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RYFF PSYCHOLOGICAL WELL-BEING SCALE PROCESSING

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METHODOLOGY EXPLANATION:

The Ryff Scale measures psychological well-being across 6 dimensions.
Each dimension is composed of 7 items, rated on a 7-point Likert scale (1=strongly disagree, 7=strongly agree).
This process calculates scores for each AI response file (subject) based on these items.

REVERSE SCORING:

Items worded negatively are reverse-scored to ensure higher scores consistently reflect higher well-being.
Formula used: $(8 - \text{original_score})$. For a 1-7 scale, this is $(8 - \text{original_score})$.
Items identified for reverse-scoring: [1, 2, 3, 4, 6, 7, 11, 13, 17, 20, 21, 22, 23, 27, 29, 31, 35, 36, 37, 38, 40]

SCORING FORMULAS:

- **Subscale Sum:** Simple sum of the 7 valid reversed item scores within each specific subscale.
- **Subscale Average:** Mean (average) of the 7 valid reversed item scores within each specific subscale.
- **Global Ryff Total Score:** Simple SUM of all 42 valid individual item scores (after reverse scoring).
- This total score can range from 42 (all minimums) to 294 (all maximums). For a 1-7 scale, this range is 42 to 294.

VALIDITY THRESHOLD:

Files with 8 or more invalid responses (missing items, non-numeric, out-of-range values, multiple values) are marked as INVALID.
INVALID files are excluded from statistical comparisons and consistency analyses to ensure reliable results.

ACCEPTABLE ITEM VALUES:

Only single integer values from 1 to 7 are considered valid responses for individual items.

✗ Hermes3.1nondet_hermes3_nondet_run7_numbers.json [baseline] - INVALID FILE (8 errors)
This file exceeded the validity threshold (≥ 8 errors) and will be excluded from further analyses.
Example invalid entries: Item 7: null, Item 10: null, Item 13: null, Item 18: null, Item 31: null...

✓ Hermes3.1nondet_hermes3_nondet_run17_numbers.json [baseline] - VALID FILE
Calculated Global Ryff Total Score: 154.000
Number of errors/invalid entries detected: 5
Subscale Sums:
Autonomy: 23.000
Environmental_Mastery: 25.000
Personal_Growth: 34.000
Positive_Relations: 23.000
Purpose_in_Life: 26.000
Self_Acceptance: 23.000
Subscale Averages:
Autonomy: 3.833
Environmental_Mastery: 4.167
Personal_Growth: 4.857
Positive_Relations: 4.600
Purpose_in_Life: 3.714
Self_Acceptance: 3.833

✓ Hermes3.1nondet_hermes3_nondet_run3_numbers.json [baseline] - VALID FILE
Calculated Global Ryff Total Score: 154.000
Number of errors/invalid entries detected: 4
Subscale Sums:
Autonomy: 24.000
Environmental_Mastery: 24.000
Personal_Growth: 30.000
Positive_Relations: 28.000
Purpose_in_Life: 26.000
Self_Acceptance: 22.000
Subscale Averages:

Autonomy: 3.429
Environmental_Mastery: 4.000
Personal_Growth: 4.286
Positive_Relations: 4.667
Purpose_in_Life: 4.333
Self_Acceptance: 3.667

✓ Hermes3.1nondet_hermes3_nondet_run6_numbers.json [baseline] - VALID FILE

Calculated Global Ryff Total Score: 154.000
Number of errors/invalid entries detected: 4
Subscale Sums:
Autonomy: 23.000
Environmental_Mastery: 27.000
Personal_Growth: 27.000
Positive_Relations: 25.000
Purpose_in_Life: 26.000
Self_Acceptance: 26.000
Subscale Averages:
Autonomy: 3.833
Environmental_Mastery: 4.500
Personal_Growth: 3.857
Positive_Relations: 4.167
Purpose_in_Life: 4.333
Self_Acceptance: 3.714

✓ Hermes3.1nondet_hermes3_nondet_run10_numbers.json [baseline] - VALID FILE

Calculated Global Ryff Total Score: 158.000
Number of errors/invalid entries detected: 4
Subscale Sums:
Autonomy: 31.000
Environmental_Mastery: 28.000
Personal_Growth: 30.000
Positive_Relations: 23.000
Purpose_in_Life: 26.000
Self_Acceptance: 20.000
Subscale Averages:
Autonomy: 4.429
Environmental_Mastery: 4.000
Personal_Growth: 4.286
Positive_Relations: 3.286
Purpose_in_Life: 5.200
Self_Acceptance: 4.000

✓ Hermes3.1nondet_hermes3_nondet_run11_numbers.json [baseline] - VALID FILE

Calculated Global Ryff Total Score: 154.000
Number of errors/invalid entries detected: 4
Subscale Sums:
Autonomy: 24.000
Environmental_Mastery: 26.000
Personal_Growth: 21.000
Positive_Relations: 20.000
Purpose_in_Life: 35.000
Self_Acceptance: 28.000
Subscale Averages:
Autonomy: 4.000
Environmental_Mastery: 4.333
Personal_Growth: 3.500
Positive_Relations: 3.333
Purpose_in_Life: 5.000
Self_Acceptance: 4.000

✓ Hermes3.1nondet_hermes3_nondet_run12_numbers.json [baseline] - VALID FILE

Calculated Global Ryff Total Score: 159.000
Number of errors/invalid entries detected: 4
Subscale Sums:
Autonomy: 27.000
Environmental_Mastery: 27.000
Personal_Growth: 34.000
Positive_Relations: 18.000
Purpose_in_Life: 24.000
Self_Acceptance: 29.000
Subscale Averages:
Autonomy: 3.857

Environmental_Mastery: 3.857
Personal_Growth: 4.857
Positive_Relations: 4.500
Purpose_in_Life: 4.000
Self_Acceptance: 4.143

✓ Hermes3.1nondet_hermes3_nondet_run13_numbers.json [baseline] - VALID FILE

Calculated Global Ryff Total Score: 148.000
Number of errors/invalid entries detected: 4
Subscale Sums:
Autonomy: 19.000
Environmental_Mastery: 25.000
Personal_Growth: 31.000
Positive_Relations: 18.000
Purpose_in_Life: 27.000
Self_Acceptance: 28.000
Subscale Averages:
Autonomy: 3.167
Environmental_Mastery: 4.167
Personal_Growth: 4.429
Positive_Relations: 3.600
Purpose_in_Life: 3.857
Self_Acceptance: 4.000

✓ Hermes3.1nondet_hermes3_nondet_run15_numbers.json [baseline] - VALID FILE

Calculated Global Ryff Total Score: 151.000
Number of errors/invalid entries detected: 4
Subscale Sums:
Autonomy: 30.000
Environmental_Mastery: 27.000
Personal_Growth: 27.000
Positive_Relations: 17.000
Purpose_in_Life: 29.000
Self_Acceptance: 21.000
Subscale Averages:
Autonomy: 4.286
Environmental_Mastery: 3.857
Personal_Growth: 3.857
Positive_Relations: 3.400
Purpose_in_Life: 4.143
Self_Acceptance: 4.200

✓ Hermes3.1nondet_hermes3_nondet_run19_numbers.json [baseline] - VALID FILE

Calculated Global Ryff Total Score: 150.000
Number of errors/invalid entries detected: 4
Subscale Sums:
Autonomy: 20.000
Environmental_Mastery: 27.000
Personal_Growth: 26.000
Positive_Relations: 28.000
Purpose_in_Life: 28.000
Self_Acceptance: 21.000
Subscale Averages:
Autonomy: 3.333
Environmental_Mastery: 3.857
Personal_Growth: 4.333
Positive_Relations: 4.000
Purpose_in_Life: 4.667
Self_Acceptance: 3.500

✓ Hermes3.1nondet_hermes3_nondet_run1_numbers.json [baseline] - VALID FILE

Calculated Global Ryff Total Score: 156.000
Number of errors/invalid entries detected: 3
Subscale Sums:
Autonomy: 25.000
Environmental_Mastery: 24.000
Personal_Growth: 27.000
Positive_Relations: 23.000
Purpose_in_Life: 30.000
Self_Acceptance: 27.000
Subscale Averages:
Autonomy: 3.571
Environmental_Mastery: 4.000

