

## Online Supplementary Material

*eFigure 1: Violin Plots for Total ATTA score*

*eFigure 2: Violin Plots for ATTA Sub-scores*

*eTable 1: Estimated ATTA sub-scores for fluency, originality, elaboration, and flexibility*

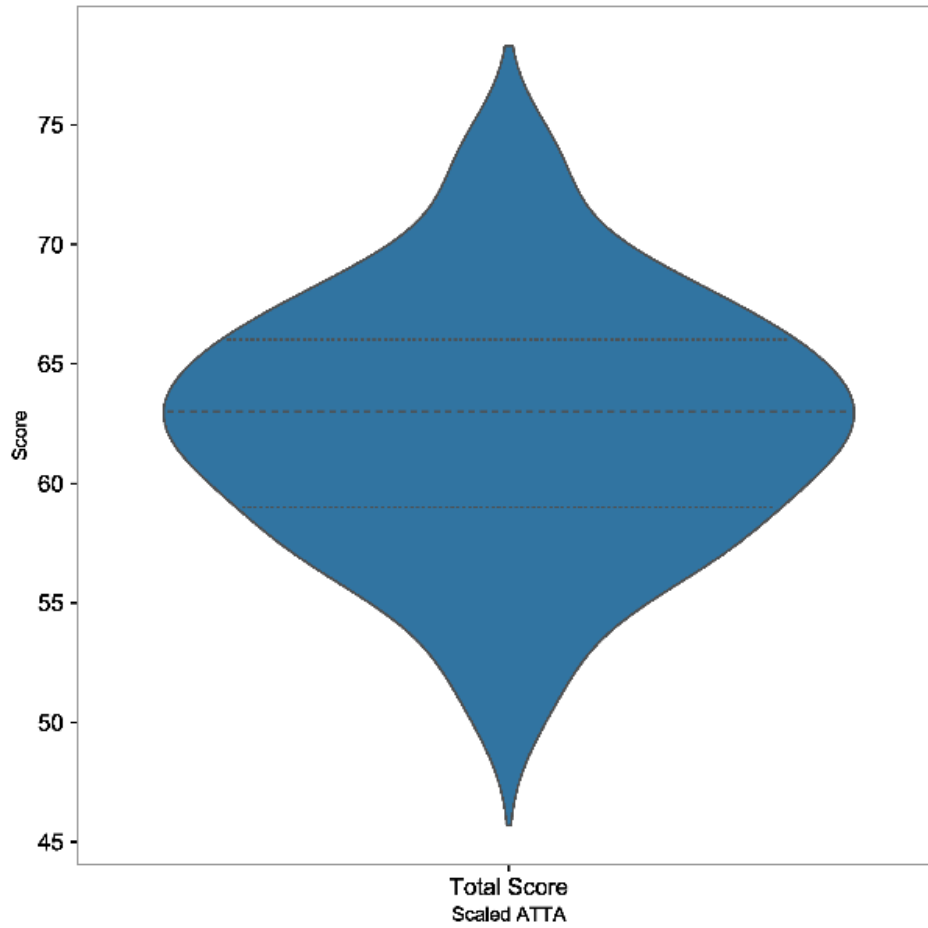
*eTable 2: Two-sided T-tests for Sub-scores vs. Average Adult Score*

*eTable 3: Mixed Model Linear Regression Results – with Specialty as a Random Effect*

