
| HW\_up | **0.48** | **-0.36** |
| EW\_up | **0.24** | 0.08 |
| HN\_down | -0.04 | 0.20 |
| EN\_down | **0.40** | **-0.53** |
| HW\_down | **0.39** | **-0.38** |
| EW\_down | 0.02 | -0.13 |

### Significant Correlation with AccHN

#### C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between LPN and AccHN

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | LPN & RESP | |
| CV # | 7 |  |
| r | 0.57 |  |
| Network | LPN | RESP |
| Condition | **Loadings** | |
| HN\_up | **-0.55** | 0.09 |
| EN\_up | 0.11 | **0.42** |
| HW\_up | **-0.78** | 0.16 |
| EW\_up | -0.18 | **0.57** |
| HN\_down | 0.22 | -0.05 |
| EN\_down | 0.03 | **-0.76** |
| HW\_down | 0.32 | -0.21 |
| EW\_down | -0.08 | -0.21 |

### Significant Correlation with AccHW

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52

Significant correlation between DMN and AccHW

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | DMN & LPN | |
| CV # | 7 |  |
| r | 0.56 |  |
| Network | DMN | LPN |
| Condition | **Loadings** | |
| HN\_up | -0.03 | 0.23 |
| EN\_up | 0.02 | -0.17 |
| HW\_up | **-0.34** | -0.08 |
| EW\_up | -0.09 | **-0.28** |
| HN\_down | 0.14 | **-0.51** |
| EN\_down | -0.20 | 0.04 |
| HW\_down | -0.24 | 0.14 |
| EW\_down | **-0.52** | 0.25 |

#### C1\_Neg\_91\_TDMN\_0.77 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between DMN and AccHW

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | DMN & RESP | |
| CV # | 4 |  |
| r | 0.58 |  |
| Network | DMN | RESP |
| Condition | **Loadings** | |
| HN\_up | 0.13 | **-0.51** |
| EN\_up | 0.01 | **-0.68** |
| HW\_up | -0.25 | -0.28 |
| EW\_up | **-0.35** | -0.10 |
| HN\_down | -0.00 | -0.00 |
| EN\_down | **-0.44** | 0.12 |
| HW\_down | **-0.60** | 0.11 |
| EW\_down | -0.14 | -0.02 |

### Significant Correlation with YMRS\_6

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between RESP and YMRS\_6

|  |  |  |  |
| --- | --- | --- | --- |
| CCA |  |  |  |
| Network Group | RESP & DMN & LPN | | |
| CV # | 4 |  |  |
| r | 0.65 |  |  |
| Network | RESP | DMN | LPN |
| Condition | **Loadings** | | |
| HN\_up | -0.04 | -0.05 | **-0.43** |
| EN\_up | 0.20 | **-0.28** | -0.17 |
| HW\_up | -0.03 | 0.03 | 0.17 |
| EW\_up | -0.20 | 0.02 | -0.06 |
| HN\_down | **-0.47** | -0.17 | **0.39** |
| EN\_down | -0.20 | -0.12 | 0.16 |
| HW\_down | **-0.29** | **-0.53** | **0.72** |
| EW\_down | **-0.50** | **-0.27** | **0.57** |

### Significant Correlation with HAMD\_10

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between RESP and HAMD\_10

|  |  |  |  |
| --- | --- | --- | --- |
| CCA |  |  |  |
| Network Group | RESP & DMN & LPN | | |
| CV # | 4 |  |  |
| r | 0.65 |  |  |
| Network | RESP | DMN | LPN |
| Condition | **Loadings** | | |
| HN\_up | -0.04 | -0.05 | **-0.43** |
| EN\_up | 0.20 | **-0.28** | -0.17 |
| HW\_up | -0.03 | 0.03 | 0.17 |
| EW\_up | -0.20 | 0.02 | -0.06 |
| HN\_down | **-0.47** | -0.17 | **0.39** |
| EN\_down | -0.20 | -0.12 | 0.16 |
| HW\_down | **-0.29** | **-0.53** | **0.72** |
| EW\_down | **-0.50** | **-0.27** | **0.57** |