Personal_Growth: 4.500
Positive_Relations: 3.833
Purpose_in_Life: 4.286
Self_Acceptance: 3.857

✓ Hermes3.1nondet_hermes3_nondet_run8_numbers.json [baseline] - VALID FILE

Calculated Global Ryff Total Score: 160.000
Number of errors/invalid entries detected: 2
Subscale Sums:
Autonomy: 28.000
Environmental_Mastery: 29.000
Personal_Growth: 29.000
Positive_Relations: 27.000
Purpose_in_Life: 28.000
Self_Acceptance: 19.000
Subscale Averages:
Autonomy: 4.000
Environmental_Mastery: 4.143
Personal_Growth: 4.143
Positive_Relations: 3.857
Purpose_in_Life: 4.000
Self_Acceptance: 3.800

✓ Hermes3.1nondet_hermes3_nondet_run9_numbers.json [baseline] - VALID FILE

Calculated Global Ryff Total Score: 167.000
Number of errors/invalid entries detected: 2
Subscale Sums:
Autonomy: 20.000
Environmental_Mastery: 28.000
Personal_Growth: 36.000
Positive_Relations: 27.000
Purpose_in_Life: 32.000
Self_Acceptance: 24.000
Subscale Averages:
Autonomy: 3.333
Environmental_Mastery: 4.000
Personal_Growth: 5.143
Positive_Relations: 3.857
Purpose_in_Life: 4.571
Self_Acceptance: 4.000

✓ Hermes3.1nondet_hermes3_nondet_run18_numbers.json [baseline] - VALID FILE

Calculated Global Ryff Total Score: 167.000
Number of errors/invalid entries detected: 2
Subscale Sums:
Autonomy: 31.000
Environmental_Mastery: 24.000
Personal_Growth: 28.000
Positive_Relations: 25.000
Purpose_in_Life: 35.000
Self_Acceptance: 24.000
Subscale Averages:
Autonomy: 4.429
Environmental_Mastery: 4.000
Personal_Growth: 4.000
Positive_Relations: 3.571
Purpose_in_Life: 5.000
Self_Acceptance: 4.000

✓ Hermes3.1nondet_hermes3_nondet_run2_numbers.json [baseline] - VALID FILE

Calculated Global Ryff Total Score: 168.000
Number of errors/invalid entries detected: 1
Subscale Sums:
Autonomy: 28.000
Environmental_Mastery: 27.000
Personal_Growth: 31.000
Positive_Relations: 29.000
Purpose_in_Life: 26.000
Self_Acceptance: 27.000
Subscale Averages:
Autonomy: 4.000
Environmental_Mastery: 3.857
Personal_Growth: 4.429

Positive_Relations: 4.143
Purpose_in_Life: 4.333
Self_Acceptance: 3.857

✓ Hermes3.1nondet_hermes3_nondet_run5_numbers.json [baseline] - VALID FILE

Calculated Global Ryff Total Score: 168.000
Number of errors/invalid entries detected: 1
Subscale Sums:
Autonomy: 25.000
Environmental_Mastery: 23.000
Personal_Growth: 28.000
Positive_Relations: 31.000
Purpose_in_Life: 31.000
Self_Acceptance: 30.000
Subscale Averages:
Autonomy: 3.571
Environmental_Mastery: 3.833
Personal_Growth: 4.000
Positive_Relations: 4.429
Purpose_in_Life: 4.429
Self_Acceptance: 4.286

✓ Hermes3.1nondet_hermes3_nondet_run14_numbers.json [baseline] - VALID FILE

Calculated Global Ryff Total Score: 171.000
Number of errors/invalid entries detected: 1
Subscale Sums:
Autonomy: 24.000
Environmental_Mastery: 29.000
Personal_Growth: 30.000
Positive_Relations: 27.000
Purpose_in_Life: 32.000
Self_Acceptance: 29.000
Subscale Averages:
Autonomy: 3.429
Environmental_Mastery: 4.143
Personal_Growth: 4.286
Positive_Relations: 4.500
Purpose_in_Life: 4.571
Self_Acceptance: 4.143

✓ Hermes3.1nondet_hermes3_nondet_run20_numbers.json [baseline] - VALID FILE

Calculated Global Ryff Total Score: 170.000
Number of errors/invalid entries detected: 1
Subscale Sums:
Autonomy: 26.000
Environmental_Mastery: 24.000
Personal_Growth: 28.000
Positive_Relations: 36.000
Purpose_in_Life: 26.000
Self_Acceptance: 30.000
Subscale Averages:
Autonomy: 3.714
Environmental_Mastery: 4.000
Personal_Growth: 4.000
Positive_Relations: 5.143
Purpose_in_Life: 3.714
Self_Acceptance: 4.286

✓ Hermes3.1det_hermes3_deterministic_run1_numbers.json [det] - VALID FILE

Calculated Global Ryff Total Score: 179.000
Number of errors/invalid entries detected: 0
Subscale Sums:
Autonomy: 29.000
Environmental_Mastery: 27.000
Personal_Growth: 36.000
Positive_Relations: 26.000
Purpose_in_Life: 31.000
Self_Acceptance: 30.000
Subscale Averages:
Autonomy: 4.143
Environmental_Mastery: 3.857
Personal_Growth: 5.143
Positive_Relations: 3.714

Purpose_in_Life: 4.429
Self_Acceptance: 4.286

✓ Hermes3.lnondet_hermes3_nondet_run4_numbers.json [baseline] - VALID FILE

Calculated Global Ryff Total Score: 160.000
Number of errors/invalid entries detected: 0
Subscale Sums:
Autonomy: 22.000
Environmental_Mastery: 30.000
Personal_Growth: 26.000
Positive_Relations: 27.000
Purpose_in_Life: 29.000
Self_Acceptance: 26.000
Subscale Averages:
Autonomy: 3.143
Environmental_Mastery: 4.286
Personal_Growth: 3.714
Positive_Relations: 3.857
Purpose_in_Life: 4.143
Self_Acceptance: 3.714

✓ Hermes3.lnondet_hermes3_nondet_run16_numbers.json [baseline] - VALID FILE

Calculated Global Ryff Total Score: 184.000
Number of errors/invalid entries detected: 0
Subscale Sums:
Autonomy: 26.000
Environmental_Mastery: 31.000
Personal_Growth: 37.000
Positive_Relations: 34.000
Purpose_in_Life: 30.000
Self_Acceptance: 26.000
Subscale Averages:
Autonomy: 3.714
Environmental_Mastery: 4.429
Personal_Growth: 5.286
Positive_Relations: 4.857
Purpose_in_Life: 4.286
Self_Acceptance: 3.714

GLOBAL RYFF TOTAL SCORES TABLE (Sum of valid reversed items):

Filename Label Total Score

Hermes3.lnondet_hermes3_nondet_run17_numbers.json baseline 154.000
Hermes3.lnondet_hermes3_nondet_run3_numbers.json baseline 154.000
Hermes3.lnondet_hermes3_nondet_run6_numbers.json baseline 154.000
Hermes3.lnondet_hermes3_nondet_run10_numbers.json baseline 158.000
Hermes3.lnondet_hermes3_nondet_run11_numbers.json baseline 154.000
Hermes3.lnondet_hermes3_nondet_run12_numbers.json baseline 159.000
Hermes3.lnondet_hermes3_nondet_run13_numbers.json baseline 148.000
Hermes3.lnondet_hermes3_nondet_run15_numbers.json baseline 151.000
Hermes3.lnondet_hermes3_nondet_run19_numbers.json baseline 150.000
Hermes3.lnondet_hermes3_nondet_run1_numbers.json baseline 156.000
Hermes3.lnondet_hermes3_nondet_run8_numbers.json baseline 160.000
Hermes3.lnondet_hermes3_nondet_run9_numbers.json baseline 167.000
Hermes3.lnondet_hermes3_nondet_run18_numbers.json baseline 167.000
Hermes3.lnondet_hermes3_nondet_run2_numbers.json baseline 168.000
Hermes3.lnondet_hermes3_nondet_run5_numbers.json baseline 168.000
Hermes3.lnondet_hermes3_nondet_run14_numbers.json baseline 171.000
Hermes3.lnondet_hermes3_nondet_run20_numbers.json baseline 170.000
Hermes3.lndet_hermes3_deterministic_run1_numbers.json det 179.000
Hermes3.lnondet_hermes3_nondet_run4_numbers.json baseline 160.000
Hermes3.lnondet_hermes3_nondet_run16_numbers.json baseline 184.000

