DFTvc_MB_etude1

September 30, 2024

La bibil à RORO loaded

La surface utilisée est fsaverage5 avec 20484 points
tandis que la fsaverage standard comporte 64984 points

patients : 104
pts in the study 1 83
nb pts witout controls : 83

```
                  Nom  MagneticFieldStrength
ID_IRM
PSY006    BLANCHARD                      1.5
PSY001  BAILLOEUIL                       3.0
PSY011      BUISINE                      NaN
PSY005       BILLON                      3.0
PSY113       BOULET                      1.5
…            …                           …
PSY109      ROSTANE                      NaN
PSY087        READY                      NaN
PSY110  SAINT OMER                       NaN
PSY088    SOUILLART                      1.5
PSY089        TOREL                      3.0
```

[83 rows x 2 columns]

Table de contingence pour GROUPE:
MagneticFieldStrength 1.5 3.0
GROUPE
PPD   11   14
bvFTD   19   23

Résultats du test du chi-carré pour GROUPE:
Chi2: 0.0
p-value: 1.0
Degrees of freedom: 1
Expected frequencies:
[[11.19402985 13.80597015]
 [18.80597015 23.19402985]]

Il n'y a pas de différence significative entre les groupes GROUPE (p >= 0.05).
Table de contingence pour SOUS_GROUPE:

```
MagneticFieldStrength  1.5  3.0
SOUS_GROUPE
ADS                      4    7
BPD                      5    5
bvFTD                   19   23
```

Résultats du test du chi-carré pour SOUS_GROUPE:
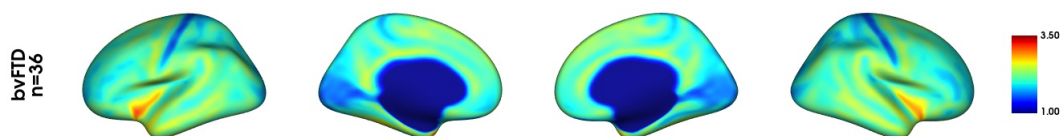Chi2: 0.42662337662337674
p-value: 0.8079042836464447
Degrees of freedom: 2
Expected frequencies:
[[4.88888889 6.11111111]
 [4.44444444 5.55555556]
 [18.66666667 23.33333333]]

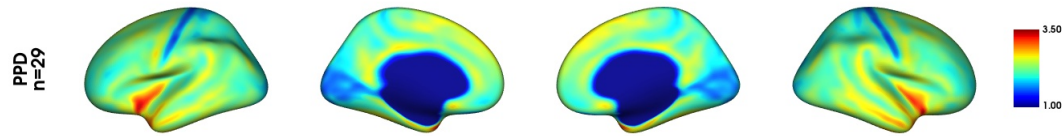Il n'y a pas de différence significative entre les groupes SOUS_GROUPE (p >= 0.05).

sub-PSY113
sub-PSY007
sub-PSY116
sub-PSY016
sub-PSY019
sub-PSY017
sub-PSY022
sub-PSY026
sub-PSY031
sub-PSY051
sub-PSY069
sub-PSY064
sub-PSY070
sub-PSY102
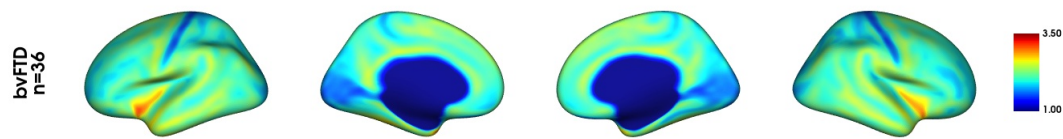sub-PSY119
sub-PSY120
sub-PSY106
sub-PSY087
65 sujets

figure_title : /NAS/dumbo/protocoles/PSY_bvFTD/screenshots/CTSurface_groupscomparison_GROUPE_vs_bvFTD.jpg
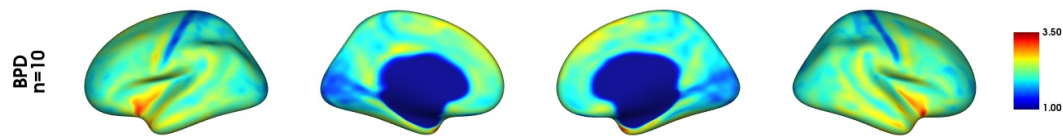
figure_title : /NAS/dumbo/protocoles/PSY_bvFTD/screenshots/CTSurface_groupscompa
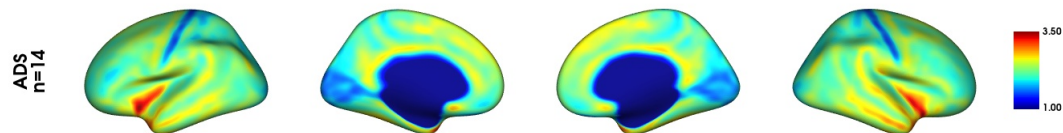rison_GROUPE_vs_PPD.jpg

figure_title : /NAS/dumbo/protocoles/PSY_bvFTD/screenshots/CTSurface_groupscompa
rison_SOUS_GROUPE_vs_bvFTD.jpg

figure_title : /NAS/dumbo/protocoles/PSY_bvFTD/screenshots/CTSurface_groupscompa
rison_SOUS_GROUPE_vs_BPD.jpg

figure_title : /NAS/dumbo/protocoles/PSY_bvFTD/screenshots/CTSurface_groupscompa
rison_SOUS_GROUPE_vs_ADS.jpg

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****

GROUPE

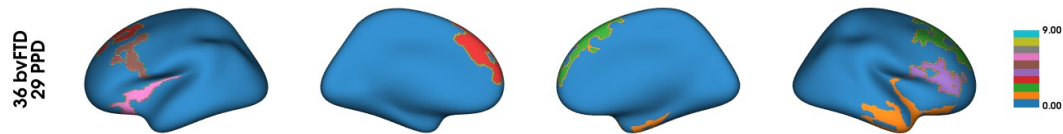*****************************
Group comparison between bvFTD and PPD

First Fitting the model
Second Fitting the model
/NAS/dumbo/protocoles/PSY_bvFTD/screenshots/CTSurface_groupscomparison_bvFTD_vs_
PPD_contrast1.jpg
/NAS/dumbo/protocoles/PSY_bvFTD/screenshots/CTSurface_groupscomparison_bvFTD_vs_
PPD_contrast1.jpg

*****

 clusters infos :

*****

```
    clusid  nverts     resels        P
0        1   728.0  17.137941  0.000003
1        2   535.0  16.676543  0.000003
2        3   325.0  10.903597  0.000003
3        4   271.0  10.147342  0.000003
4        5   164.0   6.295821  0.000038
5        6   215.0   5.745609  0.000087
```

*****

 peaks infos :

*****

```
            t  clusid  vertid          P
0    4.500129       1   20481   0.081132
1    4.499293       2   19214   0.081335
2    4.486786       4   16434   0.084618
3    4.388554       2   13761   0.114878
4    4.351863       4   16179   0.128581
..        ...     ...     ...        ...
140  2.629278       1   20440  10.729872
153  2.558385       2   18858  12.301703
161  2.521723       2   19019  13.183173
171  2.463514       1   10443  14.672771
172  2.461902       1   15779  14.716540
```
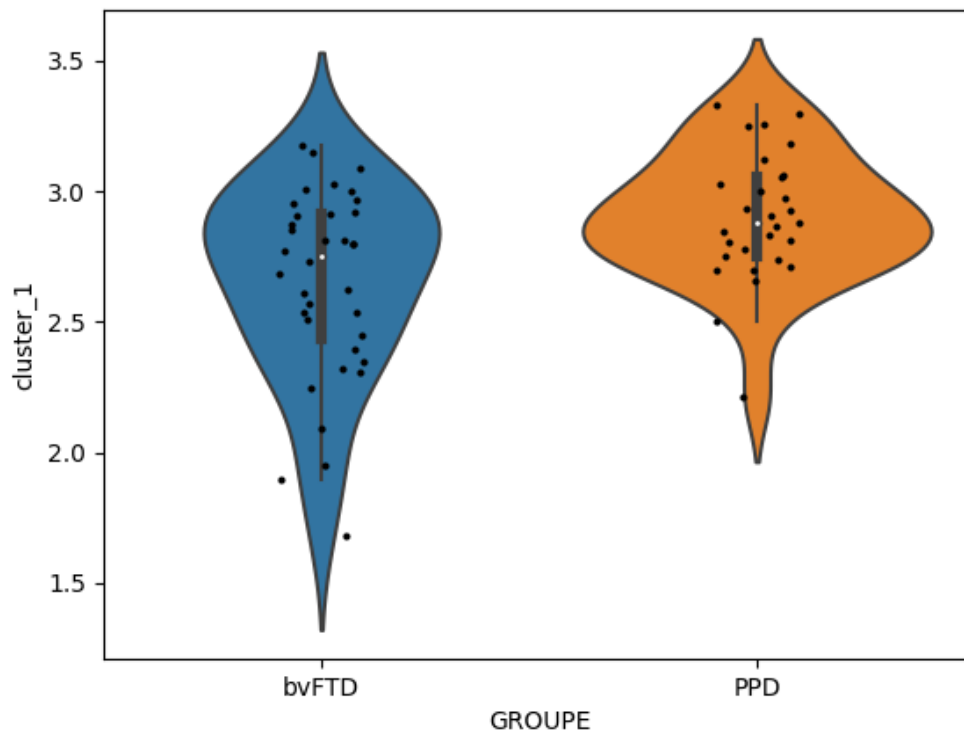
[84 rows x 4 columns]
  cluster_1