### Significant Correlation with HAMD\_14

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between RESP and HAMD\_14

|  |  |  |  |
| --- | --- | --- | --- |
| CCA |  |  |  |
| Network Group | RESP & DMN & LPN | | |
| CV # | 4 |  |  |
| r | 0.65 |  |  |
| Network | RESP | DMN | LPN |
| Condition | **Loadings** | | |
| HN\_up | -0.04 | -0.05 | **-0.43** |
| EN\_up | 0.20 | **-0.28** | -0.17 |
| HW\_up | -0.03 | 0.03 | 0.17 |
| EW\_up | -0.20 | 0.02 | -0.06 |
| HN\_down | **-0.47** | -0.17 | **0.39** |
| EN\_down | -0.20 | -0.12 | 0.16 |
| HW\_down | **-0.29** | **-0.53** | **0.72** |
| EW\_down | **-0.50** | **-0.27** | **0.57** |

# Summary of Results for Bipolar Patients

## Summary for Each Behavioural Variable

Only variables with significant results are reported.

### For Handedness:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&RESP | DMN | 7 | 0.51 | HN\_up positive, HW\_up positive, EW\_up positive |

### For Sex:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&LPN | DMN | 4 | 0.58 | HN\_up positive, EN\_up negative, HW\_up negative, EW\_up negative, EN\_down positive |
| DMN&LPN&RESP | DMN | 5 | 0.58 | HW\_up negative, EW\_up negative, HN\_down positive, EN\_down positive, EW\_down positive |

### For Times\_married:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| LPN&RESP | RESP | 7 | 0.56 | HN\_up negative, EN\_up negative, HW\_up negative, EW\_up negative, HN\_down positive, EN\_down positive |

### For Children:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&RESP | RESP | 2 | 0.54 | EN\_up positive, EW\_up positive, EN\_down negative |
| LPN&RESP | RESP | 2 | 0.51 | EN\_up positive, EW\_up positive, HN\_down positive, HW\_down positive |
| DMN&LPN&RESP | RESP | 1 | 0.60 | EN\_up positive, EW\_up positive |

### For Birth\_complications:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&LPN&RESP | LPN | 3 | 0.52 | HW\_up positive, EW\_up negative, EN\_down positive, HW\_down positive, EW\_down positive |

### For Adopted:

|  |  |  |  |
| --- | --- | --- | --- |
| **PCA** | | | |
| **Network** | **PC #** | **r value** | **Conditions** |
| RESP | 2 | 0.52 | EN\_up negative, EW\_up negative |

No significant results with CCA.

### For Medications:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&RESP | DMN | 3 | 0.52 | HN\_up positive, HW\_up positive, HN\_down positive |

### For Hospitalized:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&LPN&RESP | RESP | 7 | 0.53 | HN\_up negative, HN\_down negative, EN\_down negative, HW\_down negative |

### For Head\_Injury:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&LPN | DMN | 2 | 0.52 | EN\_up negative, HN\_down negative, EN\_down negative |

### For Unconscious:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&LPN | DMN | 2 | 0.57 | EN\_up negative, HN\_down negative, EN\_down negative |

### For Seizure\_Convulsion:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&RESP | DMN | 3 | 0.52 | HN\_up positive, HW\_up positive, HN\_down positive |

### For Neurological\_Problems:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&RESP | DMN | 7 | 0.51 | HN\_up negative, HW\_up negative, EW\_up negative |

### For Paralysis\_Arthritis\_BackPain:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&LPN&RESP | RESP | 1 | 0.52 | EN\_up negative, EW\_up negative |

### For Smoking:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&RESP | DMN | 2 | 0.56 | HN\_up positive, EW\_up positive, EN\_down negative, HW\_down negative, EW\_down negative |
| DMN&LPN&RESP | DMN | 1 | 0.51 | HN\_up positive, EN\_up positive, HN\_down positive, HW\_down negative, EW\_down negative |

### For Spirituality\_Importance:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&LPN&RESP | LPN | 8 | 0.57 | HW\_up positive, HN\_down positive, EN\_down positive, HW\_down positive, EW\_down positive |

### For EN\_RT:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&RESP | RESP | 5 | 0.51 | EN\_up positive, HW\_up negative, HN\_down positive, HW\_down positive |

### For EW\_RT:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| LPN&RESP | RESP | 5 | 0.58 | HN\_down positive, EN\_down positive, HW\_down positive |

### For HW\_RT:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| LPN&RESP | RESP | 5 | 0.54 | HN\_down positive, EN\_down positive, HW\_down positive |