SUBSCALE SUMS TABLE:

Filename Label Autonomy Environm Personal Positive Purpose_ Self_Acc

Hermes3.lnondet_hermes3_nondet_run17_numbers.json baseline 23.000 25.000 34.000 23.000
26.000 23.000

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Hermes3.lnondet_hermes3_nondet_run3_numbers.json baseline 24.000 24.000 30.000 28.000
26.000 22.000
Hermes3.lnondet_hermes3_nondet_run6_numbers.json baseline 23.000 27.000 27.000 25.000
26.000 26.000
Hermes3.lnondet_hermes3_nondet_run10_numbers.json baseline 31.000 28.000 30.000 23.000
26.000 20.000
Hermes3.lnondet_hermes3_nondet_run11_numbers.json baseline 24.000 26.000 21.000 20.000
35.000 28.000
Hermes3.lnondet_hermes3_nondet_run12_numbers.json baseline 27.000 27.000 34.000 18.000
24.000 29.000
Hermes3.lnondet_hermes3_nondet_run13_numbers.json baseline 19.000 25.000 31.000 18.000
27.000 28.000
Hermes3.lnondet_hermes3_nondet_run15_numbers.json baseline 30.000 27.000 27.000 17.000
29.000 21.000
Hermes3.lnondet_hermes3_nondet_run19_numbers.json baseline 20.000 27.000 26.000 28.000
28.000 21.000
Hermes3.lnondet_hermes3_nondet_run1_numbers.json baseline 25.000 24.000 27.000 23.000
30.000 27.000
Hermes3.lnondet_hermes3_nondet_run8_numbers.json baseline 28.000 29.000 29.000 27.000
28.000 19.000
Hermes3.lnondet_hermes3_nondet_run9_numbers.json baseline 20.000 28.000 36.000 27.000
32.000 24.000
Hermes3.lnondet_hermes3_nondet_run18_numbers.json baseline 31.000 24.000 28.000 25.000
35.000 24.000
Hermes3.lnondet_hermes3_nondet_run2_numbers.json baseline 28.000 27.000 31.000 29.000
26.000 27.000
Hermes3.lnondet_hermes3_nondet_run5_numbers.json baseline 25.000 23.000 28.000 31.000
31.000 30.000
Hermes3.lnondet_hermes3_nondet_run14_numbers.json baseline 24.000 29.000 30.000 27.000
32.000 29.000
Hermes3.lnondet_hermes3_nondet_run20_numbers.json baseline 26.000 24.000 28.000 36.000
26.000 30.000
Hermes3.lndet_hermes3_deterministic_run1_numbers.json det 29.000 27.000 36.000 26.000
31.000 30.000
Hermes3.lnondet_hermes3_nondet_run4_numbers.json baseline 22.000 30.000 26.000 27.000
29.000 26.000
Hermes3.lnondet_hermes3_nondet_run16_numbers.json baseline 26.000 31.000 37.000 34.000
30.000 26.000

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SUBSCALE AVERAGES TABLE:

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Filename Label Autonomy Environm Personal Positive Purpose_ Self_Acc
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Hermes3.lnondet_hermes3_nondet_run17_numbers.json baseline 3.833 4.167 4.857 4.600
3.714 3.833
Hermes3.lnondet_hermes3_nondet_run3_numbers.json baseline 3.429 4.000 4.286 4.667 4.333
3.667
Hermes3.lnondet_hermes3_nondet_run6_numbers.json baseline 3.833 4.500 3.857 4.167 4.333
3.714
Hermes3.lnondet_hermes3_nondet_run10_numbers.json baseline 4.429 4.000 4.286 3.286
5.200 4.000
Hermes3.lnondet_hermes3_nondet_run11_numbers.json baseline 4.000 4.333 3.500 3.333
5.000 4.000
Hermes3.lnondet_hermes3_nondet_run12_numbers.json baseline 3.857 3.857 4.857 4.500
4.000 4.143
Hermes3.lnondet_hermes3_nondet_run13_numbers.json baseline 3.167 4.167 4.429 3.600
3.857 4.000
Hermes3.lnondet_hermes3_nondet_run15_numbers.json baseline 4.286 3.857 3.857 3.400
4.143 4.200
Hermes3.lnondet_hermes3_nondet_run19_numbers.json baseline 3.333 3.857 4.333 4.000
4.667 3.500
Hermes3.lnondet_hermes3_nondet_run1_numbers.json baseline 3.571 4.000 4.500 3.833 4.286
3.857
Hermes3.lnondet_hermes3_nondet_run8_numbers.json baseline 4.000 4.143 4.143 3.857 4.000
3.800
Hermes3.lnondet_hermes3_nondet_run9_numbers.json baseline 3.333 4.000 5.143 3.857 4.571
4.000
Hermes3.lnondet_hermes3_nondet_run18_numbers.json baseline 4.429 4.000 4.000 3.571
5.000 4.000

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Hermes3.1nondet_hermes3_nondet_run2_numbers.json baseline 4.000 3.857 4.429 4.143 4.333
3.857
Hermes3.1nondet_hermes3_nondet_run5_numbers.json baseline 3.571 3.833 4.000 4.429 4.429
4.286
Hermes3.1nondet_hermes3_nondet_run14_numbers.json baseline 3.429 4.143 4.286 4.500
4.571 4.143
Hermes3.1nondet_hermes3_nondet_run20_numbers.json baseline 3.714 4.000 4.000 5.143
3.714 4.286
Hermes3.1det_hermes3_deterministic_run1_numbers.json det 4.143 3.857 5.143 3.714 4.429
4.286
Hermes3.1nondet_hermes3_nondet_run4_numbers.json baseline 3.143 4.286 3.714 3.857 4.143
3.714
Hermes3.1nondet_hermes3_nondet_run16_numbers.json baseline 3.714 4.429 5.286 4.857
4.286 3.714

SUBSCALE EXTREMES ANALYSIS (Based on Subscale Averages):

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INDIVIDUAL FILE ANALYSIS:

Hermes3.1nondet_hermes3_nondet_run17_numbers.json [baseline]:
Highest: Personal_Growth (4.857)
Lowest: Purpose_in_Life (3.714)
Range: 1.143

Hermes3.1nondet_hermes3_nondet_run3_numbers.json [baseline]:
Highest: Positive_Relations (4.667)
Lowest: Autonomy (3.429)
Range: 1.238

Hermes3.1nondet_hermes3_nondet_run6_numbers.json [baseline]:
Highest: Environmental_Mastery (4.500)
Lowest: Self_Acceptance (3.714)
Range: 0.786

Hermes3.1nondet_hermes3_nondet_run10_numbers.json [baseline]:
Highest: Purpose_in_Life (5.200)
Lowest: Positive_Relations (3.286)
Range: 1.914

Hermes3.1nondet_hermes3_nondet_run11_numbers.json [baseline]:
Highest: Purpose_in_Life (5.000)
Lowest: Positive_Relations (3.333)
Range: 1.667

Hermes3.1nondet_hermes3_nondet_run12_numbers.json [baseline]:
Highest: Personal_Growth (4.857)
Lowest: Autonomy (3.857)
Range: 1.000

Hermes3.1nondet_hermes3_nondet_run13_numbers.json [baseline]:
Highest: Personal_Growth (4.429)
Lowest: Autonomy (3.167)
Range: 1.262