/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is

deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
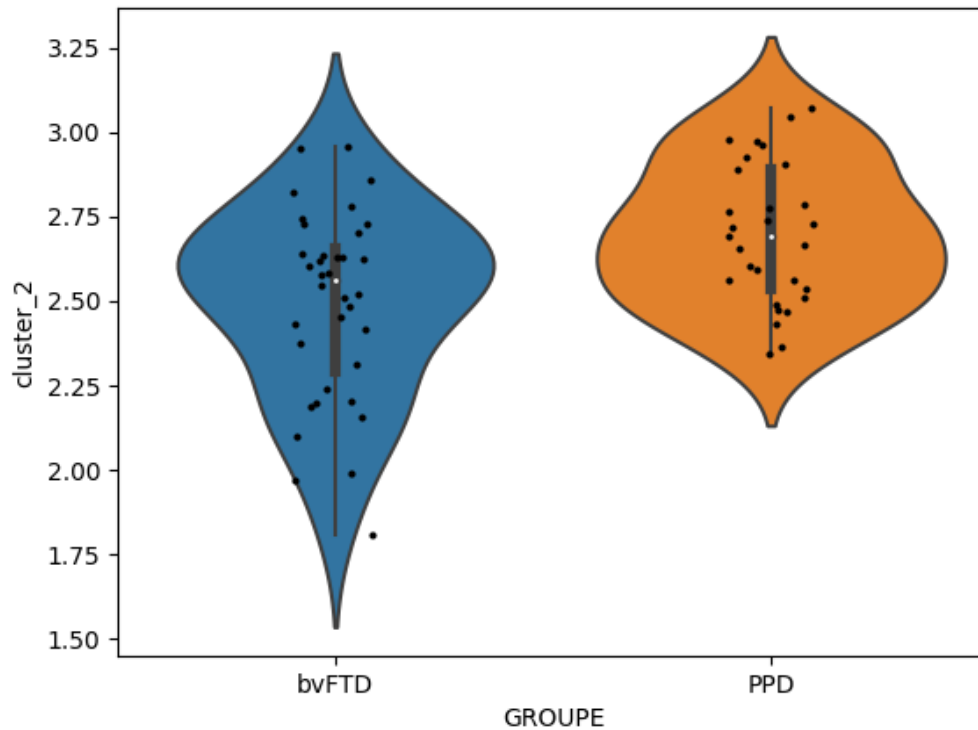

T-Test (oneside) : -3.323 and p_value = 0.002
  cluster_2

/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):

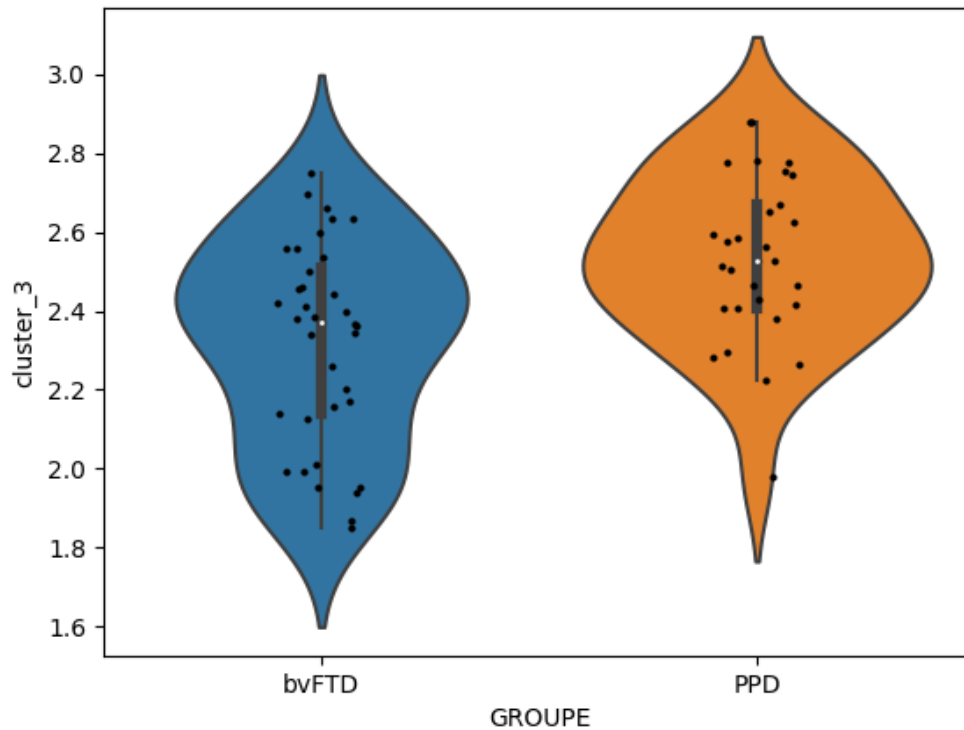T-Test (oneside) : -3.371 and p_value = 0.001
  cluster_3

