

STATISTICS 3
WS 2017 (Mag. Thomas Forstner)

Course-Number: 366.542

- 12) A study was conducted to examine the differences between young (18 – 40 years), middle-aged (41 – 60 years) and elderly adults (> 60 years) on perceived life satisfaction. In total 18 adults was given a life satisfaction test (known to have high reliability and validity). Scores on this ordinal scale range from 0 to 60 with high scores indicating high life satisfaction.

	Life Satisfaction Score					
Group A (“younger adults”)	34	22	15	27	37	11
Group B (“middle-aged adults”)	42	34	20	42	41	52
Group C (“elderly adults”)	59	48	52	49	46	56

Test for a global difference between the 3 independent groups (type I error = 5%). If a significant global difference exists use an appropriate method to conduct multiple pairwise comparisons.

- 13) Twenty patients with high systolic blood pressure were randomly allocated to one of four treatment medications (standard medication and three other medications). Someone wants to test each of the three other medications against the standard medication.

	systolic blood pressure [mmHg]				
Standard medication	195	159	158	157	155
Medication A	109	110	120	130	140
Medication B	142	143	141	142	142
Medication C	127	138	120	121	122

Choose an appropriate statistical test (type I error = 5%) for evaluating this research question.