DATASET ACTIVATE DataSet1.

ONEWAY FindTime LocateMinMax CompareValues CompareRanges BY VisType /STATISTICS DESCRIPTIVES

/MISSING ANALYSIS

/POSTHOC=BONFERRONI ALPHA(0.0125).

# Oneway ANOVA - Exp 1 - AC

#### **Notes**

Output Created		26-AUG-2020 09:49:
Comments		
Input	Data	/Users/niklas/Document s/Doktorandhandlednin g/Kahin/radvis/statistik/ exp1_ac.sav
	Active Dataset	DataSet1
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	Split File	<none></none>
	N of Rows in Working Data File	189
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on cases with no missing data for any variable in the analysis.
Syntax		ONEWAY FindTime LocateMinMax CompareValues CompareRanges BY VisType /STATISTICS DESCRIPTIVES /MISSING ANALYSIS /POSTHOC=BONFERRO NI ALPHA(0.0125).
Resources	Processor Time	00:00:00.01
	Elapsed Time	00:00:00.00

 $\label{thm:commutation} $$[DataSet1] / Users/niklas/Documents/Doktorandhandledning/Kahin/radvis/statistik/exp1\_a c.sav$ 

# **Descriptives**

						95% Confidence
		N	Mean	Std. Deviation	Std. Error	Lower Bound
FindTime	Adj	63	.9841	.05145	.00648	.9712
	Sta	63	.9857	.03958	.00499	.9757
	Com	63	.9952	.02147	.00270	.9898
	Total	189	.9884	.03957	.00288	.9827
LocateMinMax	Adj	63	.9127	.12999	.01638	.8800
	Sta	63	.9048	.12599	.01587	.8730
	Com	63	.9524	.10120	.01275	.9269
	Total	189	.9233	.12092	.00880	.9059
CompareValues	Adj	63	.7143	.30736	.03872	.6369
	Sta	63	.7619	.29590	.03728	.6874
	Com	63	.7540	.30944	.03899	.6760
	Total	189	.7434	.30339	.02207	.6999
CompareRanges	Adj	63	.9048	.12599	.01587	.8730
	Sta	63	.9259	.13312	.01677	.8924
	Com	63	.9392	.10499	.01323	.9127
	Total	189	.9233	.12213	.00888	.9058

# **Descriptives**

		95% Confidence Interval for		
		Upper Bound	Minimum	Maximum
FindTime	Adj	.9971	.70	1.00
	Sta	.9957	.80	1.00
	Com	1.0006	.90	1.00
	Total	.9940	.70	1.00
LocateMinMax	Adj	.9454	.33	1.00
	Sta	.9365	.50	1.00
	Com	.9779	.50	1.00
	Total	.9406	.33	1.00
CompareValues	Adj	.7917	.00	1.00
	Sta	.8364	.00	1.00
	Com	.8319	.00	1.00
	Total	.7869	.00	1.00
CompareRanges	Adj	.9365	.50	1.00
	Sta	.9595	.33	1.00
	Com	.9656	.67	1.00
	Total	.9408	.33	1.00

## ANOVA

		Sum of Squares	df	Mean Square	F
FindTime	Between Groups	.005	2	.002	1.460
	Within Groups	.290	186	.002	
	Total	.294	188		
LocateMinMax	Between Groups	.082	2	.041	2.860
	Within Groups	2.667	186	.014	
	Total	2.749	188		
CompareValues	Between Groups	.082	2	.041	.443
	Within Groups	17.222	186	.093	
	Total	17.304	188		
CompareRanges	Between Groups	.038	2	.019	1.275
	Within Groups	2.766	186	.015	
	Total	2.804	188		

## ANOVA

		Sig.
FindTime	<b>Between Groups</b>	.235
	Within Groups	
	Total	
LocateMinMax	Between Groups	.060
	Within Groups	
	Total	
CompareValues	<b>Between Groups</b>	.643
	Within Groups	
	Total	
CompareRanges	Between Groups	.282
	Within Groups	
	Total	