Hermes3.1nondet_hermes3_nondet_run15_numbers.json [baseline]:
Highest: Autonomy (4.286)
Lowest: Positive_Relations (3.400)
Range: 0.886

Hermes3.1nondet_hermes3_nondet_run19_numbers.json [baseline]:
Highest: Purpose_in_Life (4.667)
Lowest: Autonomy (3.333)
Range: 1.333

Hermes3.1nondet_hermes3_nondet_run1_numbers.json [baseline]:
Highest: Personal_Growth (4.500)
Lowest: Autonomy (3.571)
Range: 0.929

Hermes3.1nondet_hermes3_nondet_run8_numbers.json [baseline]:
Highest: Environmental_Mastery (4.143)
Lowest: Self_Acceptance (3.800)
Range: 0.343

Hermes3.1nondet_hermes3_nondet_run9_numbers.json [baseline]:
 Highest: Personal_Growth (5.143)
 Lowest: Autonomy (3.333)
 Range: 1.810

Hermes3.1nondet_hermes3_nondet_run18_numbers.json [baseline]:
 Highest: Purpose_in_Life (5.000)
 Lowest: Positive_Relations (3.571)
 Range: 1.429

Hermes3.1nondet_hermes3_nondet_run2_numbers.json [baseline]:
 Highest: Personal_Growth (4.429)
 Lowest: Environmental_Mastery (3.857)
 Range: 0.571

Hermes3.1nondet_hermes3_nondet_run5_numbers.json [baseline]:
 Highest: Positive_Relations (4.429)
 Lowest: Autonomy (3.571)
 Range: 0.857

Hermes3.1nondet_hermes3_nondet_run14_numbers.json [baseline]:
 Highest: Purpose_in_Life (4.571)
 Lowest: Autonomy (3.429)
 Range: 1.143

Hermes3.1nondet_hermes3_nondet_run20_numbers.json [baseline]:
 Highest: Positive_Relations (5.143)
 Lowest: Autonomy (3.714)
 Range: 1.429

Hermes3.1det_hermes3_deterministic_run1_numbers.json [det]:
 Highest: Personal_Growth (5.143)
 Lowest: Positive_Relations (3.714)
 Range: 1.429

Hermes3.1nondet_hermes3_nondet_run4_numbers.json [baseline]:
 Highest: Environmental_Mastery (4.286)
 Lowest: Autonomy (3.143)
 Range: 1.143

Hermes3.1nondet_hermes3_nondet_run16_numbers.json [baseline]:
 Highest: Personal_Growth (5.286)
 Lowest: Autonomy (3.714)
 Range: 1.571

OVERALL ANALYSIS ACROSS ALL FILES:

Average subscale scores across 20 files:
 Purpose_in_Life : 4.350
 Personal_Growth : 4.345
 Positive_Relations : 4.066
 Environmental_Mastery: 4.064
 Self_Acceptance : 3.950
 Autonomy : 3.761

OVERALL EXTREMES:
 Highest scoring subscale: Purpose_in_Life (4.350)
 Lowest scoring subscale: Autonomy (3.761)
 Overall range: 0.590

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PROCESSING SUMMARY:
 Total files attempted: 21
 Valid files for analysis: 20
 Invalid files (excluded): 1
 Success rate: 95.2%

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INTERNAL CONSISTENCY (WITHIN SUBSCALE) ANALYSIS

METHODOLOGY EXPLANATION:

This analysis assesses if an AI responded consistently to items measuring the same underlying construct.
We calculate the Standard Deviation (SD) of the reversed item scores *within each subscale* for *each file*.
A minimum of 5 valid items (out of 7) is required to calculate the SD for a subscale to ensure the measure is meaningful.

CONSISTENCY RULES & THRESHOLDS:

1. ****Subscale Inconsistency:**** A subscale is flagged if its item response SD > 2.0.
2. ****Global Inconsistency:**** An entire file is flagged as 'Globally Inconsistent' if it has MORE THAN 2 inconsistent subscales (i.e., fewer than 4 consistent scales).

Hermes3.1nondet_hermes3_nondet_run7_numbers.json [baseline]: SKIPPED (marked as INVALID in processing stage).

ANALYZING FILE: Hermes3.1nondet_hermes3_nondet_run17_numbers.json [baseline]

Subscale Item Response Standard Deviations:

- ✓ Autonomy : 1.722 --- Scores: (4, 3, 4, 2, 7, 3)
- ✓ Environmental_Mastery: 0.408 --- Scores: (4, 4, 5, 4, 4, 4)
- ✓ Personal_Growth : 1.069 --- Scores: (6, 4, 6, 4, 6, 4, 4)
- ✓ Positive_Relations : 1.949 --- Scores: (4, 6, 2, 7, 4)
- ✓ Purpose_in_Life : 0.756 --- Scores: (4, 4, 2, 4, 4, 4, 4)
- ✓ Self_Acceptance : 0.753 --- Scores: (4, 5, 3, 4, 4, 3)
- ✓ This file is considered GLOBALLY CONSISTENT (0 inconsistent scales found).

ANALYZING FILE: Hermes3.1nondet_hermes3_nondet_run3_numbers.json [baseline]

Subscale Item Response Standard Deviations:

- ✓ Autonomy : 0.535 --- Scores: (3, 4, 4, 3, 4, 3, 3)
- ✓ Environmental_Mastery: 0.000 --- Scores: (4, 4, 4, 4, 4, 4)
- Personal_Growth : 2.138 --- Scores: (1, 5, 7, 4, 2, 6, 5)
- ✓ Positive_Relations : 1.366 --- Scores: (4, 7, 5, 4, 5, 3)
- ✓ Purpose_in_Life : 0.816 --- Scores: (5, 4, 4, 5, 3, 5)
- ✓ Self_Acceptance : 0.516 --- Scores: (3, 4, 4, 4, 4, 3)
- ✓ This file is considered GLOBALLY CONSISTENT (1 inconsistent scales found).

ANALYZING FILE: Hermes3.1nondet_hermes3_nondet_run6_numbers.json [baseline]

Subscale Item Response Standard Deviations:

- ✓ Autonomy : 0.983 --- Scores: (2, 4, 4, 5, 4, 4)
- ✓ Environmental_Mastery: 1.225 --- Scores: (4, 7, 4, 4, 4, 4)
- ✓ Personal_Growth : 1.773 --- Scores: (5, 2, 6, 4, 5, 1, 4)
- ✓ Positive_Relations : 0.983 --- Scores: (3, 4, 4, 4, 4, 6)
- ✓ Purpose_in_Life : 1.033 --- Scores: (4, 4, 3, 4, 5, 6)
- ✓ Self_Acceptance : 1.254 --- Scores: (4, 4, 4, 4, 5, 1, 4)
- ✓ This file is considered GLOBALLY CONSISTENT (0 inconsistent scales found).

ANALYZING FILE: Hermes3.1nondet_hermes3_nondet_run10_numbers.json [baseline]

Subscale Item Response Standard Deviations:

- ✓ Autonomy : 1.272 --- Scores: (4, 2, 4, 6, 5, 5, 5)
- ✓ Environmental_Mastery: 0.577 --- Scores: (4, 3, 4, 4, 4, 4, 5)
- ✓ Personal_Growth : 1.976 --- Scores: (4, 6, 7, 1, 3, 4, 5)
- ✓ Positive_Relations : 1.380 --- Scores: (3, 4, 5, 2, 4, 1, 4)
- ✓ Purpose_in_Life : 1.789 --- Scores: (3, 7, 5, 4, 7)
- ✓ Self_Acceptance : 0.000 --- Scores: (4, 4, 4, 4, 4, 4)
- ✓ This file is considered GLOBALLY CONSISTENT (0 inconsistent scales found).