/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):

```
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```
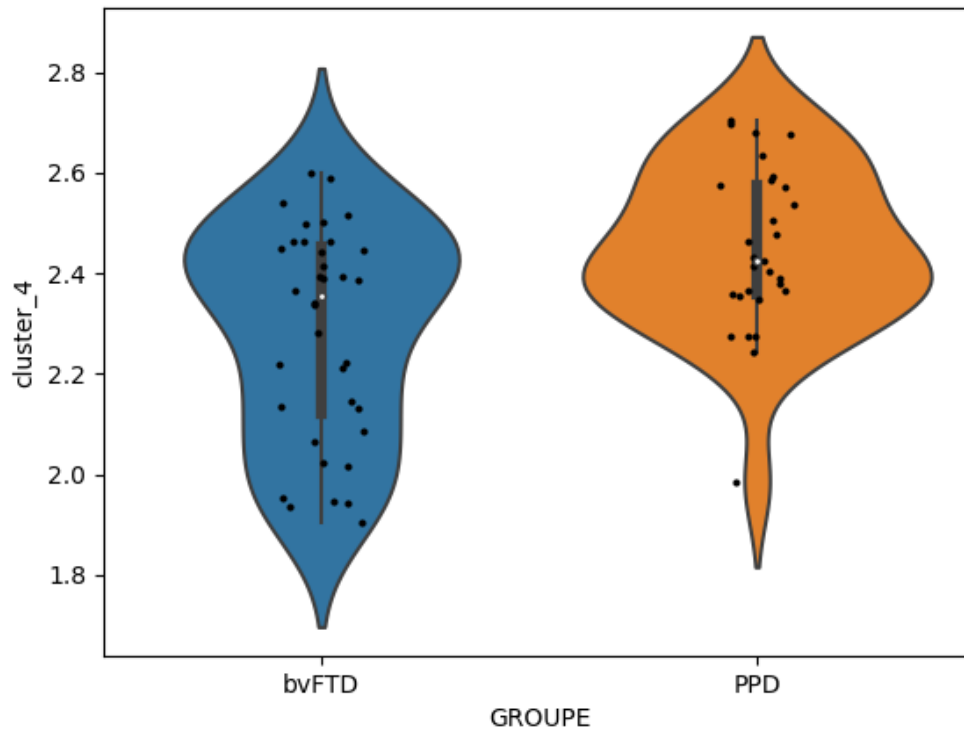
T-Test (oneside) : -3.661 and p_value = 0.001
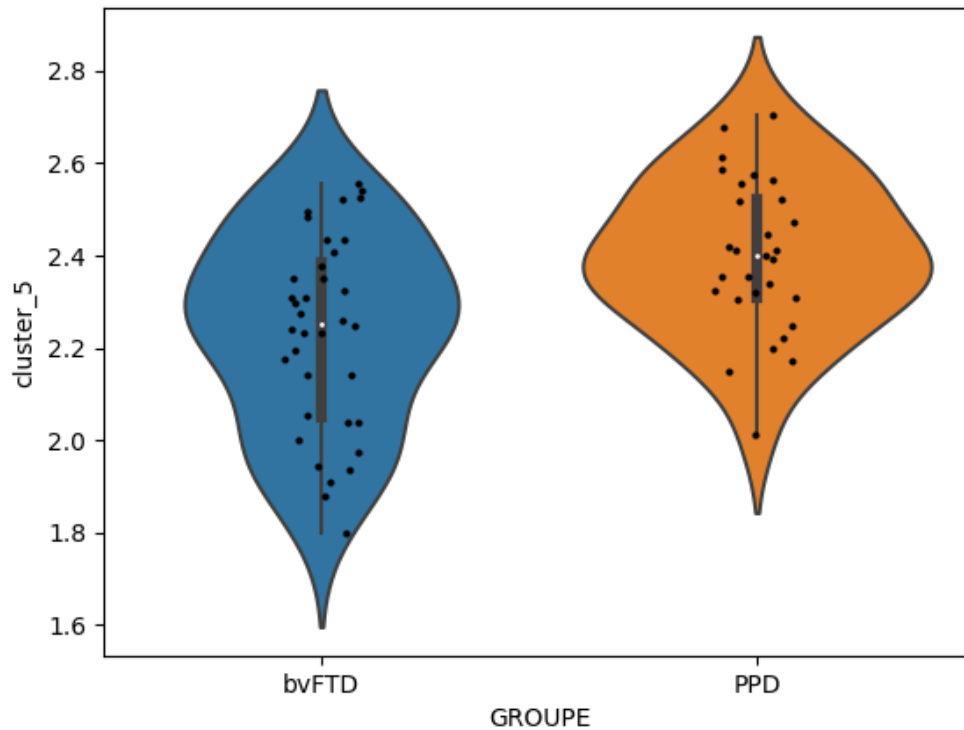 cluster_4

T-Test (oneside) : -3.511 and p_value = 0.001
  cluster_5

/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):

```
T-Test (oneside) : -3.555 and p_value = 0.001
  cluster_6
```

```
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```
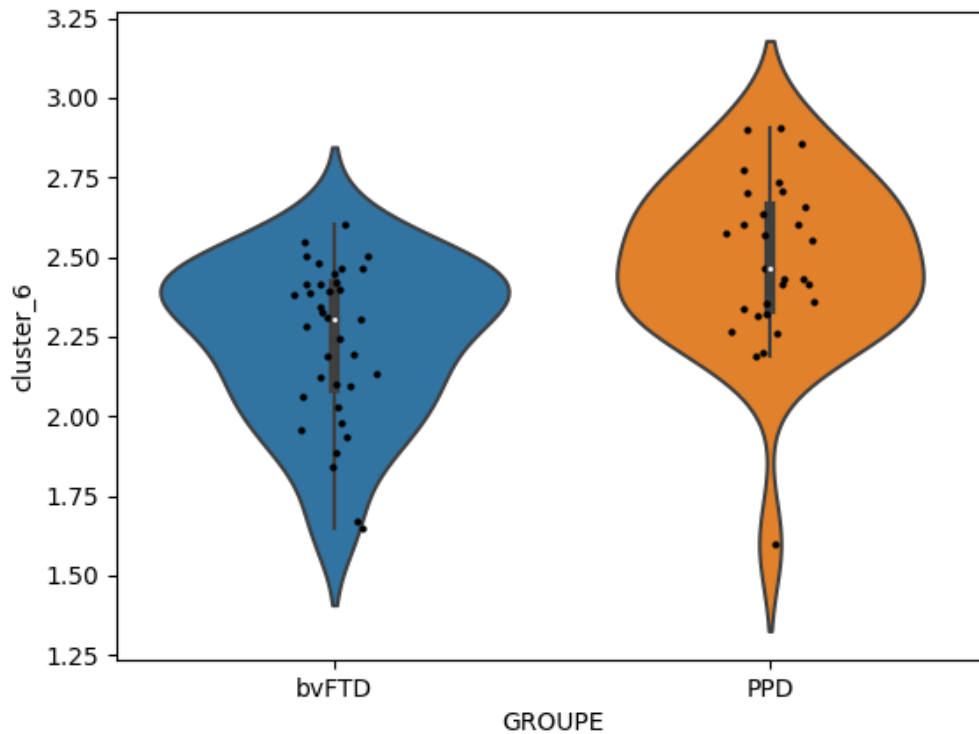
T-Test (oneside) : -3.900 and p_value = 0.000
****