### For AccHW:

No significant results with PCA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCA** | | | | |
| **Network Group** | **Network** | **CV #** | **r value** | **Conditions** |
| DMN&LPN | DMN | 7 | 0.53 | EN\_up positive, EW\_up positive, HN\_down positive, EN\_down positive, HW\_down positive |

## Multiple-Set Canonical Correlation Analysis and Principal Component Analysis

### Significant Correlation with Handedness

#### C1\_Neg\_91\_TDMN\_0.77 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between DMN and Handedness

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | DMN & RESP | |
| CV # | 7 |  |
| r | 0.51 |  |
| Network | DMN | RESP |
| Condition | **Loadings** | |
| HN\_up | **0.39** | **-0.31** |
| EN\_up | 0.01 | **0.28** |
| HW\_up | **0.41** | -0.13 |
| EW\_up | **0.75** | 0.15 |
| HN\_down | -0.10 | -0.16 |
| EN\_down | 0.01 | **-0.54** |
| HW\_down | 0.07 | **-0.29** |
| EW\_down | -0.22 | -0.09 |

### Significant Correlation with Sex

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52

Significant correlation between DMN and Sex

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | DMN & LPN | |
| CV # | 4 |  |
| r | 0.58 |  |
| Network | DMN | LPN |
| Condition | **Loadings** | |
| HN\_up | **0.43** | **-0.25** |
| EN\_up | **-0.43** | **0.37** |
| HW\_up | **-0.31** | **0.45** |
| EW\_up | **-0.43** | **0.35** |
| HN\_down | 0.08 | **-0.28** |
| EN\_down | **0.30** | **-0.29** |
| HW\_down | -0.19 | 0.03 |
| EW\_down | 0.14 | **-0.39** |

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between DMN and Sex

|  |  |  |  |
| --- | --- | --- | --- |
| CCA |  |  |  |
| Network Group | DMN & LPN & RESP | | |
| CV # | 5 |  |  |
| r | 0.58 |  |  |
| Network | DMN | LPN | RESP |
| Condition | **Loadings** | | |
| HN\_up | 0.16 | **-0.69** | **0.23** |
| EN\_up | -0.13 | 0.13 | **0.21** |
| HW\_up | **-0.41** | -0.09 | 0.13 |
| EW\_up | **-0.37** | **0.36** | 0.16 |
| HN\_down | **0.36** | -0.07 | **-0.37** |
| EN\_down | **0.50** | **-0.35** | -0.00 |
| HW\_down | 0.09 | 0.09 | 0.04 |
| EW\_down | **0.43** | **-0.41** | **-0.24** |

### Significant Correlation with Times\_married

#### C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between RESP and Times\_married

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | RESP & LPN | |
| CV # | 7 |  |
| r | 0.56 |  |
| Network | RESP | LPN |
| Condition | **Loadings** | |
| HN\_up | **0.26** | **-0.42** |
| EN\_up | **0.44** | **-0.28** |
| HW\_up | **0.26** | -0.04 |
| EW\_up | **0.27** | 0.08 |
| HN\_down | **-0.44** | -0.06 |
| EN\_down | **-0.35** | -0.05 |
| HW\_down | -0.08 | **0.30** |
| EW\_down | 0.00 | **-0.27** |

### Significant Correlation with Children

#### C1\_Neg\_91\_TDMN\_0.77 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between RESP and Children

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | RESP & DMN | |
| CV # | 2 |  |
| r | 0.54 |  |
| Network | RESP | DMN |
| Condition | **Loadings** | |
| HN\_up | -0.14 | **0.51** |
| EN\_up | **-0.40** | 0.22 |
| HW\_up | 0.19 | -0.20 |
| EW\_up | **-0.60** | **0.38** |
| HN\_down | -0.25 | 0.17 |
| EN\_down | **0.41** | **-0.39** |
| HW\_down | -0.09 | **-0.59** |
| EW\_down | -0.24 | **-0.35** |

#### C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between RESP and Children

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | RESP & LPN | |
| CV # | 2 |  |
| r | 0.51 |  |
| Network | RESP | LPN |
| Condition | **Loadings** | |
| HN\_up | -0.04 | **0.51** |
| EN\_up | **0.53** | **-0.39** |
| HW\_up | -0.13 | 0.34 |
| EW\_up | **0.68** | -0.31 |
| HN\_down | **0.52** | -0.35 |
| EN\_down | 0.13 | **-0.40** |
| HW\_down | **0.61** | **-0.72** |
| EW\_down | 0.30 | -0.31 |