ANALYZING FILE: Hermes3.1nondet_hermes3_nondet_run11_numbers.json [baseline]

Subscale Item Response Standard Deviations:

- ✓ Autonomy : 0.632 --- Scores: (4, 3, 4, 4, 5, 4)
- ✓ Environmental_Mastery: 0.516 --- Scores: (4, 5, 5, 4, 4, 4)
- ✓ Personal_Growth : 1.225 --- Scores: (5, 2, 4, 2, 4, 4)
- ✓ Positive_Relations : 1.211 --- Scores: (3, 4, 2, 5, 4, 2)
- ✓ Purpose_in_Life : 1.414 --- Scores: (7, 4, 4, 4, 5, 4, 7)
- ✓ Self_Acceptance : 0.000 --- Scores: (4, 4, 4, 4, 4, 4, 4)
- ✓ This file is considered GLOBALLY CONSISTENT (0 inconsistent scales found).

ANALYZING FILE: Hermes3.1nondet_hermes3_nondet_run12_numbers.json [baseline]

Subscale Item Response Standard Deviations:

- ✓ Autonomy : 1.464 --- Scores: (3, 4, 5, 5, 1, 5, 4)
- ✓ Environmental_Mastery: 0.378 --- Scores: (4, 3, 4, 4, 4, 4, 4)
- ✓ Personal_Growth : 1.773 --- Scores: (4, 3, 7, 4, 3, 7, 6)
- Positive_Relations : N/A (Cannot calculate. Found 4/7 valid items, need at least 5).
- ✓ Purpose_in_Life : 1.673 --- Scores: (2, 4, 4, 3, 4, 7)

✓ Self_Acceptance : 0.378 --- Scores: (4, 4, 4, 4, 5, 4, 4)
✓ This file is considered GLOBALLY CONSISTENT (0 inconsistent scales found).

ANALYZING FILE: Hermes3.1nondet_hermes3_nondet_run13_numbers.json [baseline]
Subscale Item Response Standard Deviations:

✓ Autonomy : 1.169 --- Scores: (3, 3, 2, 2, 4, 5)
✓ Environmental_Mastery: 0.408 --- Scores: (4, 4, 4, 4, 4, 5)
✓ Personal_Growth : 1.512 --- Scores: (7, 3, 6, 4, 3, 4, 4)
✓ Positive_Relations : 1.140 --- Scores: (4, 5, 2, 4, 3)
✓ Purpose_in_Life : 0.378 --- Scores: (4, 4, 4, 3, 4, 4, 4)
✓ Self_Acceptance : 0.577 --- Scores: (4, 3, 4, 5, 4, 4, 4)
✓ This file is considered GLOBALLY CONSISTENT (0 inconsistent scales found).

ANALYZING FILE: Hermes3.1nondet_hermes3_nondet_run15_numbers.json [baseline]
Subscale Item Response Standard Deviations:

✓ Autonomy : 1.254 --- Scores: (7, 4, 4, 3, 4, 4, 4)
✓ Environmental_Mastery: 0.378 --- Scores: (4, 3, 4, 4, 4, 4, 4)
✓ Personal_Growth : 1.215 --- Scores: (4, 2, 6, 4, 3, 4, 4)
✓ Positive_Relations : 0.894 --- Scores: (4, 3, 2, 4, 4)
✓ Purpose_in_Life : 1.464 --- Scores: (4, 4, 4, 4, 4, 2, 7)
✓ Self_Acceptance : 1.095 --- Scores: (4, 3, 4, 6, 4)
✓ This file is considered GLOBALLY CONSISTENT (0 inconsistent scales found).

ANALYZING FILE: Hermes3.1nondet_hermes3_nondet_run19_numbers.json [baseline]
Subscale Item Response Standard Deviations:

✓ Autonomy : 1.506 --- Scores: (6, 4, 3, 2, 2, 3)
✓ Environmental_Mastery: 0.378 --- Scores: (4, 3, 4, 4, 4, 4, 4)
✓ Personal_Growth : 1.862 --- Scores: (6, 5, 4, 1, 6, 4)
✓ Positive_Relations : 1.291 --- Scores: (4, 4, 6, 2, 3, 5, 4)
✓ Purpose_in_Life : 0.816 --- Scores: (6, 4, 4, 5, 4, 5)
✓ Self_Acceptance : 1.225 --- Scores: (4, 4, 4, 4, 1, 4)
✓ This file is considered GLOBALLY CONSISTENT (0 inconsistent scales found).

ANALYZING FILE: Hermes3.1nondet_hermes3_nondet_run1_numbers.json [baseline]
Subscale Item Response Standard Deviations:

✓ Autonomy : 0.976 --- Scores: (2, 3, 4, 3, 4, 4, 5)
✓ Environmental_Mastery: 0.000 --- Scores: (4, 4, 4, 4, 4, 4, 4)
✓ Personal_Growth : 1.378 --- Scores: (4, 3, 7, 4, 5, 4)
✓ Positive_Relations : 0.983 --- Scores: (4, 4, 2, 4, 5, 4)
✓ Purpose_in_Life : 0.951 --- Scores: (5, 4, 6, 4, 4, 3, 4)
✓ Self_Acceptance : 0.378 --- Scores: (4, 4, 4, 4, 4, 4, 3)
✓ This file is considered GLOBALLY CONSISTENT (0 inconsistent scales found).

ANALYZING FILE: Hermes3.1nondet_hermes3_nondet_run8_numbers.json [baseline]
Subscale Item Response Standard Deviations:

✓ Autonomy : 1.000 --- Scores: (3, 5, 3, 5, 5, 3, 4)
✓ Environmental_Mastery: 0.378 --- Scores: (5, 4, 4, 4, 4, 4, 4)
✓ Personal_Growth : 1.574 --- Scores: (4, 2, 7, 4, 3, 5, 4)
✓ Positive_Relations : 1.864 --- Scores: (3, 5, 4, 7, 4, 1, 3)
✓ Purpose_in_Life : 0.000 --- Scores: (4, 4, 4, 4, 4, 4, 4)
✓ Self_Acceptance : 0.447 --- Scores: (4, 4, 4, 4, 3)
✓ This file is considered GLOBALLY CONSISTENT (0 inconsistent scales found).

ANALYZING FILE: Hermes3.1nondet_hermes3_nondet_run9_numbers.json [baseline]
Subscale Item Response Standard Deviations:

✓ Autonomy : 1.033 --- Scores: (3, 5, 3, 4, 2, 3)
✓ Environmental_Mastery: 0.000 --- Scores: (4, 4, 4, 4, 4, 4, 4)
✓ Personal_Growth : 1.574 --- Scores: (7, 3, 6, 4, 4, 7, 5)
✓ Positive_Relations : 0.690 --- Scores: (4, 4, 4, 3, 3, 5, 4)
✓ Purpose_in_Life : 0.976 --- Scores: (6, 4, 4, 4, 4, 4, 6)
✓ Self_Acceptance : 0.632 --- Scores: (4, 4, 3, 4, 5, 4)
✓ This file is considered GLOBALLY CONSISTENT (0 inconsistent scales found).

ANALYZING FILE: Hermes3.1nondet_hermes3_nondet_run18_numbers.json [baseline]
Subscale Item Response Standard Deviations:

✓ Autonomy : 0.535 --- Scores: (5, 4, 5, 4, 5, 4, 4)
✓ Environmental_Mastery: 0.000 --- Scores: (4, 4, 4, 4, 4, 4, 4)
✓ Personal_Growth : 1.633 --- Scores: (5, 3, 7, 4, 2, 4, 3)
✓ Positive_Relations : 0.535 --- Scores: (4, 3, 3, 3, 4, 4, 4)
✓ Purpose_in_Life : 1.414 --- Scores: (7, 4, 7, 4, 5, 4, 4)
✓ Self_Acceptance : 0.000 --- Scores: (4, 4, 4, 4, 4, 4, 4)
✓ This file is considered GLOBALLY CONSISTENT (0 inconsistent scales found).