SOUS_GROUPE

****
Group comparison between bvFTD and BPD
First Fitting the model
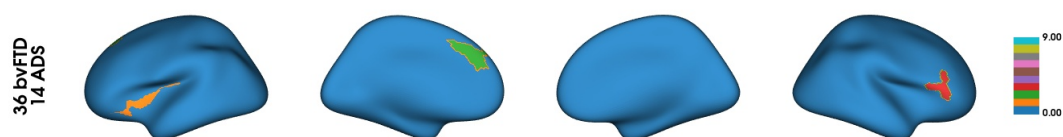Second Fitting the model
Group comparison between bvFTD and ADS
First Fitting the model
Second Fitting the model
/NAS/dumbo/protocoles/PSY_bvFTD/screenshots/CTSurface_groupscomparison_bvFTD_vs_
ADS_contrast1.jpg
/NAS/dumbo/protocoles/PSY_bvFTD/screenshots/CTSurface_groupscomparison_bvFTD_vs_
ADS_contrast1.jpg

```
*****
 clusters infos :
*****
     clusid  nverts    resels       P
0       1    145.0  4.327059  0.001378
1       2    115.0  4.189553  0.001724
2       3     94.0  3.259697  0.008533
*****
 peaks infos :
*****
            t  clusid  vertid        P
3    4.174108       2     254  0.300246
4    4.141070       1    2259  0.328940
5    4.050628       3   19297  0.420942
7    3.972772       1    5423  0.519313
9    3.908226       2    7586  0.616780
11   3.816461       3   16179  0.785164
31   3.430772       1     531  2.068953
32   3.419712       2    6564  2.124028
52   3.177301       1    2262  3.742020
53   3.173262       3   14325  3.775591
61   3.097755       1    6730  4.468491
65   3.077318       1    4973  4.677341
101  2.805454       2    4092  8.292293
147  2.513157       1    2186  14.453601
154  2.489571       1    6638  15.070799
   cluster_1
```
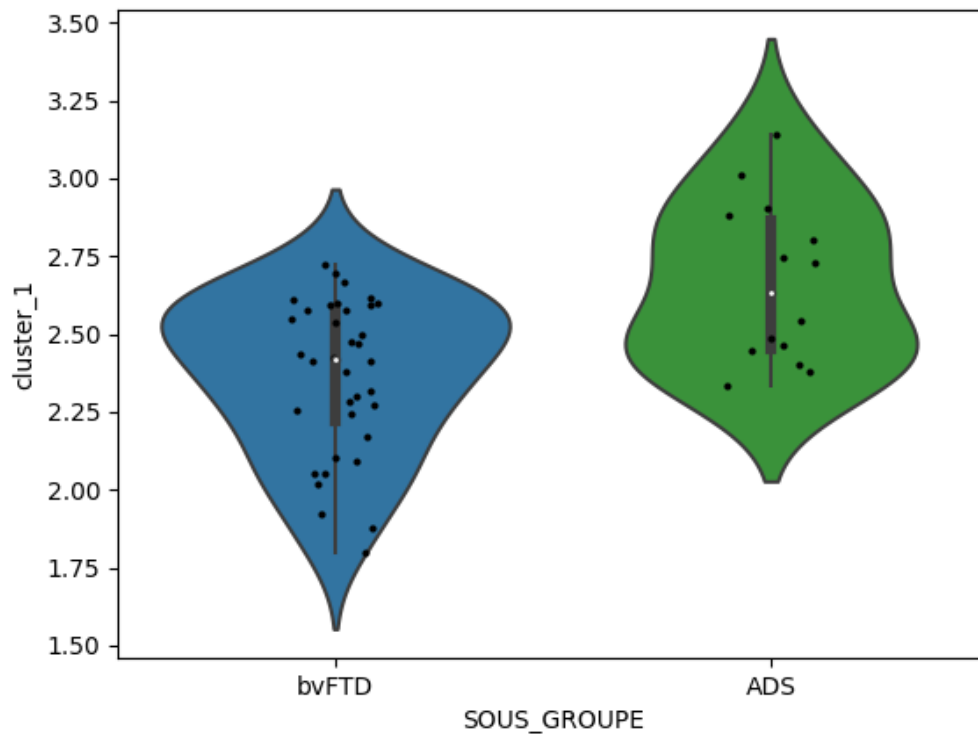
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
   with pd.option_context('mode.use_inf_as_na', True):
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
   with pd.option_context('mode.use_inf_as_na', True):
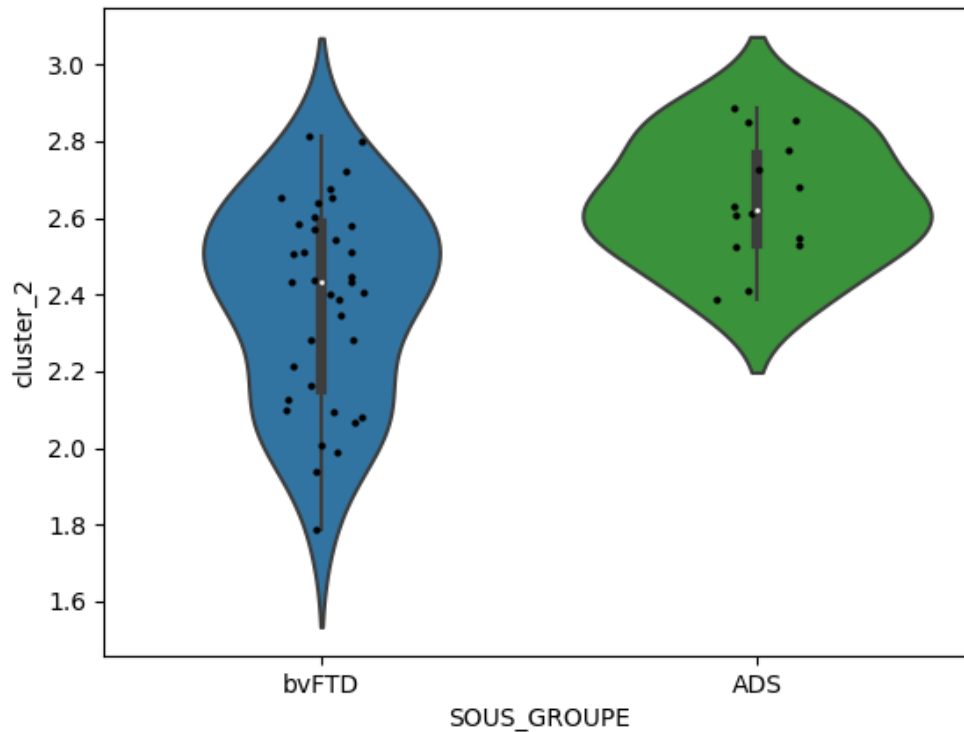
T-Test (oneside) : -3.666 and p_value = 0.001
  cluster_2

/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
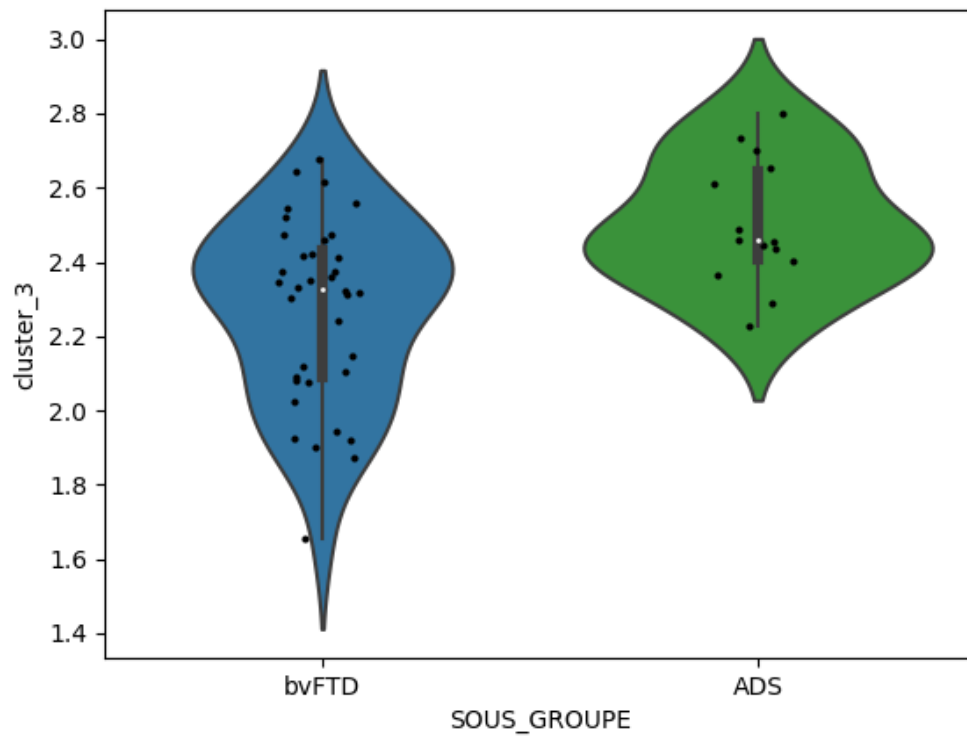
T-Test (oneside) : -4.284 and p_value = 0.000
  cluster_3

