

Using Qualitative Research Techniques in Education Research

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Disclosure

➤ I am NOT a qualitative analysis expert

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Who has experience doing qualitative research?

THE WAY I FEEL IS HARD TO QUANTIFY!

HOW HARD - ON A SCALE OF ONE TO TEN?

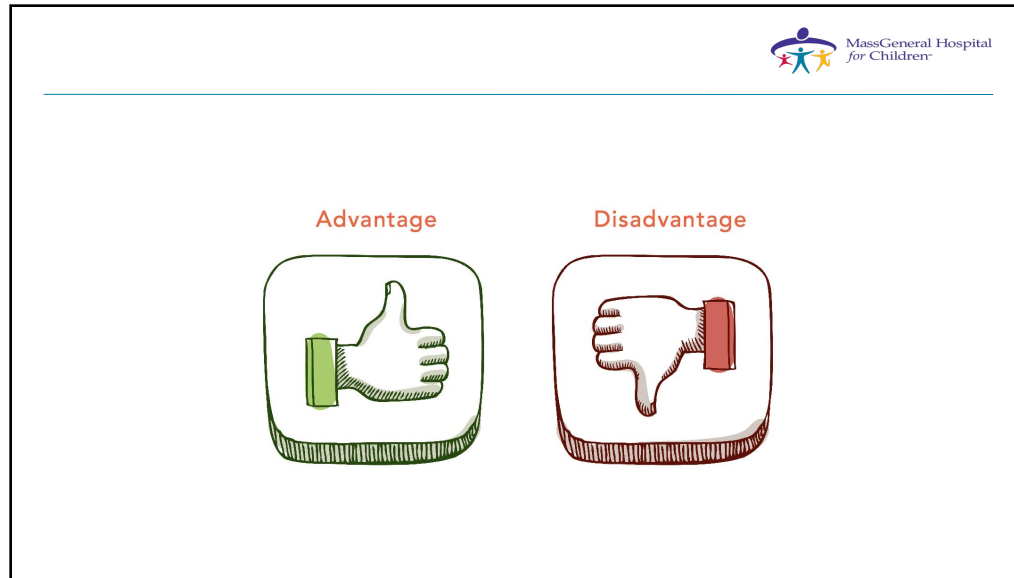
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Qualitative vs Quantitative



	Qualitative	Quantitative
Approach	Inductive	Deductive
Goal	Depth of understanding; generate hypotheses	Test hypotheses
Setting	Natural	Experimental / controlled
Sampling	Purposeful	Random
Data Collection	Interviews, focus groups	Surveys, clinical data
Data Analysis	Iterative interpretation	Statistical tests

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MassGeneral Hospital
for Children


Qualitative Research

Advantages	Disadvantages
Complex questions	Generalizability
Smaller sample size	Cannot determine causation
Easier to design and fund	

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Qualitative Analysis






FACT OR **MYTH?**

Not actionable	Sure it is
Bias will taint the results	What study doesn't have the potential for bias?
Too challenging to manage unstructured data	Online tools can help
Results can't be trusted	Can be just as rigorous and robust

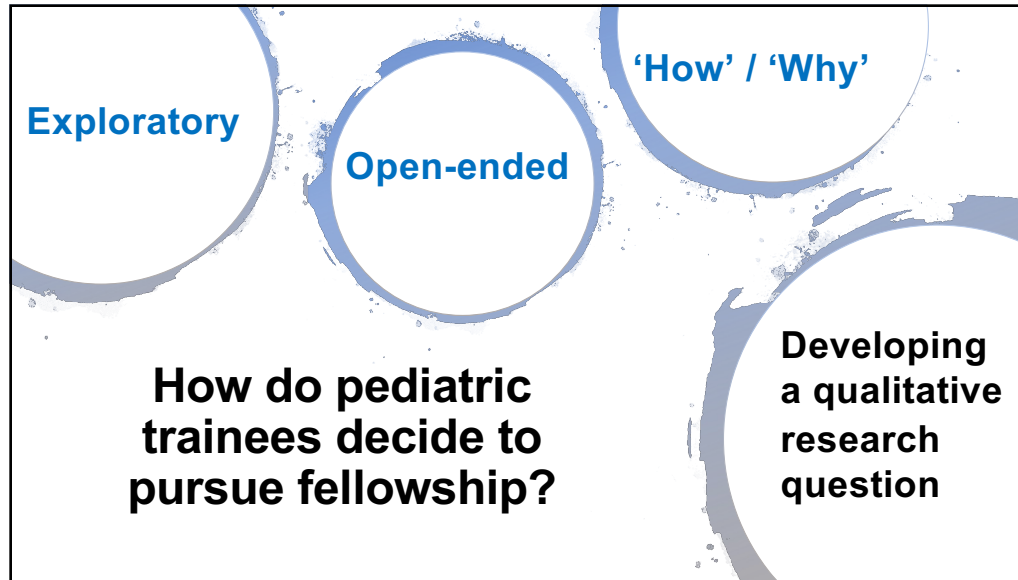
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Qualitative research in medical education