ANALYZING FILE: Hermes3.1nondet_hermes3_nondet_run2_numbers.json [baseline]
 Subscale Item Response Standard Deviations:
 ✓ Autonomy : 1.414 --- Scores: (3, 7, 3, 3, 4, 4, 4)
 ✓ Environmental_Mastery: 0.378 --- Scores: (4, 4, 4, 4, 4, 4, 3)
 ✓ Personal_Growth : 1.902 --- Scores: (3, 2, 7, 4, 4, 7, 4)
 ✓ Positive_Relations : 1.676 --- Scores: (3, 5, 1, 5, 4, 6, 5)
 ✓ Purpose_in_Life : 0.516 --- Scores: (4, 4, 4, 5, 4, 5)
 ✓ Self_Acceptance : 0.378 --- Scores: (4, 4, 3, 4, 4, 4, 4)
 ✓ This file is considered GLOBALLY CONSISTENT (0 inconsistent scales found).

ANALYZING FILE: Hermes3.1nondet_hermes3_nondet_run5_numbers.json [baseline]
 Subscale Item Response Standard Deviations:
 ✓ Autonomy : 0.976 --- Scores: (2, 5, 4, 3, 4, 4, 3)
 ✓ Environmental_Mastery: 0.408 --- Scores: (4, 3, 4, 4, 4, 4, 4)
 ✓ Personal_Growth : 1.291 --- Scores: (3, 2, 6, 4, 4, 5, 4)
 ✓ Positive_Relations : 0.976 --- Scores: (3, 5, 4, 6, 4, 5, 4)
 ✓ Purpose_in_Life : 0.787 --- Scores: (5, 4, 4, 4, 4, 6, 4)
 ✓ Self_Acceptance : 1.380 --- Scores: (5, 3, 3, 7, 4, 4, 4)
 ✓ This file is considered GLOBALLY CONSISTENT (0 inconsistent scales found).

ANALYZING FILE: Hermes3.1nondet_hermes3_nondet_run14_numbers.json [baseline]
 Subscale Item Response Standard Deviations:
 ✓ Autonomy : 1.134 --- Scores: (2, 4, 5, 3, 4, 2, 4)
 ✓ Environmental_Mastery: 0.378 --- Scores: (4, 4, 4, 4, 5, 4, 4)
 ✓ Personal_Growth : 0.756 --- Scores: (5, 3, 5, 4, 5, 4, 4)
 ✓ Positive_Relations : 1.049 --- Scores: (5, 5, 3, 4, 6, 4)
 ✓ Purpose_in_Life : 1.397 --- Scores: (4, 3, 7, 4, 4, 4, 6)
 ✓ Self_Acceptance : 0.378 --- Scores: (4, 4, 4, 4, 4, 5, 4)
 ✓ This file is considered GLOBALLY CONSISTENT (0 inconsistent scales found).

ANALYZING FILE: Hermes3.1nondet_hermes3_nondet_run20_numbers.json [baseline]
 Subscale Item Response Standard Deviations:
 ✓ Autonomy : 0.488 --- Scores: (3, 3, 4, 4, 4, 4, 4)
 ✓ Environmental_Mastery: 0.000 --- Scores: (4, 4, 4, 4, 4, 4, 4)
 ✓ Personal_Growth : 0.816 --- Scores: (4, 3, 5, 4, 3, 5, 4)
 ✓ Positive_Relations : 0.900 --- Scores: (5, 5, 6, 6, 6, 4, 4)
 ✓ Purpose_in_Life : 0.488 --- Scores: (4, 4, 3, 4, 4, 3, 4)
 ✓ Self_Acceptance : 1.254 --- Scores: (4, 4, 4, 4, 4, 3, 7)
 ✓ This file is considered GLOBALLY CONSISTENT (0 inconsistent scales found).

ANALYZING FILE: Hermes3.1det_hermes3_deterministic_run1_numbers.json [det]
 Subscale Item Response Standard Deviations:
 ✓ Autonomy : 1.574 --- Scores: (4, 2, 3, 5, 7, 4, 4)
 ✓ Environmental_Mastery: 0.378 --- Scores: (3, 4, 4, 4, 4, 4, 4)
 ✓ Personal_Growth : 1.574 --- Scores: (7, 3, 6, 4, 4, 7, 5)
 ✓ Positive_Relations : 0.951 --- Scores: (5, 4, 3, 2, 4, 4, 4)
 ✓ Purpose_in_Life : 0.976 --- Scores: (5, 4, 4, 4, 5, 3, 6)
 ✓ Self_Acceptance : 0.488 --- Scores: (4, 4, 4, 4, 5, 4, 5)
 ✓ This file is considered GLOBALLY CONSISTENT (0 inconsistent scales found).

ANALYZING FILE: Hermes3.1nondet_hermes3_nondet_run4_numbers.json [baseline]
 Subscale Item Response Standard Deviations:
 ✓ Autonomy : 1.345 --- Scores: (3, 1, 4, 3, 5, 4, 2)
 ✓ Environmental_Mastery: 0.756 --- Scores: (4, 4, 4, 4, 4, 6, 4)
 ✓ Personal_Growth : 1.799 --- Scores: (6, 2, 6, 4, 4, 2, 2)
 ✓ Positive_Relations : 0.900 --- Scores: (3, 5, 4, 3, 4, 5, 3)
 ✓ Purpose_in_Life : 1.345 --- Scores: (4, 3, 4, 4, 3, 4, 7)
 ✓ Self_Acceptance : 0.756 --- Scores: (4, 3, 3, 3, 5, 4, 4)
 ✓ This file is considered GLOBALLY CONSISTENT (0 inconsistent scales found).

ANALYZING FILE: Hermes3.1nondet_hermes3_nondet_run16_numbers.json [baseline]
 Subscale Item Response Standard Deviations:
 ✓ Autonomy : 0.951 --- Scores: (4, 3, 4, 2, 4, 4, 5)
 ✓ Environmental_Mastery: 1.134 --- Scores: (4, 4, 4, 7, 4, 4, 4)
 ✓ Personal_Growth : 1.254 --- Scores: (7, 5, 7, 4, 5, 4, 5)
 ✓ Positive_Relations : 1.215 --- Scores: (4, 5, 4, 6, 4, 7, 4)
 ✓ Purpose_in_Life : 1.254 --- Scores: (4, 3, 4, 4, 4, 4, 7)
 ✓ Self_Acceptance : 0.488 --- Scores: (4, 4, 4, 3, 4, 4, 3)
 ✓ This file is considered GLOBALLY CONSISTENT (0 inconsistent scales found).

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OVERALL CONSISTENCY SUMMARY

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Total valid files analyzed for consistency: 20

Breakdown by number of inconsistent scales per file:
 - Files with exactly 1 inconsistent scale(s): 1

Rule: A file is 'Globally Inconsistent' if it has >2 inconsistent scales (i.e., fewer than 4 consistent scales).
 Total files flagged as Globally Inconsistent: 0
 Overall File Consistency Rate (files deemed 'Globally Consistent'): 100.0%

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GROUP COMPARISON: BASELINE vs DET

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METHODOLOGY EXPLANATION (GLOBAL RYFF TOTAL SCORE COMPARISON):
 This analysis compares the **Global Ryff Total Scores** (sum of all valid reversed items) between the selected groups.
 Each AI response file yields one Global Ryff Total Score, ranging from 42 to 294 (42 to 294 for 1-7 Likert).