/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):

```
T-Test (oneside) : -3.840 and p_value = 0.001
Group comparison between BPD and ADS
First Fitting the model
Second Fitting the model

La bibil à RORO loaded
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GROUPE

****************************
```
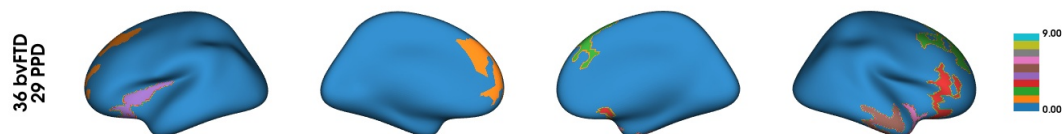
```
*****
 clusters infos :
*****
    clusid  nverts     resels          P
0       1   441.0  14.534073  0.000003
1       2   376.0  11.617540  0.000003
2       3   261.0   8.417559  0.000005
3       4   246.0   6.607148  0.000028
4       5   179.0   4.508337  0.000715
5       6   156.0   3.484860  0.004491
*****
 peaks infos :
*****
            t  clusid  vertid          P
0    4.441478       4    5013   0.103924
1    4.420694       4    9108   0.110743
2    4.326418       3   16434   0.147220
3    4.310466       5   20481   0.154737
4    4.245047       1    7585   0.187915
..        ...     ...     ...        ...
131  2.624337       2   18894  11.002611
132  2.615344       2   18920  11.199574
134  2.600952       6   20153  11.514774
135  2.599834       3   10299  11.539261
146  2.524179       2   18307  13.311445

[70 rows x 4 columns]
  cluster_1
```
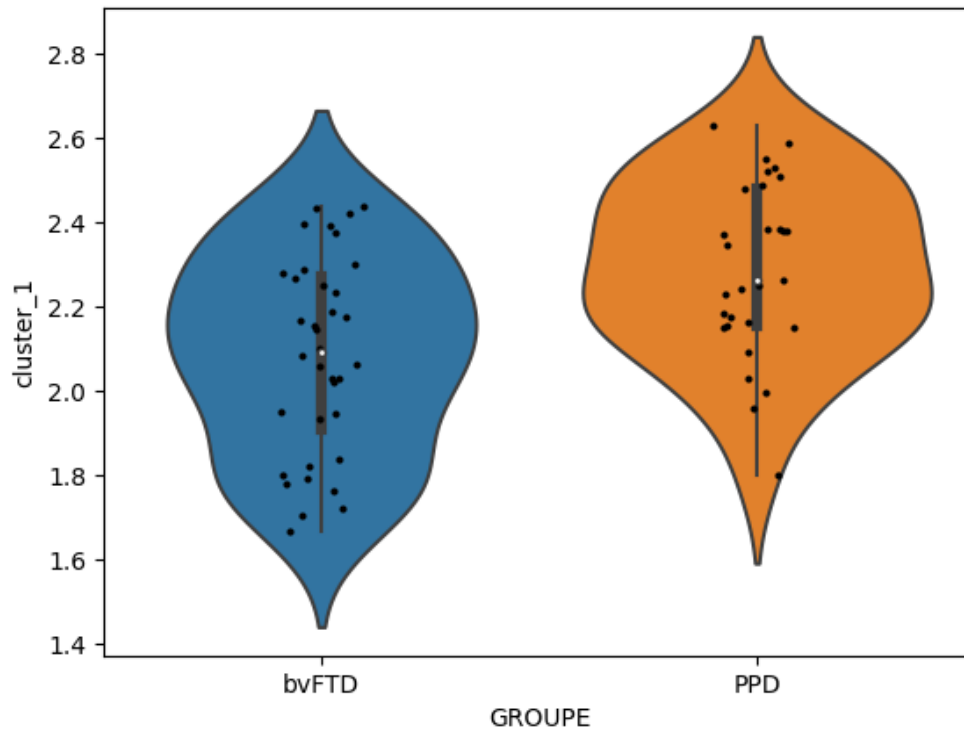
/home/global/Anaconda3-2023.09/lib/python3.11/site-packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is deprecated and will be removed in a future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/global/Anaconda3-2023.09/lib/python3.11/site-packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is deprecated and will be removed in a future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
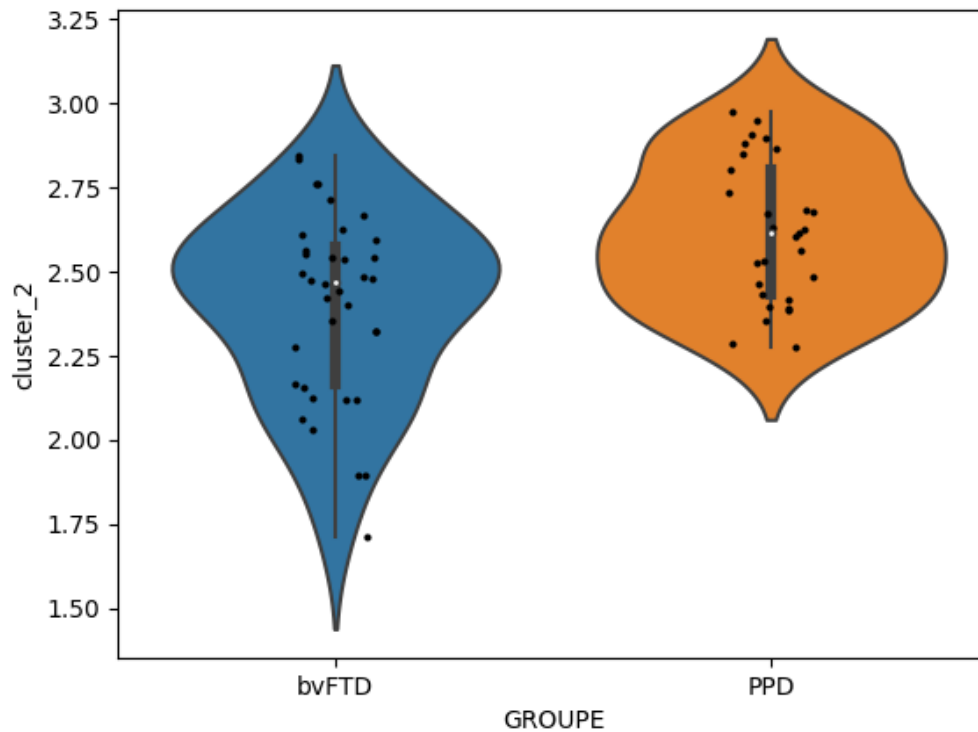
```
T-Test (oneside) : -3.762 and p_value = 0.000
  cluster_2
```

/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
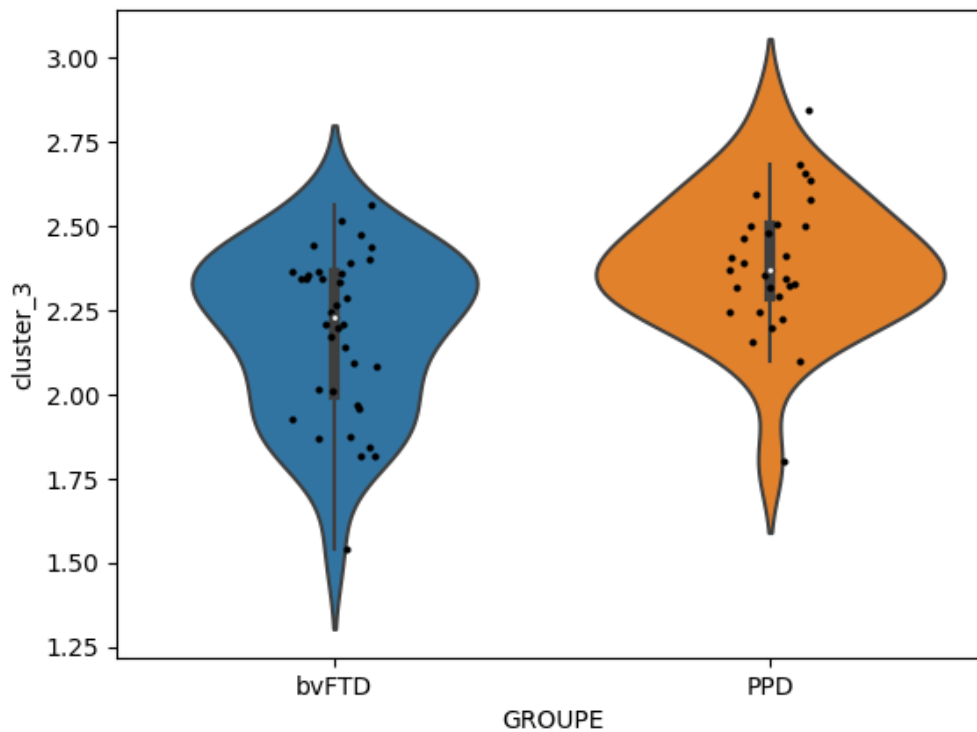 with pd.option_context('mode.use_inf_as_na', True):