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between RESP and Children

|  |  |  |  |
| --- | --- | --- | --- |
| CCA |  |  |  |
| Network Group | RESP & DMN & LPN | | |
| CV # | 1 |  |  |
| r | 0.60 |  |  |
| Network | RESP | DMN | LPN |
| Condition | **Loadings** | | |
| HN\_up | -0.37 | **0.71** | -0.08 |
| EN\_up | **-0.65** | **0.46** | **0.46** |
| HW\_up | -0.20 | 0.16 | 0.08 |
| EW\_up | **-0.85** | 0.22 | **0.39** |
| HN\_down | -0.16 | **0.40** | -0.06 |
| EN\_down | 0.35 | -0.09 | -0.01 |
| HW\_down | 0.02 | **-0.56** | **0.57** |
| EW\_down | 0.16 | **-0.36** | **0.36** |

### Significant Correlation with Birth\_complications

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between LPN and Birth\_complications

|  |  |  |  |
| --- | --- | --- | --- |
| CCA |  |  |  |
| Network Group | LPN & DMN & RESP | | |
| CV # | 3 |  |  |
| r | 0.52 |  |  |
| Network | LPN | DMN | RESP |
| Condition | **Loadings** | | |
| HN\_up | -0.17 | 0.01 | -0.13 |
| EN\_up | 0.17 | **-0.36** | 0.09 |
| HW\_up | **0.25** | -0.12 | -0.18 |
| EW\_up | **-0.37** | **0.54** | 0.04 |
| HN\_down | -0.18 | 0.00 | -0.02 |
| EN\_down | **0.43** | **-0.56** | 0.02 |
| HW\_down | **0.23** | 0.01 | **-0.49** |
| EW\_down | **0.25** | 0.11 | **-0.93** |

### Significant Correlation with Adopted

Significant correlation between RESP and Adopted

|  |  |
| --- | --- |
| PCA | |
| Network | RESP |
| PCA component | 2 |
| Correlated with | Demo |
| Condition | Adopted |
| r | **0.52** |
| p | 0.01 |
| HN\_up | -0.19 |
| EN\_up | **-0.97** |
| HW\_up | -0.25 |
| EW\_up | **-0.96** |
| HN\_down | -0.11 |
| EN\_down | 0.36 |
| HW\_down | -0.14 |
| EW\_down | 0.42 |

### Significant Correlation with Medications

#### C1\_Neg\_91\_TDMN\_0.77 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between DMN and Medications

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | DMN & RESP | |
| CV # | 3 |  |
| r | 0.52 |  |
| Network | DMN | RESP |
| Condition | **Loadings** | |
| HN\_up | **0.46** | **-0.51** |
| EN\_up | 0.22 | **-0.55** |
| HW\_up | **0.45** | **-0.78** |
| EW\_up | -0.03 | **-0.56** |
| HN\_down | **0.27** | 0.21 |
| EN\_down | -0.01 | 0.21 |
| HW\_down | -0.06 | 0.01 |
| EW\_down | -0.03 | 0.28 |

### Significant Correlation with Hospitalized

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between RESP and Hospitalized

|  |  |  |  |
| --- | --- | --- | --- |
| CCA |  |  |  |
| Network Group | RESP & DMN & LPN | | |
| CV # | 7 |  |  |
| r | 0.53 |  |  |
| Network | RESP | DMN | LPN |
| Condition | **Loadings** | | |
| HN\_up | **0.45** | **-0.46** | -0.15 |
| EN\_up | -0.06 | **0.40** | -0.04 |
| HW\_up | 0.22 | 0.20 | -0.14 |
| EW\_up | 0.03 | -0.17 | -0.01 |
| HN\_down | **0.52** | **0.43** | **-0.42** |
| EN\_down | **0.83** | -0.03 | **-0.73** |
| HW\_down | **0.42** | 0.06 | **-0.58** |
| EW\_down | 0.14 | -0.15 | -0.18 |

### Significant Correlation with Head\_Injury

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52

Significant correlation between DMN and Head\_Injury

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | DMN & LPN | |
| CV # | 2 |  |
| r | 0.52 |  |
| Network | DMN | LPN |
| Condition | **Loadings** | |
| HN\_up | -0.25 | **0.27** |
| EN\_up | **-0.68** | 0.18 |
| HW\_up | -0.25 | **0.44** |
| EW\_up | 0.29 | **-0.49** |
| HN\_down | **-0.39** | -0.02 |
| EN\_down | **-0.59** | **0.34** |
| HW\_down | 0.03 | -0.19 |
| EW\_down | -0.31 | 0.13 |