DESCRIPTIVE STATISTICS (Global Ryff Total Scores):
 Group A (baseline): Mean = 160.684, n = 19, SD = 9.141
 Group B (det): Mean = 179.000, n = 1
 Absolute difference between means: 18.316

COMPARISON SCENARIO: MULTIPLE INSTANCES (Group A) vs. ONE PEER (Group B)
 This is ideal for comparing multiple non-deterministic AI runs (Group A) to a deterministic baseline AI (Group B).
Statistical Test: One-Sample t-test.
Goal: To determine if the mean Global Ryff Total Score of Group A significantly differs from the single Global Ryff Total Score of Group B.
Formula (t-statistic): $t = (\text{Mean_GroupA} - \text{Score_GroupB}) / (\text{SD_GroupA} / \sqrt{n_GroupA})$
Null Hypothesis (H0): Mean of Group A's Global Scores = Group B's single Global Score.
Alternative Hypothesis (H1): Mean of Group A's Global Scores \neq Mean of Group B's Global Score.
Cohen's d Formula: $d = |\text{Mean_GroupA} - \text{Score_GroupB}| / \text{SD_GroupA}$

STATISTICAL TEST RESULTS (Global Ryff Total Scores):
 Test Performed: One-Sample t-test (Group A vs Group B's single score)
 t-statistic: -8.734
 Degrees of freedom (df): 18.0
 p-value: 0.000
 Effect size (Cohen's d): 2.004

INTERPRETATION (Global Ryff Total Scores):
 ■■■■ HIGHLY STATISTICALLY SIGNIFICANT difference (p < 0.001)
 Very strong evidence that Global Ryff Total Scores differ between groups.
 ■■ LARGE PRACTICAL EFFECT SIZE (d ≥ 0.8)
 The difference in Global Ryff Total Scores is substantial and practically meaningful.

OVERALL ASSESSMENT (Global Ryff Total Scores):
 ■ MEANINGFUL DIFFERENCE: Both statistically significant AND practically important.
 The AI's overall well-being assessments are reliably and substantially different between these conditions.

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INITIATING SUBSCALE LEVEL COMPARISON...

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SUBSCALE LEVEL COMPARISON:

Subscale: Autonomy
 Group A (baseline): Mean=3.741, SD=0.391 (n=19)
 Group B (det): Mean=4.143 (n=1)
 Absolute difference: 0.402
 Formula: $t = (\text{Mean_GroupA} - \text{Single_Score_GroupB}) / (\text{SD_GroupA} / \sqrt{n_GroupA})$
 Cohen's d Formula: $d = |\text{Mean_GroupA} - \text{Single_Score_GroupB}| / \text{SD_GroupA}$
 Statistical Test: One-sample t-test
 t-statistic: -4.487
 Degrees of freedom: 18.0

p-value: 0.000
 Effect size (Cohen's d): 1.029
 ■■ Statistically Significant Difference (p < 0.05)
 ■■ LARGE practical effect size (d ≥ 0.8)

Subscale: Environmental_Mastery
 Group A (baseline): Mean=4.075, SD=0.201 (n=19)
 Group B (det): Mean=3.857 (n=1)
 Absolute difference: 0.218
 Formula: $t = (\text{Mean_GroupA} - \text{Single_Score_GroupB}) / (\text{SD_GroupA} / \sqrt{n_GroupA})$
 Cohen's d Formula: $d = |\text{Mean_GroupA} - \text{Single_Score_GroupB}| / \text{SD_GroupA}$
 Statistical Test: One-sample t-test
 t-statistic: 4.736
 Degrees of freedom: 18.0
 p-value: 0.000
 Effect size (Cohen's d): 1.087
 ■■ Statistically Significant Difference (p < 0.05)
 ■■ LARGE practical effect size (d ≥ 0.8)

Subscale: Personal_Growth
 Group A (baseline): Mean=4.303, SD=0.474 (n=19)
 Group B (det): Mean=5.143 (n=1)
 Absolute difference: 0.840
 Formula: $t = (\text{Mean_GroupA} - \text{Single_Score_GroupB}) / (\text{SD_GroupA} / \sqrt{n_GroupA})$
 Cohen's d Formula: $d = |\text{Mean_GroupA} - \text{Single_Score_GroupB}| / \text{SD_GroupA}$
 Statistical Test: One-sample t-test
 t-statistic: -7.718
 Degrees of freedom: 18.0
 p-value: 0.000
 Effect size (Cohen's d): 1.771
 ■■ Statistically Significant Difference (p < 0.05)
 ■■ LARGE practical effect size (d ≥ 0.8)

Subscale: Positive_Relations
 Group A (baseline): Mean=4.084, SD=0.537 (n=19)
 Group B (det): Mean=3.714 (n=1)
 Absolute difference: 0.370
 Formula: $t = (\text{Mean_GroupA} - \text{Single_Score_GroupB}) / (\text{SD_GroupA} / \sqrt{n_GroupA})$
 Cohen's d Formula: $d = |\text{Mean_GroupA} - \text{Single_Score_GroupB}| / \text{SD_GroupA}$
 Statistical Test: One-sample t-test
 t-statistic: 3.003
 Degrees of freedom: 18.0
 p-value: 0.008
 Effect size (Cohen's d): 0.689
 ■■ Statistically Significant Difference (p < 0.05)
 ■■ MEDIUM practical effect size (d ≥ 0.5)

Subscale: Purpose_in_Life
 Group A (baseline): Mean=4.346, SD=0.419 (n=19)
 Group B (det): Mean=4.429 (n=1)
 Absolute difference: 0.082
 Formula: $t = (\text{Mean_GroupA} - \text{Single_Score_GroupB}) / (\text{SD_GroupA} / \sqrt{n_GroupA})$
 Cohen's d Formula: $d = |\text{Mean_GroupA} - \text{Single_Score_GroupB}| / \text{SD_GroupA}$
 Statistical Test: One-sample t-test
 t-statistic: -0.855
 Degrees of freedom: 18.0
 p-value: 0.404
 Effect size (Cohen's d): 0.196
 ✓ No Statistically Significant Difference (p ≥ 0.05)
 ✓ NEGLIGIBLE practical effect size (d < 0.2)

Subscale: Self_Acceptance
 Group A (baseline): Mean=3.932, SD=0.220 (n=19)
 Group B (det): Mean=4.286 (n=1)
 Absolute difference: 0.353
 Formula: $t = (\text{Mean_GroupA} - \text{Single_Score_GroupB}) / (\text{SD_GroupA} / \sqrt{n_GroupA})$
 Cohen's d Formula: $d = |\text{Mean_GroupA} - \text{Single_Score_GroupB}| / \text{SD_GroupA}$
 Statistical Test: One-sample t-test
 t-statistic: -7.000
 Degrees of freedom: 18.0
 p-value: 0.000
 Effect size (Cohen's d): 1.606
 ■■ Statistically Significant Difference (p < 0.05)

■ ■ LARGE practical effect size ($d \geq 0.8$)

■ ■ SUMMARY: SUBSCALES WITH STATISTICALLY SIGNIFICANT DIFFERENCES:

- Autonomy
- Environmental_Mastery
- Personal_Growth
- Positive_Relations
- Self_Acceptance

CROSS-FILE SIMILARITY ANALYSIS

METHODOLOGY EXPLANATION:

This analysis examines the overall variability and similarity of Ryff scores across all valid loaded AI response files.

It helps identify if AI responses, overall, tend to cluster closely or if there's significant dispersion, potentially indicating outliers or diverse AI 'behavior'.

STATISTICAL MEASURES USED:

1. **DESCRIPTIVE STATISTICS (Mean, Standard Deviation, Range):**
 - Provide a basic summary of the central tendency and spread of Global Ryff Total Scores across all files.
2. **COEFFICIENT OF VARIATION (CV):**
 - Formula: $CV = (\text{Standard Deviation} / \text{Mean})$
 - Measures relative variability, expressing the standard deviation as a percentage of the mean.
 - Useful for comparing variability across measures with different scales or means.
3. **Z-SCORE OUTLIER DETECTION:**
 - Formula: $z = (\text{individual_score} - \text{overall_mean}) / \text{overall_standard_deviation}$
 - Identifies how many standard deviations an individual file's score is from the overall mean.

THRESHOLDS FOR CONCERN:

- **Overall CV < 0.10:** Indicates very low relative variability (extremely high similarity across files).
- **Overall CV > 0.20:** Indicates moderately high relative variability (some dispersion across files).
- **Overall CV > 0.30:** Indicates high relative variability (significant dispersion, potential inconsistency across files or diverse AI types).
- ** $|z| > 2.0$:** Indicates a potential outlier (score is more than 2 standard deviations from the mean).
- ** $|z| > 3.0$:** Indicates an extreme outlier (score is more than 3 standard deviations from the mean).