T-Test (oneside) : -3.594 and p_value = 0.001

```
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```

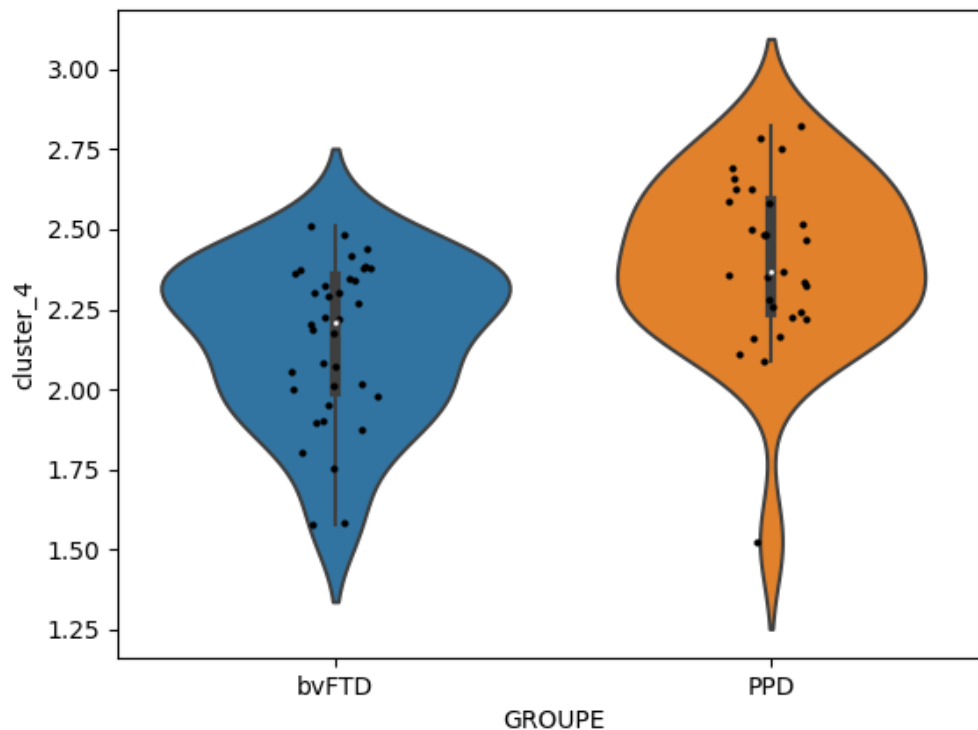cluster_3

T-Test (oneside) : -3.697 and p_value = 0.000
  cluster_4

/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):

T-Test (oneside) : -3.840 and p_value = 0.000
  cluster_5

/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
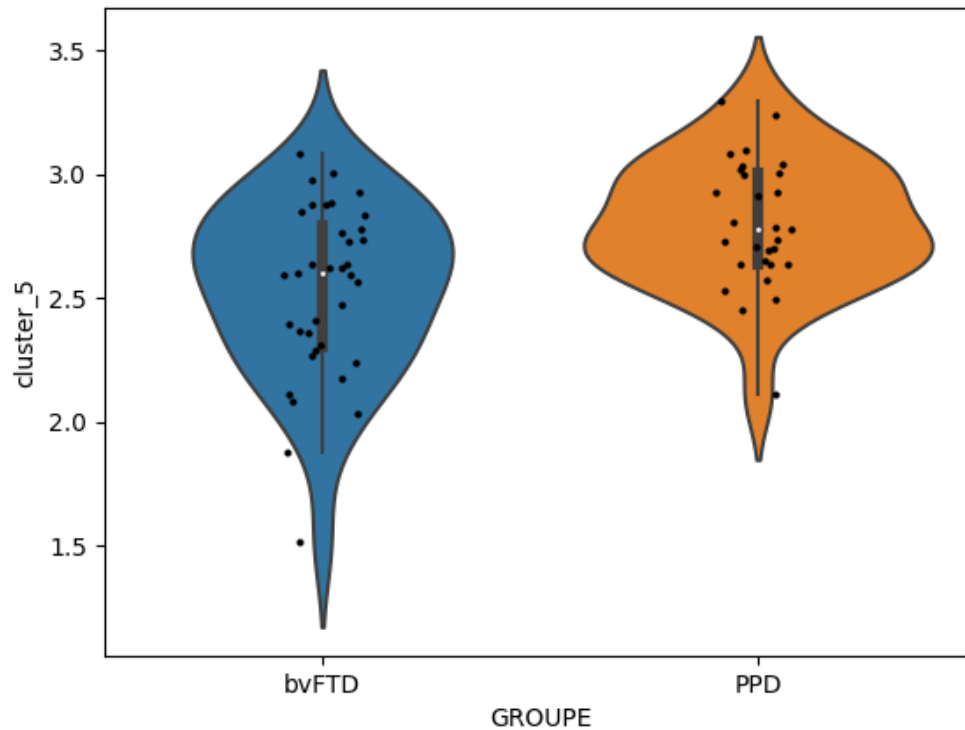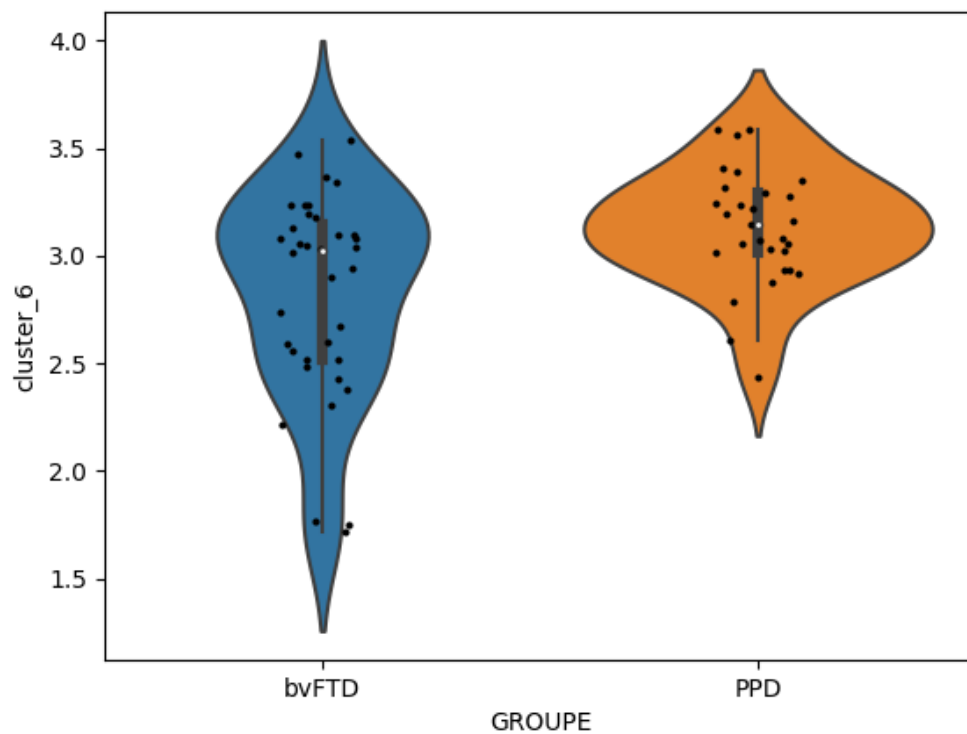
T-Test (oneside) : -3.589 and p_value = 0.001
  cluster_6

/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
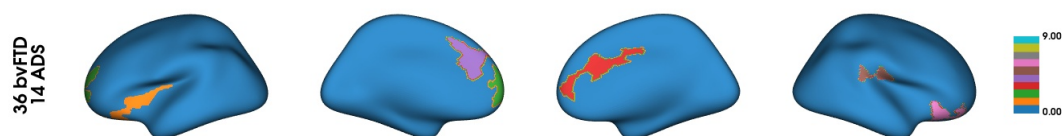 with pd.option_context('mode.use_inf_as_na', True):
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):

T-Test (oneside) : -3.319 and p_value = 0.002
****

SOUS_GROUPE

****

*****

 clusters infos :

*****

```
     clusid   nverts     resels          P
0        1    252.0    7.657735    0.000019
1        2    192.0    6.079295    0.000124
```

```
2        3    179.0  6.013677  0.000135
3        4    132.0  5.258866  0.000383
4        5    128.0  4.379592  0.001435
5        6    114.0  3.688879  0.004418
```
*****

 peaks infos :

*****

	t	clusid	vertid	P
0	4.800303	5	14521	0.057082
2	4.655421	1	2259	0.086695
4	4.572197	5	10666	0.109854
5	4.425511	1	5015	0.166091
7	4.313734	2	2660	0.226426
8	4.243347	1	3848	0.274296
9	4.242309	1	6751	0.275116
10	4.170349	4	6625	0.334802
11	4.132644	3	19475	0.370721
14	3.969308	2	7269	0.572228
15	3.969046	4	7585	0.572611
16	3.948966	2	7268	0.603665
17	3.928637	2	1867	0.636468
18	3.903838	1	5423	0.679202
22	3.773712	6	19367	0.948741
24	3.753119	6	12441	0.999663
28	3.616664	1	1180	1.405788
32	3.586961	3	11155	1.512940
36	3.568591	3	19430	1.581598
38	3.553923	3	14408	1.640274
40	3.519550	2	4771	1.782940
42	3.502385	1	4855	1.857574
45	3.481824	5	18695	1.952575
50	3.418280	5	16293	2.270620
55	3.368771	4	4782	2.552313
56	3.351386	2	4079	2.656371
60	3.323841	4	4789	2.833163
61	3.285127	6	15066	3.097040
68	3.240256	5	18121	3.428649
70	3.171788	3	12131	3.999453
73	3.159749	1	9118	4.108995
97	2.932292	3	12455	6.695350
102	2.895253	2	1617	7.225564
108	2.863573	4	884	7.707914
114	2.814567	6	13891	8.505668
117	2.797770	4	9071	8.794474
137	2.684727	3	13662	10.949431
148	2.611901	6	19383	12.549908