### Significant Correlation with Unconscious

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52

Significant correlation between DMN and Unconscious

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | DMN & LPN | |
| CV # | 2 |  |
| r | 0.57 |  |
| Network | DMN | LPN |
| Condition | **Loadings** | |
| HN\_up | -0.25 | **0.27** |
| EN\_up | **-0.68** | 0.18 |
| HW\_up | -0.25 | **0.44** |
| EW\_up | 0.29 | **-0.49** |
| HN\_down | **-0.39** | -0.02 |
| EN\_down | **-0.59** | **0.34** |
| HW\_down | 0.03 | -0.19 |
| EW\_down | -0.31 | 0.13 |

### Significant Correlation with Seizure\_Convulsion

#### C1\_Neg\_91\_TDMN\_0.77 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between DMN and Seizure\_Convulsion

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | DMN & RESP | |
| CV # | 3 |  |
| r | 0.52 |  |
| Network | DMN | RESP |
| Condition | **Loadings** | |
| HN\_up | **0.46** | **-0.51** |
| EN\_up | 0.22 | **-0.55** |
| HW\_up | **0.45** | **-0.78** |
| EW\_up | -0.03 | **-0.56** |
| HN\_down | **0.27** | 0.21 |
| EN\_down | -0.01 | 0.21 |
| HW\_down | -0.06 | 0.01 |
| EW\_down | -0.03 | 0.28 |

### Significant Correlation with Neurological\_Problems

#### C1\_Neg\_91\_TDMN\_0.77 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between DMN and Neurological\_Problems

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | DMN & RESP | |
| CV # | 7 |  |
| r | 0.51 |  |
| Network | DMN | RESP |
| Condition | **Loadings** | |
| HN\_up | **0.39** | **-0.31** |
| EN\_up | 0.01 | **0.28** |
| HW\_up | **0.41** | -0.13 |
| EW\_up | **0.75** | 0.15 |
| HN\_down | -0.10 | -0.16 |
| EN\_down | 0.01 | **-0.54** |
| HW\_down | 0.07 | **-0.29** |
| EW\_down | -0.22 | -0.09 |

### Significant Correlation with Paralysis\_Arthritis\_BackPain

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between RESP and Paralysis\_Arthritis\_BackPain

|  |  |  |  |
| --- | --- | --- | --- |
| CCA |  |  |  |
| Network Group | RESP & DMN & LPN | | |
| CV # | 1 |  |  |
| r | 0.52 |  |  |
| Network | RESP | DMN | LPN |
| Condition | **Loadings** | | |
| HN\_up | -0.37 | **0.71** | -0.08 |
| EN\_up | **-0.65** | **0.46** | **0.46** |
| HW\_up | -0.20 | 0.16 | 0.08 |
| EW\_up | **-0.85** | 0.22 | **0.39** |
| HN\_down | -0.16 | **0.40** | -0.06 |
| EN\_down | 0.35 | -0.09 | -0.01 |
| HW\_down | 0.02 | **-0.56** | **0.57** |
| EW\_down | 0.16 | **-0.36** | **0.36** |

### Significant Correlation with Smoking

#### C1\_Neg\_91\_TDMN\_0.77 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between DMN and Smoking

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | DMN & RESP | |
| CV # | 2 |  |
| r | 0.56 |  |
| Network | DMN | RESP |
| Condition | **Loadings** | |
| HN\_up | **0.51** | -0.14 |
| EN\_up | 0.22 | **-0.40** |
| HW\_up | -0.20 | 0.19 |
| EW\_up | **0.38** | **-0.60** |
| HN\_down | 0.17 | -0.25 |
| EN\_down | **-0.39** | **0.41** |
| HW\_down | **-0.59** | -0.09 |
| EW\_down | **-0.35** | -0.24 |