OVERALL STATISTICS FOR GLOBAL RYFF TOTAL SCORES (20 valid scores):

Mean: 161.600

Standard Deviation (SD): 9.795

Range: 148.000 - 184.000

Coefficient of Variation (CV): 0.061

✓ Very Low relative variability (extremely high overall similarity across files).

SUBSCALE LEVEL SIMILARITY (Mean & SD of Subscale Averages across files):

Autonomy: Mean=3.761, SD=0.391, CV=0.104

Environmental_Mastery: Mean=4.064, SD=0.201, CV=0.050

Personal_Growth: Mean=4.345, SD=0.498, CV=0.115

Positive_Relations: Mean=4.066, SD=0.529, CV=0.130

Purpose_in_Life: Mean=4.350, SD=0.408, CV=0.094

Self_Acceptance: Mean=3.950, SD=0.228, CV=0.058

Most variable subscale across files (highest CV): Positive_Relations (CV: 0.130)

Least variable subscale across files (lowest CV): Environmental_Mastery (CV: 0.050)

OUTLIER ANALYSIS (Based on Global Ryff Total Scores):

■ ■ MODERATE OUTLIERS ($|z\text{-score}| > 2.0$) - Potentially atypical Global Scores:

- Hermes3.l nondet_hermes3_nondet_run16_numbers.json [baseline]: z-score=2.29

CROSS-FILE SIMILARITY SUMMARY:

Total valid files analyzed: 20

Overall Global Score consistency: VERY HIGH

Total outliers detected: 1

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COMPREHENSIVE ERROR ANALYSIS

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METHODOLOGY EXPLANATION:

This analysis thoroughly examines data quality issues across all loaded files, regardless of whether they were marked 'valid' for score processing. It identifies and categorizes various types of invalid responses and provides an overall assessment of data quality.

ERROR CATEGORIES DETECTED:

1. ****MISSING ITEMS:**** Expected item numbers (1-42) were not found in the JSON file.
2. ****NULL VALUES:**** An item was present, but its value was explicitly null (e.g., '"1": null').
3. ****MULTIPLE VALUES:**** An item's value was a list, object, or other structure, indicating more than one response where a single value was expected (e.g., '"1": [5, 6]').
4. ****OUT OF RANGE / NON-INTEGER VALUES:**** The item's numeric value was outside the expected 1 to 7 Likert scale range, or it was a decimal number (e.g., 8, 0, 3.5).
5. ****NON-NUMERIC VALUES:**** The item's value could not be converted to a number (e.g., '"1": "abc"').

VALIDITY THRESHOLD RECAP:

- Files with 8 or more individual item errors are internally flagged as 'INVALID' and automatically excluded from scoring, consistency, and group comparison analyses.
- This threshold ensures that statistical analyses are performed only on datasets with a reasonable amount of complete and correctly formatted data.

ACCEPTABLE ITEM VALUES:

Only single integer values from 1 to 7 are considered valid responses for individual items.

FILE: Hermes3.1nondet_hermes3_nondet_run7_numbers.json [baseline] - Status: INVALID (8 errors)

Specific Invalid Entries in this file:

- Item 7: null
- Item 10: null
- Item 13: null
- Item 18: null
- Item 31: null
- Item 35: null
- Item 36: null
- Item 41: null

FILE: Hermes3.1nondet_hermes3_nondet_run17_numbers.json [baseline] - Status: VALID (5 errors)

Specific Invalid Entries in this file:

- Item 7: null
- Item 18: null
- Item 36: null
- Item 40: null
- Item 41: null

FILE: Hermes3.1nondet_hermes3_nondet_run3_numbers.json [baseline] - Status: VALID (4 errors)

Specific Invalid Entries in this file:

- Item 18: null
- Item 34: null
- Item 36: null
- Item 39: null

FILE: Hermes3.1nondet_hermes3_nondet_run6_numbers.json [baseline] - Status: VALID (4 errors)

Specific Invalid Entries in this file:

- Item 13: null
- Item 20: null
- Item 27: null
- Item 36: null

FILE: Hermes3.1nondet_hermes3_nondet_run10_numbers.json [baseline] - Status: VALID (4 errors)

Specific Invalid Entries in this file:

- Item 20: null
- Item 29: null
- Item 31: null
- Item 40: null

FILE: Hermes3.1nondet_hermes3_nondet_run11_numbers.json [baseline] - Status: VALID (4 errors)

Specific Invalid Entries in this file:

- Item 10: null
- Item 18: null
- Item 26: null
- Item 28: null

FILE: Hermes3.1nondet_hermes3_nondet_run12_numbers.json [baseline] - Status: VALID (4 errors)

Specific Invalid Entries in this file:

- Item 7: null
- Item 16: null
- Item 18: null
- Item 20: null

FILE: Hermes3.1nondet_hermes3_nondet_run13_numbers.json [baseline] - Status: VALID (4 errors)

Specific Invalid Entries in this file:

- Item 7: null
- Item 10: null
- Item 12: null
- Item 16: null

FILE: Hermes3.1nondet_hermes3_nondet_run15_numbers.json [baseline] - Status: VALID (4 errors)

Specific Invalid Entries in this file:

- Item 4: null
- Item 8: null
- Item 18: null
- Item 34: null

FILE: Hermes3.1nondet_hermes3_nondet_run19_numbers.json [baseline] - Status: VALID (4 errors)

Specific Invalid Entries in this file:

- Item 1: null
- Item 5: null
- Item 31: null
- Item 39: null

FILE: Hermes3.1nondet_hermes3_nondet_run1_numbers.json [baseline] - Status: VALID (3 errors)

Specific Invalid Entries in this file:

- Item 7: null
- Item 14: null
- Item 42: null

FILE: Hermes3.1nondet_hermes3_nondet_run8_numbers.json [baseline] - Status: VALID (2 errors)

Specific Invalid Entries in this file:

- Item 19: null
- Item 22: null

FILE: Hermes3.1nondet_hermes3_nondet_run9_numbers.json [baseline] - Status: VALID (2 errors)

Specific Invalid Entries in this file:

- Item 13: null
- Item 22: null

FILE: Hermes3.1nondet_hermes3_nondet_run18_numbers.json [baseline] - Status: VALID (2 errors)

Specific Invalid Entries in this file:

- Item 36: null
- Item 40: null

FILE: Hermes3.1nondet_hermes3_nondet_run2_numbers.json [baseline] - Status: VALID (1 errors)

Specific Invalid Entries in this file:

- Item 20: null

FILE: Hermes3.1nondet_hermes3_nondet_run5_numbers.json [baseline] - Status: VALID (1 errors)
Specific Invalid Entries in this file:
- Item 23: null

FILE: Hermes3.1nondet_hermes3_nondet_run14_numbers.json [baseline] - Status: VALID (1 errors)
Specific Invalid Entries in this file:
- Item 7: null

FILE: Hermes3.1nondet_hermes3_nondet_run20_numbers.json [baseline] - Status: VALID (1 errors)
Specific Invalid Entries in this file:
- Item 3: null

FILE: Hermes3.1det_hermes3_deterministic_run1_numbers.json [det] - Status: VALID (0 errors)
No specific invalid entries found in this file.

FILE: Hermes3.1nondet_hermes3_nondet_run4_numbers.json [baseline] - Status: VALID (0 errors)
No specific invalid entries found in this file.

FILE: Hermes3.1nondet_hermes3_nondet_run16_numbers.json [baseline] - Status: VALID (0 errors)
No specific invalid entries found in this file.

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OVERALL ERROR ANALYSIS SUMMARY:
Total files analyzed: 21
Files marked as VALID: 20 (95.2%)
Files marked as INVALID (excluded from analyses): 1 (4.8%)
Total individual invalid entries found across all files: 58

Breakdown of Error Types (Total occurrences):
- Null Values : 58 occurrences

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DATA QUALITY ASSESSMENT:
✓ EXCELLENT data quality (≥95% valid files).
✓ Low overall error rate in item responses. Data quality is generally good, minor issues.

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