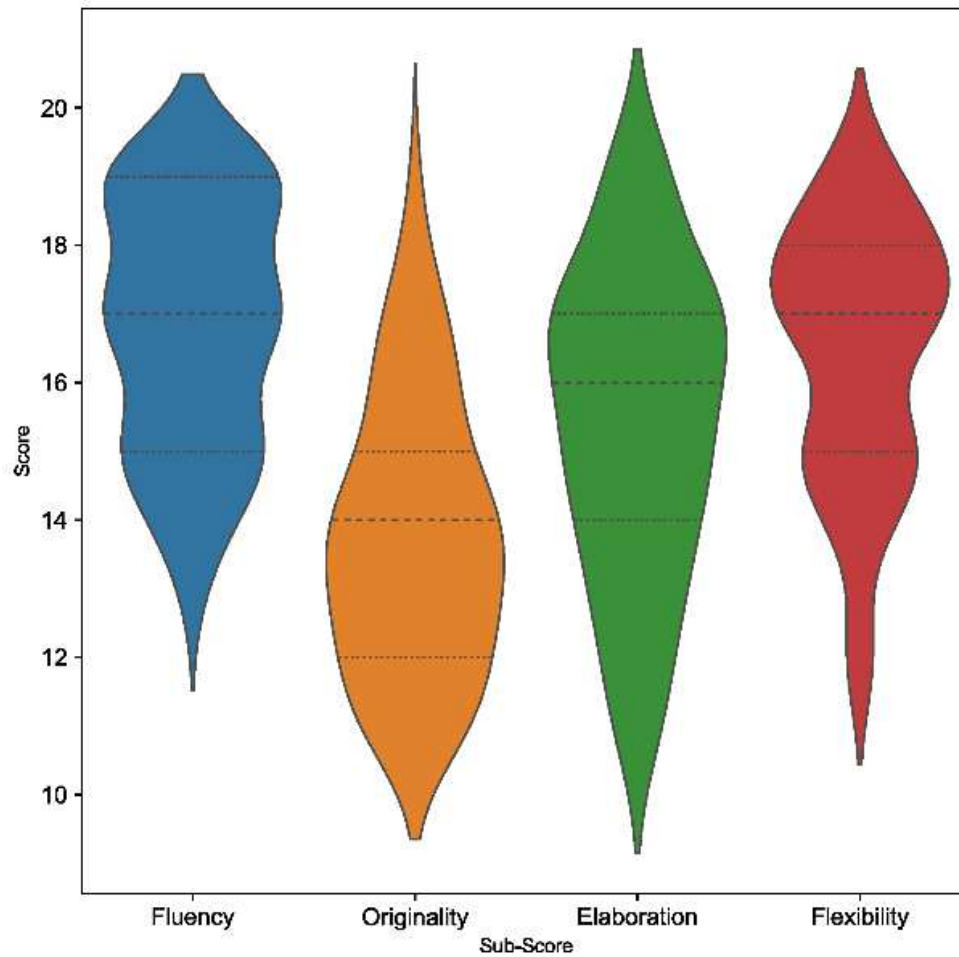
*Interview Guide*

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*eFigure 1: Violin Plots for Total ATTA score*



*eFigure 2: Violin Plots for ATTA Sub-scores*



*eTable 1: Estimated ATTA sub-scores for fluency, originality, elaboration, and flexibility abilities*

<b>Ability</b>	<b>n</b>	<b>Scaled Sub-score (95% CI)</b>
Fluency	82	16.83 (16.43, 17.22)
Originality	82	13.73 (13.29, 14.17)
Elaboration	82	15.41 (14.92, 15.91)
Flexibility	82	16.41 (16.00, 16.83)

*Average adult score is normalized to 15 for each ability. CI: confidence interval*

*eTable 2: Two-sided T-tests for Sub-scores vs. Average Adult Score*

Variable	<i>t</i>	<i>df</i>	Mean Difference (95% CI)	p-value
Total Score	4.159	81	2.39 (1.25, 3.53)	<0.001
Fluency	9.217	81	1.83 (1.43, 2.22)	<0.001
Originality	-5.777	81	-1.27 (-1.71, -0.83)	<0.001
Elaboration	1.677	81	0.42 (-0.08, 0.91)	0.097
Flexibility	6.771	81	1.42 (1.00, 1.83)	<0.001

*CI: confidence interval**eTable 3: Mixed Model Linear Regression Results – with Specialty as a Random Effect*

Variable	Estimated $\beta$ coefficient (95% CI)	p-value
Age	0.06 (-0.22, 0.35)	0.658
Surgical Experience	Ref.	
2+ Years	2.09 (-0.84, 5.01)	0.158
Less Than 2 Years	Ref.	
Sex	Ref.	
Female	-3.70 (-6.33, -1.06)	0.007
Male	Ref.	
Creative Hobby	Ref.	
No Creative Hobby	0.24 (-2.14, 2.62)	0.843
Has Creative Hobby	Ref.	
Creative Friends	2.27 (-0.90, 5.43)	0.157
No Creative Friends	Ref.	
Creative Friends	Ref.	
Creative Problem Solving	0.93 (-1.75, 3.62)	0.491
Not Confident or Neutral	0.04 (-0.06, 0.13)	0.437
Confident	0.05 (-0.04, 0.14)	0.269
# of Publications	-0.04 (-0.54, 0.45)	0.868
Hours Worked Per Week		
Time Alone Per Day		

*CI: confidence interval**Interview Guide***Introduction & Purpose Statement:**

Thank you for agreeing to partake in this interview. The purpose of this study was to explore the level and role of creativity in surgeons. We hope by interviewing some of the ‘highly creative surgeons’ we can get a better understanding of the role of creativity in the profession and life of a surgeon. We are interested in your experience as a creative individual and surgeon, and there are no right or wrong answers.

This interview is completely voluntary, and you have the right to participate or refrain from participating. If at any point you feel like you no longer want to participate, we will end the interview and the data from your file will be deleted permanently.

The interview will be audio recorded with your permission and take approximately 30-40 minutes.

*\*Remember to avoid leading responses and explore themes that emerge outside of the interview.*

### **Background Information**

1. Let's start by having you describe your background. Mostly about demographics, professional characteristics, and creativity-related aspects of their life.
    - a. Age
    - b. Medical Role (X Year Resident, Staff Surgeon)
    - c. Creative Hobbies
    - d. Number of publications
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### **Definition of Creativity**

2. How would you define creativity?
    - a. Aspect about elements of creativity that they mention (ex. novelty, flexibility, usefulness)
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### **Creative Life**

3. Tell me a little bit about your creative life and your journey with creativity over the years.
    - a. Prompt: Start with pre-medical school.
    - b. Prompt: Medical school & residency – how did it evolve.
      - i. How did your creativity change when you became a medical professional.
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### **Creativity x Surgery**

4. Could you talk a little bit about the intersection between creativity and surgery?
    - a. Prompt: What does creativity look like as a surgeon?
    - b. Prompt: How do you see surgery changing in relation to creativity (ex. robotics, AI)
    - c. Prompt: Is creativity valued in surgery?
  5. What do you think about having creative hobbies as a surgeon?
    - a. Prompt: Is it important? Not important?
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### **Surgical Training x Creativity**

6. What would you say to surgical training programs or other surgeons with respect to creativity and creative hobbies?
  - a. Prompt: Value – does it help or hinder your work?
  - b. Prompt: Should there be creative approaches to training surgeons?