

Qualitative Research for Surgical Trainees; developing the “Robotic Proficiency” grounded theory

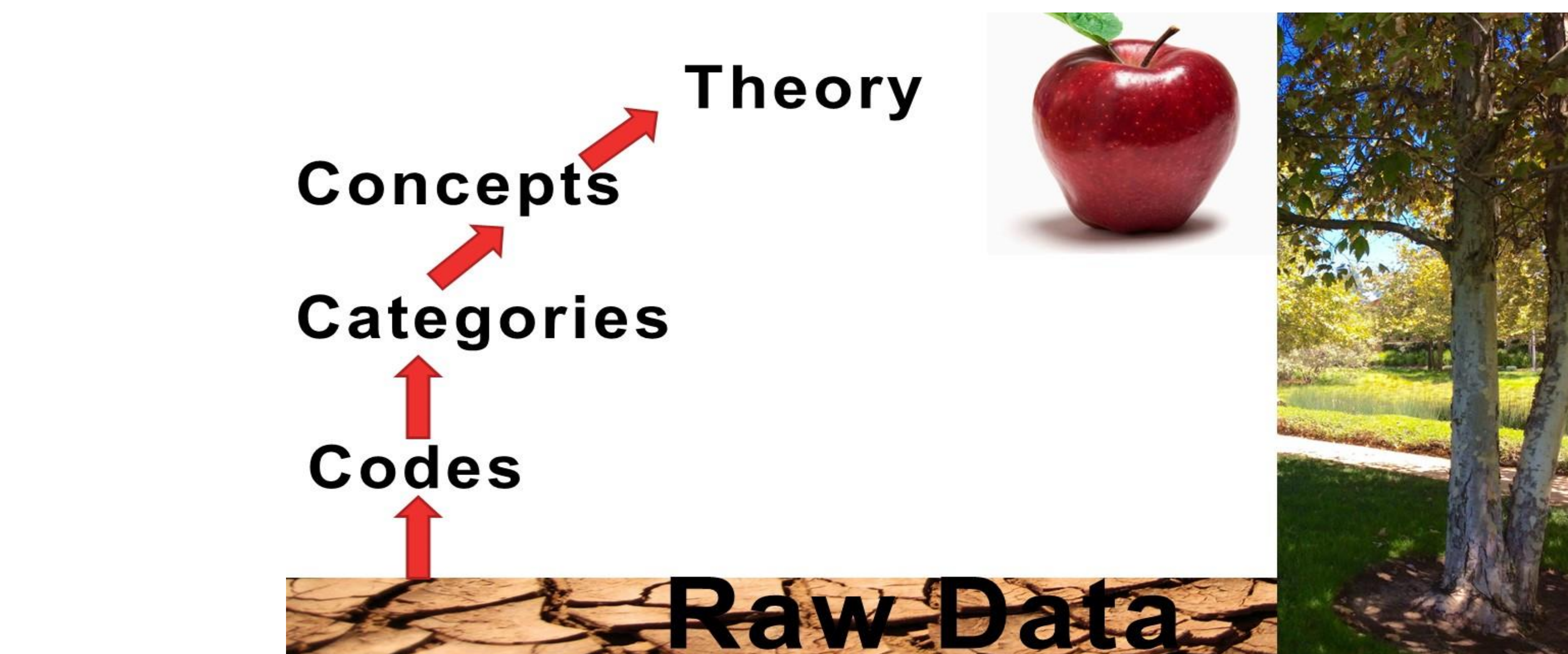
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Introduction and Aim:

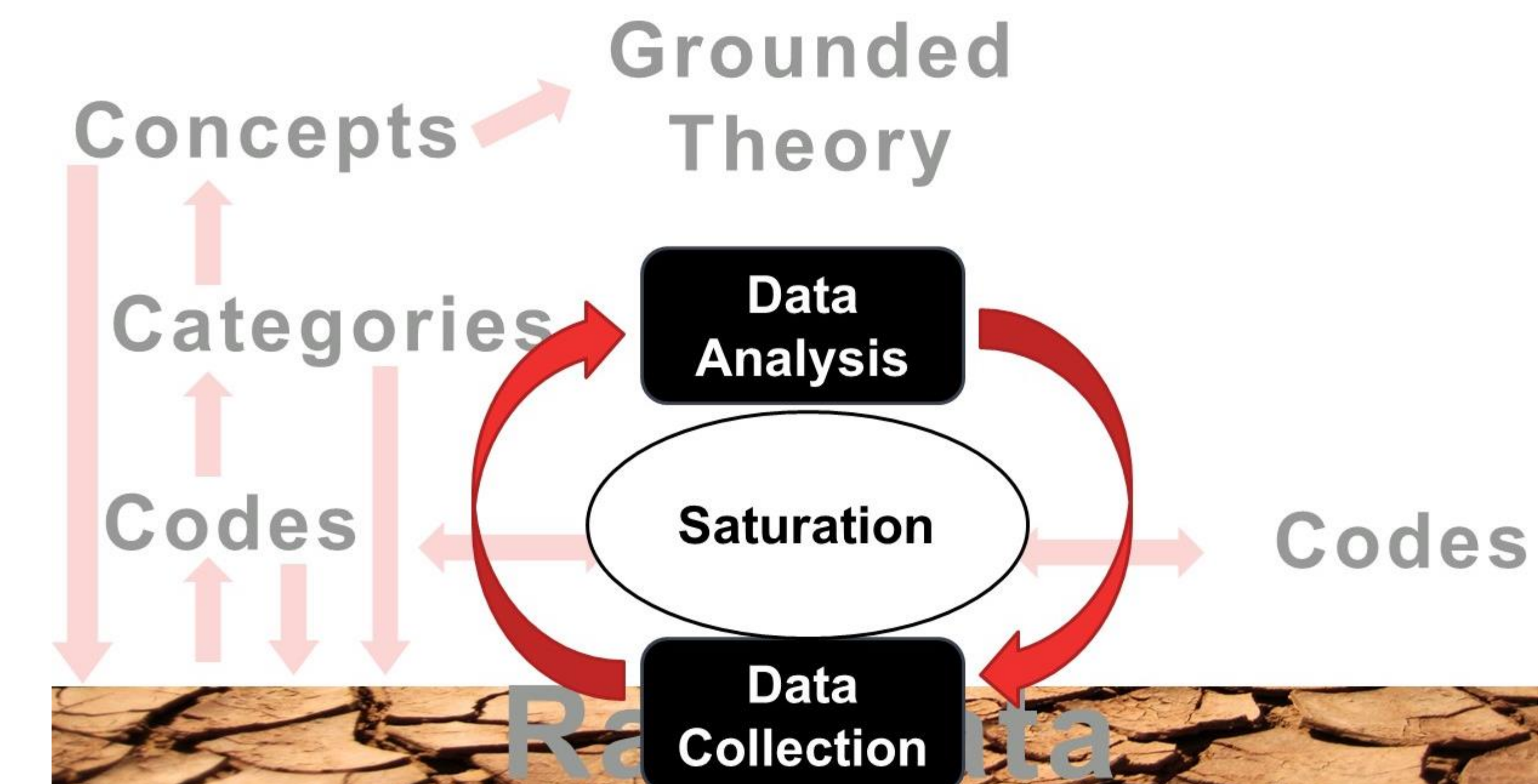
Qualitative research addresses the “how” and “why” research questions that quantitative methods cannot. In “Grounded Theory” approach, there is no pre-determined hypothesis, so results are firmly based upon (grounded in) the collected data. This is important for evidence-based medicine and patient-centred care. However, little training is provided to surgical trainees regarding such methodology. In this presentation, I aim to provide a practical example of how to apply such methodology using a qualitative interview and observational study of robotic staff experiences.

Methods: The study was conducted across two tertiary UK hospitals and was open to all staff utilising robotic surgery regardless of discipline or experience.

Interviews	Observations
<ul style="list-style-type: none">➤ Semi-structured➤ One-to-one➤ Audio recorded and transcribed verbatim	<ul style="list-style-type: none">➤ Robotic procedures➤ laparoscopic/open procedures were added for comparison➤ Reflective observations (researcher acting as robotic assistant).➤ Field notes were taken contemporaneously – Diagrams and photos.