**Post Hoc Tests** 

#### Bonferroni

Dependent Variable	(I) VisType	(J) VisType	Mean Difference (I-J)	Std. Error	Sig.
FindTime	Adj	Sta	00159	.00703	1.000
		Com	01111	.00703	.348
	Sta	Adj	.00159	.00703	1.000
		Com	00952	.00703	.532
	Com	Adj	.01111	.00703	.348
		Sta	.00952	.00703	.532
LocateMinMax	Adj	Sta	.00794	.02133	1.000
		Com	03968	.02133	.193
	Sta	Adj	00794	.02133	1.000
		Com	04762	.02133	.080
	Com	Adj	.03968	.02133	.193
		Sta	.04762	.02133	.080
CompareValues	Adj	Sta	04762	.05422	1.000
		Com	03968	.05422	1.000
	Sta	Adj	.04762	.05422	1.000
		Com	.00794	.05422	1.000
	Com	Adj	.03968	.05422	1.000
		Sta	00794	.05422	1.000
CompareRanges	Adj	Sta	02116	.02173	.994
		Com	03439	.02173	.346
	Sta	Adj	.02116	.02173	.994
		Com	01323	.02173	1.000
	Com	Adj	.03439	.02173	.346
		Sta	.01323	.02173	1.000

#### Bonferroni

			98.75% Confi	dence Interval
Dependent Variable	(I) VisType	(J) VisType	Lower Bound	Upper Bound
FindTime	Adj	Sta	0220	.0188
		Com	0315	.0093
	Sta	Adj	0188	.0220
		Com	0299	.0109
	Com	Adj	0093	.0315
		Sta	0109	.0299
LocateMinMax	Adj	Sta	0540	.0698
		Com	1016	.0222
	Sta	Adj	0698	.0540
		Com	1095	.0143
	Com	Adj	0222	.1016
		Sta	0143	.1095
CompareValues	Adj	Sta	2049	.1097
		Com	1970	.1176
	Sta	Adj	1097	.2049
		Com	1494	.1652
	Com	Adj	1176	.1970
		Sta	1652	.1494
CompareRanges	Adj	Sta	0842	.0419
		Com	0974	.0286
	Sta	Adj	0419	.0842
		Com	0763	.0498
	Com	Adj	0286	.0974
		Sta	0498	.0763

#### GRAPH

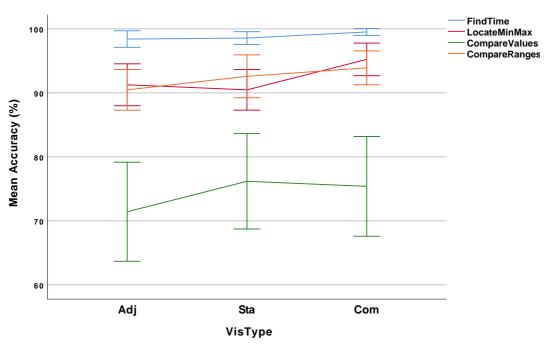
 $\label{locateMinMax} \verb| MEAN(CompareValues) = \verb| MEAN(FindTime) | MEAN(LocateMinMax) | MEAN(CompareValues) |$ 

VisType /MISSING=LISTWISE /INTERVAL CI(95.0).

## Graph

## Notes

Output Crea	ated	26-AUG-2020 09:49:
Comments		
Input	Data	/Users/niklas/Document s/Doktorandhandlednin g/Kahin/radvis/statistik/ exp1_ac.sav
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	Weight	<none></none>
	Split File	<none></none>
	N of Rows in Working Data File	189
Syntax		GRAPH /LINE(MULTIPLE) =MEAN(FindTime) MEAN (LocateMinMax) MEAN (CompareValues) MEAN (CompareRanges) BY VisType /MISSING=LISTWISE /INTERVAL CI(95.0).
Resources	Processor Time	00:00:00.19
	Elapsed Time	00:00:01.00



Error bars: 95% CI

DATASET ACTIVATE DataSet4.