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between DMN and Smoking

|  |  |  |  |
| --- | --- | --- | --- |
| CCA |  |  |  |
| Network Group | DMN & LPN & RESP | | |
| CV # | 1 |  |  |
| r | 0.51 |  |  |
| Network | DMN | LPN | RESP |
| Condition | **Loadings** | | |
| HN\_up | **0.71** | -0.08 | -0.37 |
| EN\_up | **0.46** | **0.46** | **-0.65** |
| HW\_up | 0.16 | 0.08 | -0.20 |
| EW\_up | 0.22 | **0.39** | **-0.85** |
| HN\_down | **0.40** | -0.06 | -0.16 |
| EN\_down | -0.09 | -0.01 | 0.35 |
| HW\_down | **-0.56** | **0.57** | 0.02 |
| EW\_down | **-0.36** | **0.36** | 0.16 |

### Significant Correlation with Spirituality\_Importance

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between LPN and Spirituality\_Importance

|  |  |  |  |
| --- | --- | --- | --- |
| CCA |  |  |  |
| Network Group | LPN & DMN & RESP | | |
| CV # | 8 |  |  |
| r | 0.57 |  |  |
| Network | LPN | DMN | RESP |
| Condition | **Loadings** | | |
| HN\_up | -0.21 | 0.13 | **0.33** |
| EN\_up | -0.02 | **0.49** | **0.21** |
| HW\_up | **-0.38** | **0.46** | **0.29** |
| EW\_up | -0.32 | **0.71** | 0.18 |
| HN\_down | **-0.49** | **0.50** | **-0.39** |
| EN\_down | **-0.46** | **0.40** | -0.12 |
| HW\_down | **-0.37** | **0.58** | **-0.38** |
| EW\_down | **-0.66** | 0.16 | -0.08 |

### Significant Correlation with EN\_RT

#### C1\_Neg\_91\_TDMN\_0.77 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between RESP and EN\_RT

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | RESP & DMN | |
| CV # | 5 |  |
| r | 0.51 |  |
| Network | RESP | DMN |
| Condition | **Loadings** | |
| HN\_up | 0.27 | -0.18 |
| EN\_up | **-0.36** | -0.08 |
| HW\_up | **0.37** | **-0.56** |
| EW\_up | -0.07 | 0.03 |
| HN\_down | **-0.71** | -0.10 |
| EN\_down | 0.01 | **-0.30** |
| HW\_down | **-0.42** | **0.31** |
| EW\_down | -0.02 | -0.25 |

### Significant Correlation with EW\_RT

#### C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between RESP and EW\_RT

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | RESP & LPN | |
| CV # | 5 |  |
| r | 0.58 |  |
| Network | RESP | LPN |
| Condition | **Loadings** | |
| HN\_up | 0.25 | -0.05 |
| EN\_up | -0.19 | 0.24 |
| HW\_up | 0.25 | -0.27 |
| EW\_up | 0.08 | 0.09 |
| HN\_down | **-0.62** | **0.72** |
| EN\_down | **-0.49** | 0.29 |
| HW\_down | **-0.34** | 0.01 |
| EW\_down | 0.27 | -0.16 |

### Significant Correlation with HW\_RT

#### C2\_Pos\_86\_LPN\_1.52 & C3\_Pos\_71\_1RESP\_1.14

Significant correlation between RESP and HW\_RT

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | RESP & LPN | |
| CV # | 5 |  |
| r | 0.54 |  |
| Network | RESP | LPN |
| Condition | **Loadings** | |
| HN\_up | 0.25 | -0.05 |
| EN\_up | -0.19 | 0.24 |
| HW\_up | 0.25 | -0.27 |
| EW\_up | 0.08 | 0.09 |
| HN\_down | **-0.62** | **0.72** |
| EN\_down | **-0.49** | 0.29 |
| HW\_down | **-0.34** | 0.01 |
| EW\_down | 0.27 | -0.16 |

### Significant Correlation with AccHW

#### C1\_Neg\_91\_TDMN\_0.77 & C2\_Pos\_86\_LPN\_1.52

Significant correlation between DMN and AccHW

|  |  |  |
| --- | --- | --- |
| CCA |  |  |
| Network Group | DMN & LPN | |
| CV # | 7 |  |
| r | 0.53 |  |
| Network | DMN | LPN |
| Condition | **Loadings** | |
| HN\_up | 0.12 | **0.46** |
| EN\_up | **-0.29** | -0.22 |
| HW\_up | 0.24 | **0.45** |
| EW\_up | **-0.29** | 0.05 |
| HN\_down | **-0.55** | 0.02 |
| EN\_down | **-0.38** | **0.62** |
| HW\_down | **-0.42** | **0.43** |
| EW\_down | 0.26 | 0.29 |