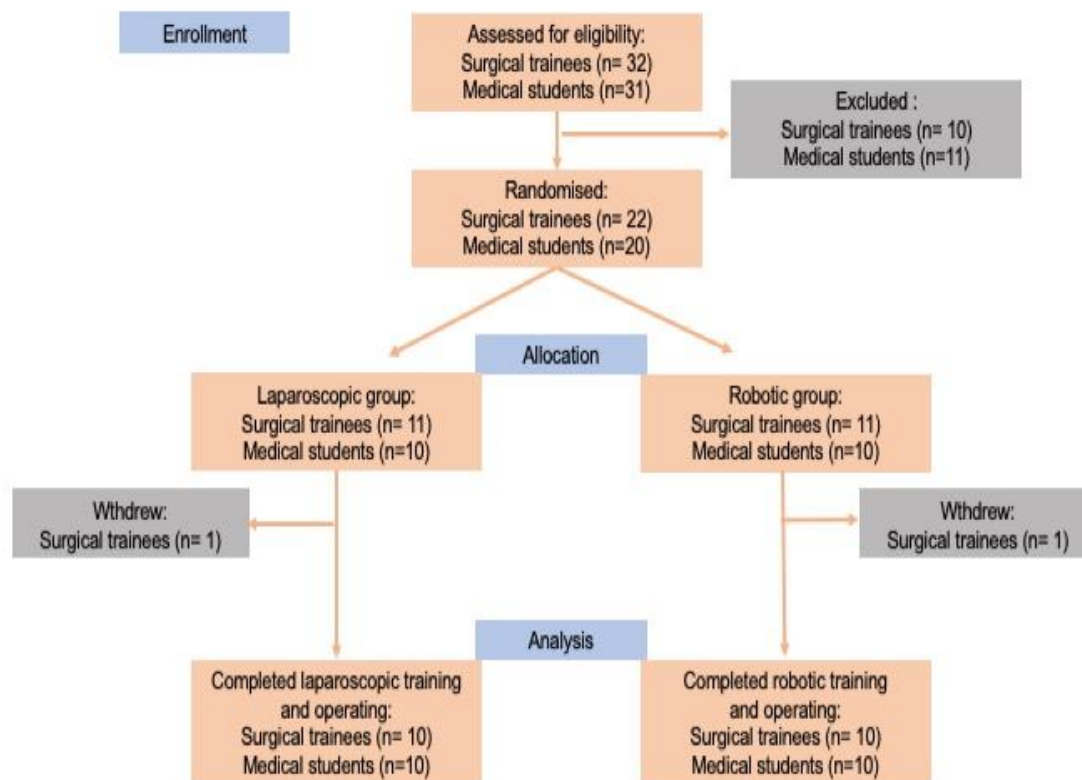


RESULTS

Participant Flow:



Baseline Characteristics Surgical Trainees:

	LG (n=10)	RG (n=10)	p-value
Trainee Characteristics			
Year of training (mean +/- SD)	2.20 +/- 1.23	2.20 +/- 1.03	1.00
Training Deanery (Newcastle: London)	5:5	4:6	1.00
Sex (Male: Female)	4:6	3:7	0.639
Lap choles as assistant (number of cases, mean +/- SD)	18.90 +/- 14.65	21.80 +/- 17.13	0.689
Lap choles partially performed (number of cases, mean +/- SD)	5.20 +/- 8.04	4.60 +/- 7.34	0.864
Lap choles performed (number of cases, mean +/- SD)	1.10 +/- 2.08	0.60 +/- 1.58	0.552
Robotic operations as assistant (number of cases, mean +/- SD)	0.10 +/- 0.32	0.10 +/- 0.32	1.00
Hours of previous laparoscopic simulation (mean +/- SD)	2.00 +/- 1.25	1.90 +/- 1.29	0.862

Baseline Characteristics Medical Students:

	LG (n=10)	RG (n=10)	p-value
Sex (Male:Female)	6:4	7:3	0.639
Previous experience			

Regular video gaming, hours /week (mean +/- SD)	4.30 +/- 6.82	4.90 +/- 5.57	0.832
Laparoscopic simulation experience, hours (mean +/- SD)	0.60 +/- 0.94	0.85 +/- 0.75	0.518

Outcome Measures:

Primary Outcome – Global Rating Scores (GRS), Surgical Trainees

Cholecystectomy			
GRS (median +/- IQR)	20.00 +/- 4	24.50 +/- 7	0.007*
Continuous suture closure			
GRS (median +/- IQR)	18.25 +/- 5	27.25 +/- 6	<0.001*
Interrupted suture anastomosis			
GRS (median +/- IQR)	17.50 +/- 6	27.50 +/- 7	<0.001*

Primary Outcome – Global Rating Scores (GRS), Medical Students

Interrupted suture			
GRS (median +/- IQR)	12.50 +/- 11	24.50 +/- 5	<0.001*

Secondary Outcomes – Surgical Trainees

Cholecystectomy			
Time to complete Hepatocystic triangle dissection, mins (mean +/- SD) (n=5)	28.42 +/- 6.15	38.68 +/- 0.12	0.089

Time to complete GB liver bed dissection, mins (mean +/- SD) (n=5)	18.33 +/- 4.21	30.55 +/- 5.97	0.025*
Continuous suture closure			
Time to complete closure of gastrostomy, mins (mean +/- SD)	33.25 +/- 8.42	21.05 +/- 5.23	0.001*
Number of continuous suture loops created (median +/- IQR)	5.00 +/- 2	7.50 +/- 2	<0.001*
Number of continuous suture errors (median +/- IQR)	22.25 +/- 5	7.00 +/- 5	<0.001*
Interrupted suture anastomosis			
Time to complete 6 interrupted sutures, mins (mean +/- SD)	36.89 +/- 5.52	26.59 +/- 4.48	<0.001*
Number of interrupted suture errors, (median +/- IQR)	29.50 +/- 8	8.25 +/- 4	<0.001*

Secondary Outcomes – Medical Students

Interrupted suture			
Number of sutures completed (median +/- IQR)	3.50 +/- 3	8.67 +/- 2.33	<0.001*

Number of suture errors (median +/- IQR)	40.00 +/- 8.67	15.50 +/- 6	<0.001*
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Adverse Events:

No adverse events anticipated or recorded during trial