DATASET CLOSE DataSet1.

ONEWAY FindTime LocateMinMax CompareValues CompareRanges BY VisType /STATISTICS DESCRIPTIVES

# Oneway ANOVA - Exp 1 - CT

## Notes

Output Created		26-AUG-2020 09:53:
Comments		
Input	Data	/Users/niklas/Document s/Doktorandhandlednin g/Kahin/radvis/statistik/ exp1_ct.sav
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	Weight	<none></none>
	Split File	<none></none>
	N of Rows in Working Data File	189
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on cases with no missing data for any variable in the analysis.
Syntax		ONEWAY FindTime LocateMinMax CompareValues CompareRanges BY VisType /STATISTICS DESCRIPTIVES /MISSING ANALYSIS /POSTHOC=BONFERRO NI ALPHA(0.0125).
Resources	Processor Time	00:00:00.01
	Elapsed Time	00:00:00.00

# **Descriptives**

						95% Confidence
		N	Mean	Std. Deviation	Std. Error	Lower Bound
FindTime	Adj	63	3.7193	1.30312	.16418	3.3911
	Sta	63	3.6327	1.18569	.14938	3.3341
	Com	63	3.6697	1.15684	.14575	3.3784
	Total	189	3.6739	1.21090	.08808	3.5001
LocateMinMax	Adj	63	9.0162	4.84143	.60996	7.7969
	Sta	63	9.1083	4.37772	.55154	8.0057
	Com	63	7.4251	4.87893	.61469	6.1963
	Total	189	8.5165	4.74349	.34504	7.8359
CompareValues	Adj	63	13.1121	6.57996	.82900	11.4550
	Sta	63	13.4915	7.21094	.90849	11.6754
	Com	63	18.1626	10.64251	1.34083	15.4824
	Total	189	14.9221	8.60709	.62607	13.6870
CompareRanges	Adj	63	11.3410	5.39504	.67971	9.9823
	Sta	63	10.9492	5.01097	.63132	9.6872
	Com	63	9.5329	5.04810	.63600	8.2616
	Total	189	10.6077	5.18558	.37720	9.8636

# **Descriptives**

		95% Confidence Interval for		
		Upper Bound	Minimum	Maximum
FindTime	Adj	4.0475	1.85	8.62
	Sta	3.9313	2.16	7.11
	Com	3.9611	1.93	7.88
	Total	3.8477	1.85	8.62
LocateMinMax	Adj	10.2355	3.67	27.86
	Sta	10.2108	4.08	24.06
	Com	8.6538	2.46	28.50
	Total	9.1972	2.46	28.50
CompareValues	Adj	14.7692	3.30	39.22
	Sta	15.3075	4.24	33.93
	Com	20.8429	4.03	52.53
	Total	16.1571	3.30	52.53
CompareRanges	Adj	12.6997	2.77	23.93
	Sta	12.2112	4.05	25.12
	Com	10.8042	3.34	33.22
	Total	11.3518	2.77	33.22

## ANOVA

		Sum of Squares	df	Mean Square	F
FindTime	Between Groups	.238	2	.119	.080
	Within Groups	275.422	186	1.481	
	Total	275.660	188		
LocateMinMax	Between Groups	112.842	2	56.421	2.549
	Within Groups	4117.287	186	22.136	
	Total	4230.130	188		
CompareValues	Between Groups	996.907	2	498.453	7.170
	Within Groups	12930.514	186	69.519	
	Total	13927.421	188		
CompareRanges	Between Groups	114.001	2	57.001	2.146
	Within Groups	4941.369	186	26.567	
	Total	5055.371	188		