```
149  2.604965        1    1331  12.711213
160  2.529752        5   11967  14.560518
171  2.474699        6   19379  16.043049
```
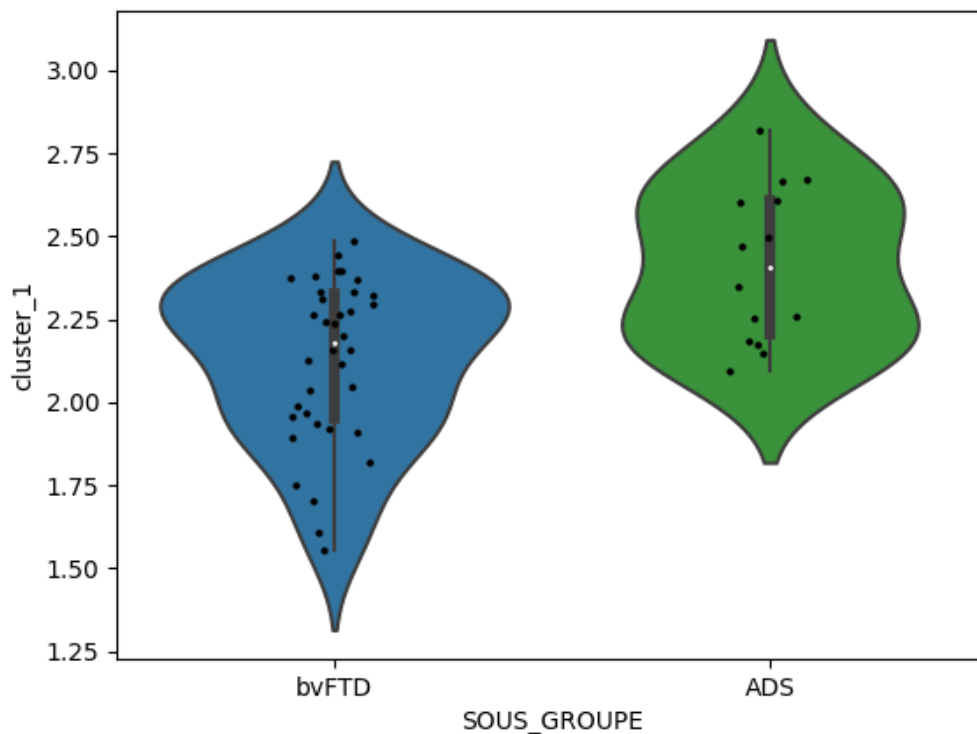cluster_1

```
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```



```
T-Test (oneside) : -3.840 and p_value = 0.001
```
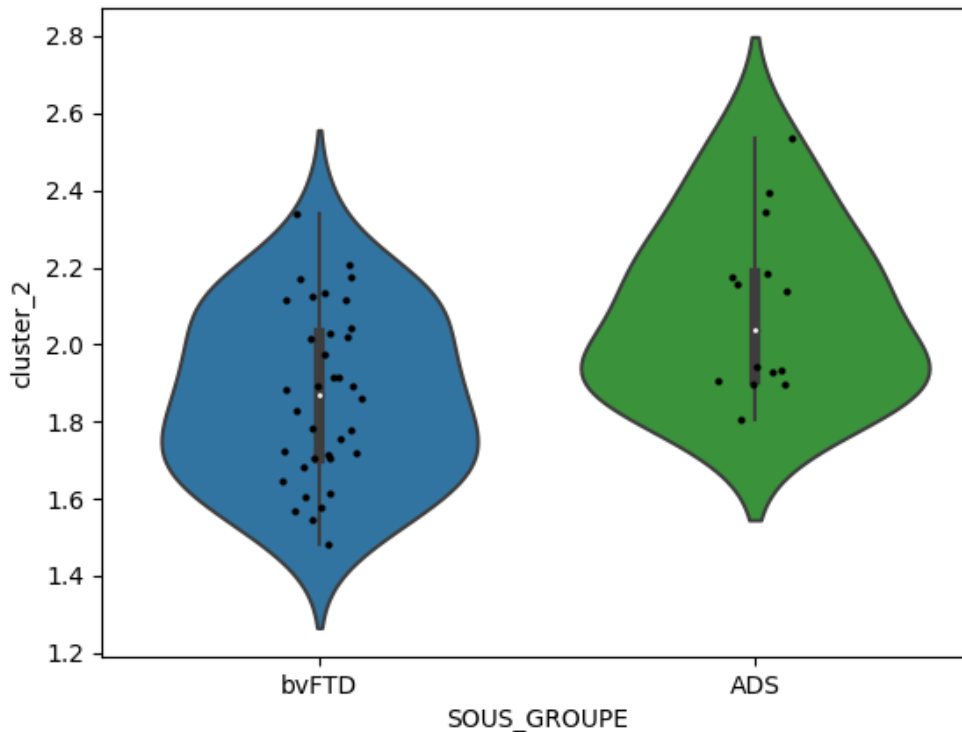cluster_2

```
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
```

```
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```



```
T-Test (oneside) : -3.155 and p_value = 0.004
  cluster_3
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```
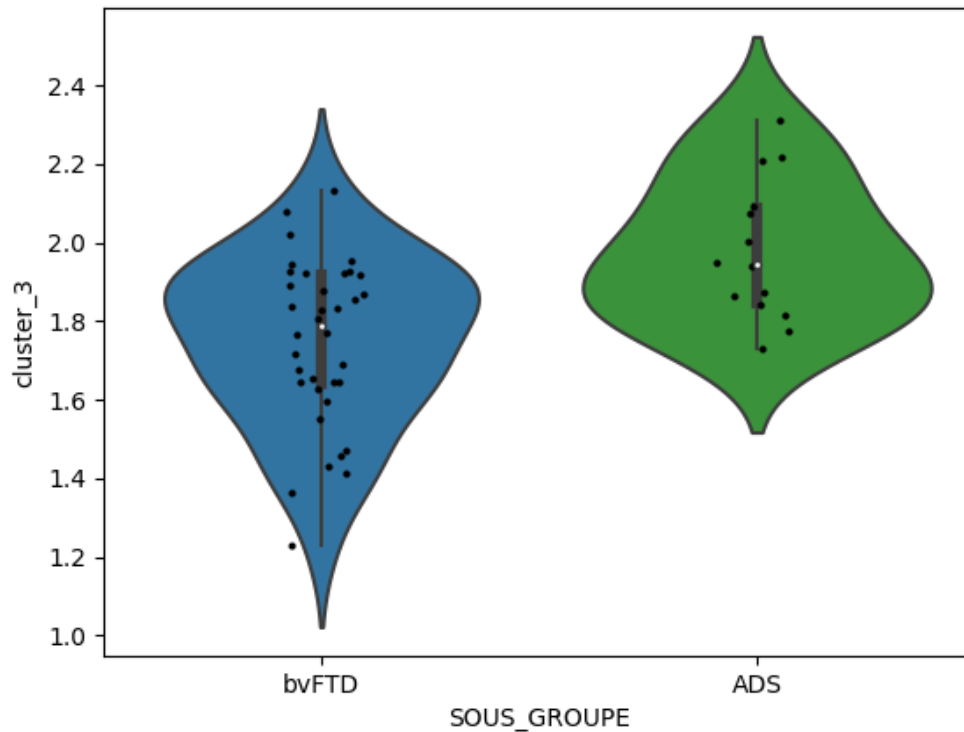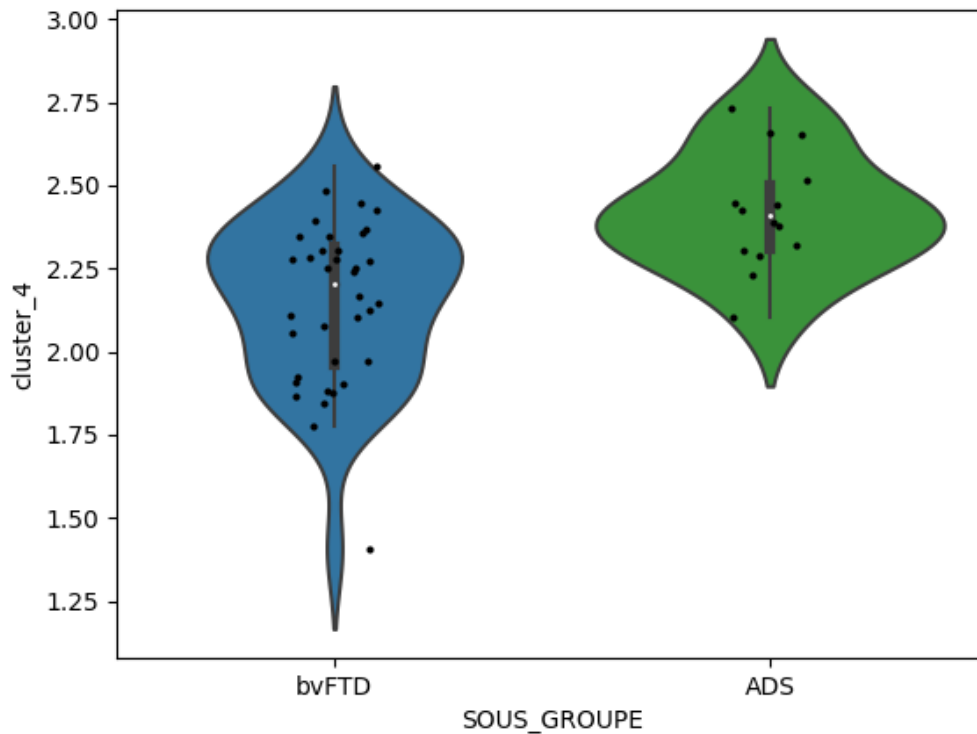
T-Test (oneside) : -3.890 and p_value = 0.001
  cluster_4

