

SUPPLEMENTARY MATERIAL

SUPPLEMENTARY CHECKLIST. STROBE (cross-sectional studies)

STROBE item	Location in manuscript
Design indicated in title and structured abstract	Title; Abstract
Background/rationale	Introduction
Objectives	Introduction, final paragraph
Study design	Study design and participants
Setting, dates, recruitment	Study design and participants
Participants and eligibility	Study design and participants; Figure 1
Variables and outcomes	Survey instrument and outcomes
Data sources/measurement (instrument, translation, pilot)	Development of physician images, Survey instrument and outcomes
Bias (fixed presentation order; preference-based image assignment)	Survey instrument and outcomes, Image assignment by physician-gender preference, Sensitivity analysis for presentation order
Study size (convenience; no a priori calculation)	Study design and participants
Quantitative variables and statistical methods	Statistical analysis
Participant flow	Figure 1
Descriptive data	Participant characteristics, Table 3
Outcome data and main results with effect sizes and CIs	Results, Tables 1-5
Limitations	Discussion
Generalizability	Discussion
CI, confidence interval.	

SUPPLEMENTARY METHODS

AI-generated image construction and quality control

All physician images were generated with a generative AI image model (Gemini 2.5 Flash Image, Google DeepMind, Mountain View, CA, USA; model identifier gemini-2.5-flash-image-preview) in August 2025. The same base physician identity was maintained within each gender stream across all variants. The attire images were generated against a common neutral background and were intended to differ primarily in clothing. The context images were generated to depict recognizable operative scenes; however, post-hoc inspection confirmed that these images also differed in clothing details, pose, framing, camera perspective, instruments, and body orientation in addition to operative setting, as detailed below and in the main Methods.

Model identities. Two base identities (one woman, one man) were generated and held constant across all attire and context variants to minimize face-driven variance.

Appearance controls. Neutral facial expression; similar apparent age (30-40 years); minimal grooming and make-up; no jewellery or tattoos; no brands or logos.

Environment controls. An identical studio-style background and similar frontal positioning were used for the five attire images. The surgical-context images used different operative backdrops (sterile-gown view; open-surgery instrument tray; endourological/laser setting; laparoscopic setting; robotic console); no patient was shown. These images were not fully standardized for camera angle, distance, pose, framing, or clothing details; the specific differences are described in the main Methods and are visible in Supplementary Figure 2.

Attire construction. Scrubs: single-colour top and trousers with a blank ID badge. Business suit: dark suit with plain shirt/blouse and conservative shoes. White-coat variants: knee-length coat without institutional name or embroidery. Casual: plain trousers or jeans with plain shirt/blouse, no logos.

Technical parameters. Images were rendered at 1024 × 1024 pixels in a photorealistic style, using a fixed random seed per identity, with the prompt library locked before production. The exact production prompt strings were not retained; the controlling specifications listed above were applied throughout, and this is acknowledged as a limitation on exact reproducibility.

Quality control. Before use, each image was reviewed by three members of the research team against four predefined criteria: (i) the intended attire was depicted correctly and completely; (ii) the intended operative setting was recognizable; (iii) facial affect was neutral and comparable across variants; and (iv) no extraneous identifying, institutional, or branding cues were present. Any image failing a criterion was regenerated. This was an internal check by the investigators; no independent (non-author) rater panel and no formal quantitative manipulation check were used.

SUPPLEMENTARY METHODS TABLE. Presentation Order of the Ten Images.

Position	Image	Arm
1	Casual clothing	Attire
2	Business suit	Attire
3	Business suit with white coat	Attire
4	Surgical scrubs	Attire
5	Surgical scrubs with white coat	Attire
6	Neutral (sterile surgical gown)	Surgical context
7	Open surgery	Surgical context
8	Endourological/laser	Surgical context
9	Laparoscopic	Surgical context
10	Robotic console	Surgical context

All participants viewed the images in this fixed order; the order was identical in the male-image and female-image streams. Each image was rated on all eleven Likert items and the binary acceptance item before the next image was displayed.