## ANOVA

		Sig.
FindTime Between Grou		.923
	Within Groups	
	Total	
LocateMinMax	<b>Between Groups</b>	.081
	Within Groups	
	Total	
CompareValues	Between Groups	.001
	Within Groups	
	Total	
CompareRanges	Between Groups	.120
	Within Groups	
	Total	

**Post Hoc Tests** 

#### Bonferroni

Dependent Variable	(I) VisType	(J) VisType	Mean Difference (I-J)	Std. Error	Sig.
FindTime	Adj	Sta	.08660	.21681	1.000
		Com	.04956	.21681	1.000
	Sta	Adj	08660	.21681	1.000
		Com	03704	.21681	1.000
	Com	Adj	04956	.21681	1.000
		Sta	.03704	.21681	1.000
LocateMinMax	Adj	Sta	09201	.83829	1.000
		Com	1.59118	.83829	.178
	Sta	Adj	.09201	.83829	1.000
		Com	1.68319	.83829	.138
	Com	Adj	-1.59118	.83829	.178
		Sta	-1.68319	.83829	.138
CompareValues	Adj	Sta	37937	1.48558	1.000
		Com	-5.05054 <sup>*</sup>	1.48558	.002
	Sta	Adj	.37937	1.48558	1.000
		Com	-4.67117 <sup>*</sup>	1.48558	.006
	Com	Adj	5.05054*	1.48558	.002
		Sta	4.67117*	1.48558	.006
CompareRanges	Adj	Sta	.39183	.91836	1.000
		Com	1.80811	.91836	.151
	Sta	Adj	39183	.91836	1.000
		Com	1.41628	.91836	.374
	Com	Adj	-1.80811	.91836	.151
		Sta	-1.41628	.91836	.374

#### Bonferroni

20				
			98.75% Confidence Interval	
Dependent Variable	(I) VisType	(J) VisType	Lower Bound	Upper Bound
FindTime	Adj	Sta	5424	.7156
		Com	5794	.6786
	Sta	Adj	7156	.5424
		Com	6661	.5920
	Com	Adj	6786	.5794
		Sta	5920	.6661
LocateMinMax	Adj	Sta	-2.5240	2.3400
		Com	8408	4.0232
	Sta	Adj	-2.3400	2.5240
		Com	7488	4.1152
	Com	Adj	-4.0232	.8408
		Sta	-4.1152	.7488
CompareValues	Adj	Sta	-4.6892	3.9305
		Com	-9.3604	7407
	Sta	Adj	-3.9305	4.6892
		Com	-8.9810	3613
	Com	Adj	.7407	9.3604
		Sta	.3613	8.9810
CompareRanges	Adj	Sta	-2.2725	3.0561
		Com	8562	4.4724
	Sta	Adj	-3.0561	2.2725
		Com	-1.2480	4.0806
	Com	Adj	-4.4724	.8562
		Sta	-4.0806	1.2480

<sup>\*.</sup> The mean difference is significant at the 0.0125 level.

#### GRAPH

 $\label{locateMinMax} \verb| MEAN(CompareValues) = \verb| MEAN(FindTime) | MEAN(LocateMinMax) | MEAN(CompareValues) |$ 

VisType /MISSING=LISTWISE /INTERVAL CI(95.0).

#### Graph

## Notes

Output Crea	ated	26-AUG-2020 09:54:
Comments		
Input	Data	/Users/niklas/Document s/Doktorandhandlednin g/Kahin/radvis/statistik/ exp1_ct.sav
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	Weight	<none></none>
	Split File	<none></none>
	N of Rows in Working Data File	189
Syntax		GRAPH /LINE(MULTIPLE) =MEAN(FindTime) MEAN (LocateMinMax) MEAN (CompareValues) MEAN (CompareRanges) BY VisType /MISSING=LISTWISE /INTERVAL CI(95.0).
Resources	Processor Time	00:00:00.15
	Elapsed Time	00:00:00.00