/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
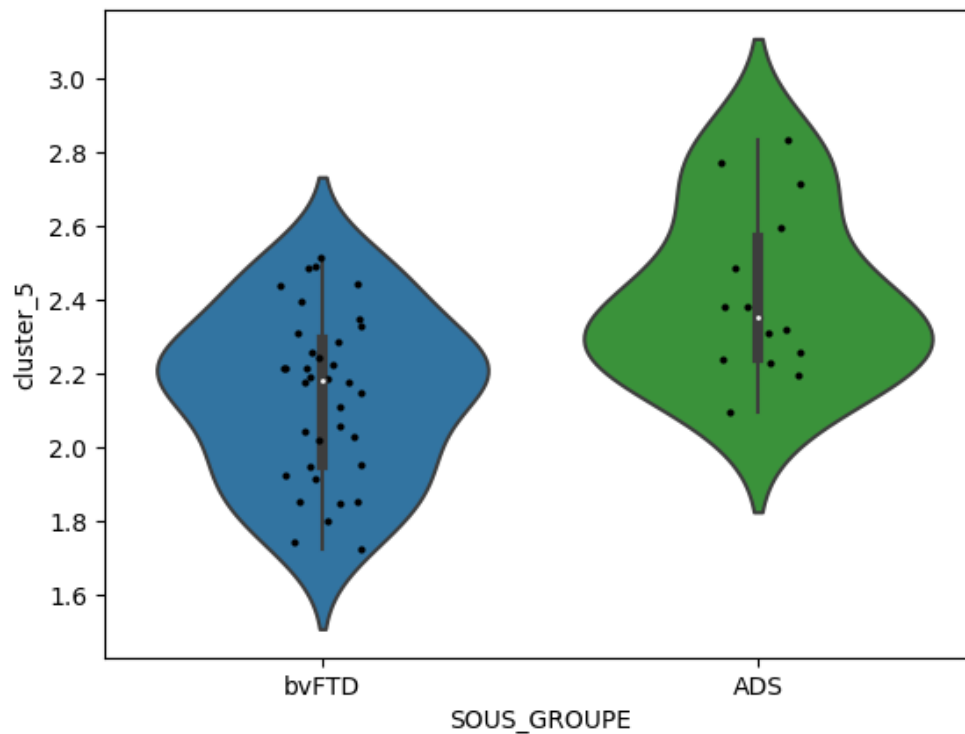
T-Test (oneside) : -4.416 and p_value = 0.000
  cluster_5

/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
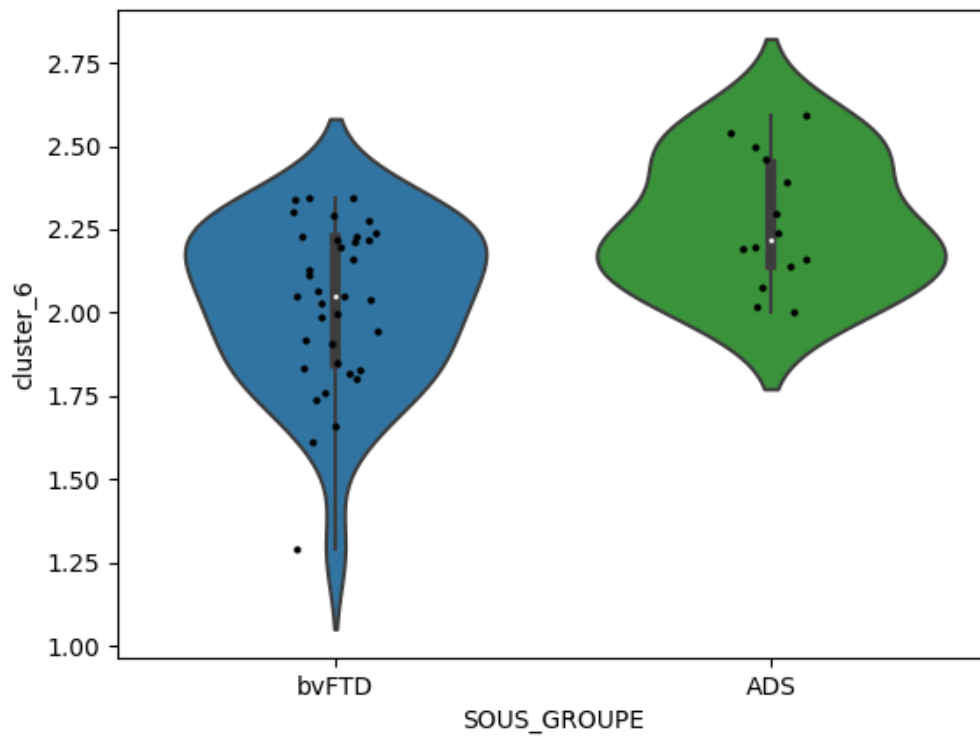
T-Test (oneside) : -3.809 and p_value = 0.001
  cluster_6

/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):

T-Test (oneside) : -3.707 and p_value = 0.001

La bibil à RORO loaded
FER
mFP
mFP_SocialContext
mFP_Mentalizing
mFP_Controls
Praxies
VOSP
TMT_B_A
Stroop_3-1
Empan_endroit

The Kernel crashed while executing code in the current cell or a previous cell.

Please review the code in the cell(s) to identify a possible cause of the␣
  ↪failure.

```
[NbConvertApp] Converting notebook DFTvc_MB_etude1.ipynb to pdf
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/nbconvert/filters/datatypefilter.py:41: UserWarning: Your element with
mimetype(s) dict_keys(['application/javascript',
'application/vnd.holoviews_load.v0+json']) is not able to be represented.
  warn(
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/nbconvert/filters/datatypefilter.py:41: UserWarning: Your element with
mimetype(s) dict_keys(['text/html']) is not able to be represented.
  warn(
/home/global/Anaconda3-2023.09/lib/python3.11/site-
packages/nbconvert/filters/datatypefilter.py:41: UserWarning: Your element with
mimetype(s) dict_keys(['application/vnd.holoviews_exec.v0+json', 'text/html'])
is not able to be represented.
  warn(
[NbConvertApp] Support files will be in DFTvc_MB_etude1_files/
[NbConvertApp] Making directory ./DFTvc_MB_etude1_files
[NbConvertApp] Making directory ./DFTvc_MB_etude1_files
[NbConvertApp] Making directory ./DFTvc_MB_etude1_files
[NbConvertApp] Making directory ./DFTvc_MB_etude1_files
[NbConvertApp] Making directory ./DFTvc_MB_etude1_files
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[NbConvertApp] Making directory ./DFTvc_MB_etude1_files
[NbConvertApp] Making directory ./DFTvc_MB_etude1_files
[NbConvertApp] Making directory ./DFTvc_MB_etude1_files
[NbConvertApp] Writing 41967 bytes to notebook.tex
[NbConvertApp] Building PDF
[NbConvertApp] Running xelatex 3 times: ['xelatex', 'notebook.tex', '-quiet']
```

```
[NbConvertApp] Running bibtex 1 time: ['bibtex', 'notebook']
[NbConvertApp] WARNING | bibtex had problems, most likely because there were no
citations
[NbConvertApp] PDF successfully created
[NbConvertApp] Writing 1027519 bytes to DFTvc_MB_etude1.pdf
```