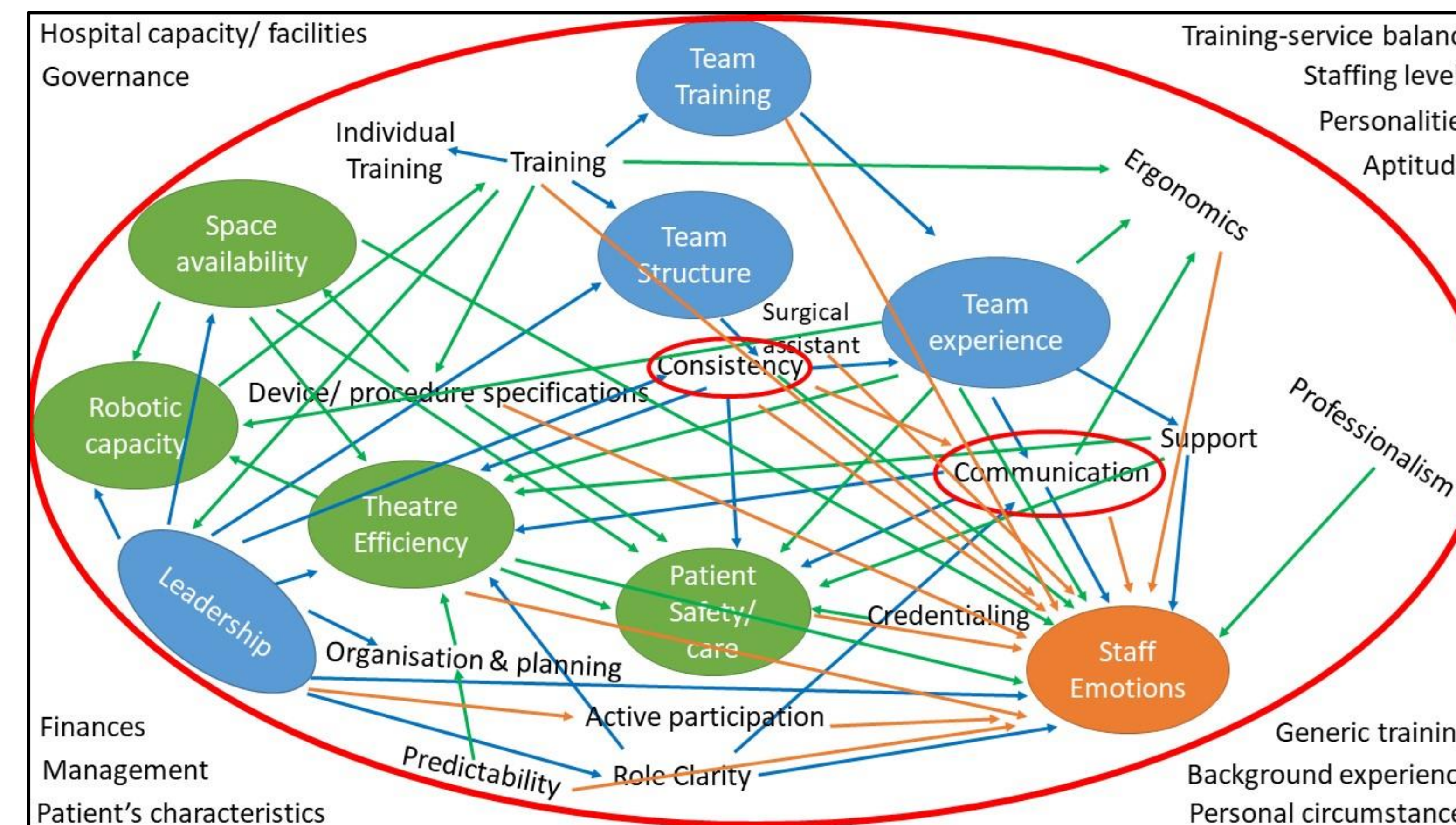
Inductive analysis starts from the ground (raw data) and grows upwards like a tree, till one reaps the fruit which is the resultant theory.



Iterative constant comparisons: you run repeated cycles of data collection and analysis till saturation is reached i.e. no new ideas develop.

Results : The resultant data coalesced around three major concepts (abstract ideas): the robotic team, the robotic theatre environment and robotic staff emotions.

Datasets	<div>Site 1 Interviews</div>			<div>Site 2 Interviews</div>			<div>Non-Robotic Observations</div>		
	<div>Site 1 Robotic Observations</div>			<div>Site 2 Robotic Observations</div>			<div>Reflective Robotic Observations</div>		
Reporting Framework (Major concepts and categories)	The Robotic Team								
	Team Structure and consistency			Training and experience			Teamwork and support		
	Robotic Theatre Environment								
	Theatre processes and efficiency				Patient outcomes and safety				
	Robotic Staff Emotions								
	Positive emotions				Negative emotions (active and passive stressors)				



Higher analysis aims at developing (detecting) the relationships between various aspects of the major categories and concepts (blue: Team, green: Theatre environment, and orange: Emotions – the big red circle represents the immediate robotic theatre environment and the small red circles the important linking categories between the three major concepts). This eventually leads to evolution of the grounded theory.

Conclusion:

The resultant theory described robotic proficiency that ultimately provides quality patient care. In this theory, proficiency rests on four major pillars: the Team, the Leadership, the Process and the Performance.