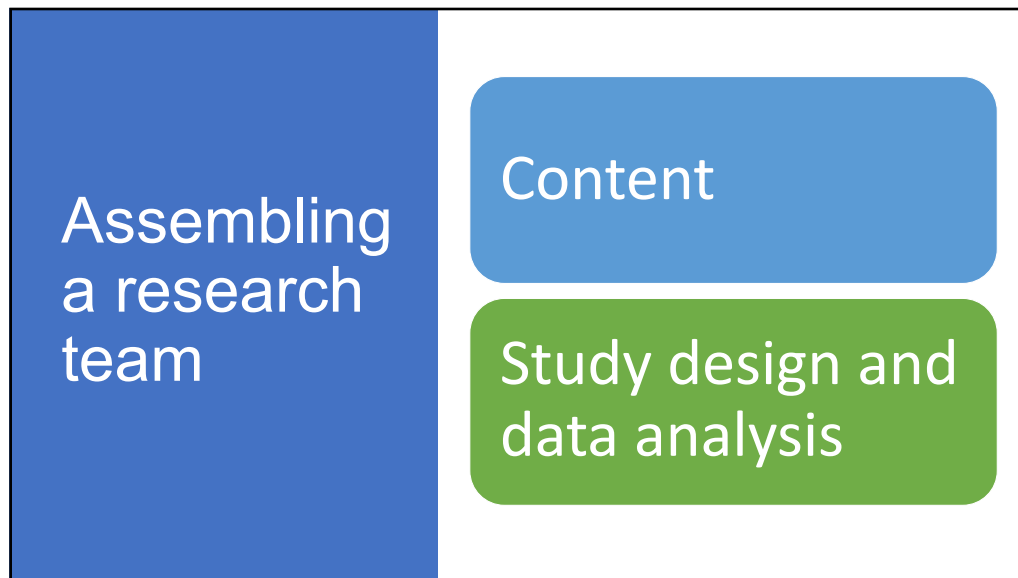


- Behaviors**
- Attitudes**
- Interactions**
- Learning environment, culture**
- Success or failure of an intervention**
- Exploration of participants' experiences**

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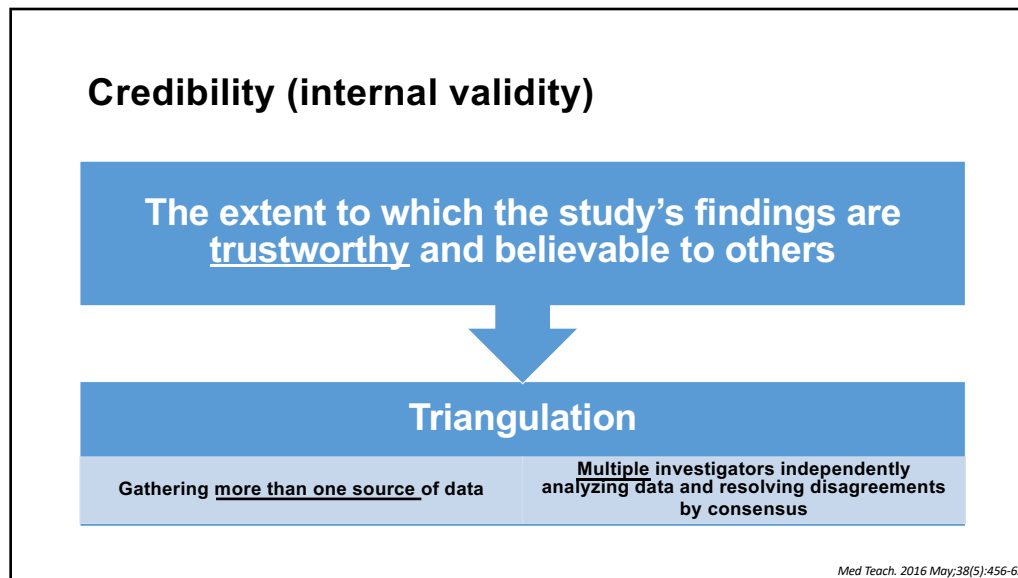
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Transferability (external validity)

The extent in which the findings can be transferred to or applied in other settings



Detailed description of sample, setting, and results

Allow reader to determine if own setting is comparable

Med Teach. 2016 May;38(5):456-63

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Dependability (reliability)

The extent to which the findings are consistent



Multiple analyzers and member checking

Software – inter-rater reliability

Ask participants ‘does the emerging data make sense’

Med Teach. 2016 May;38(5):456-63

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Confirmability (objectivity)

The extent to which the findings are based on the study's participants and not the researchers' biases



Leave a paper trail

Allow reviewer to follow line of reasoning – does it make sense

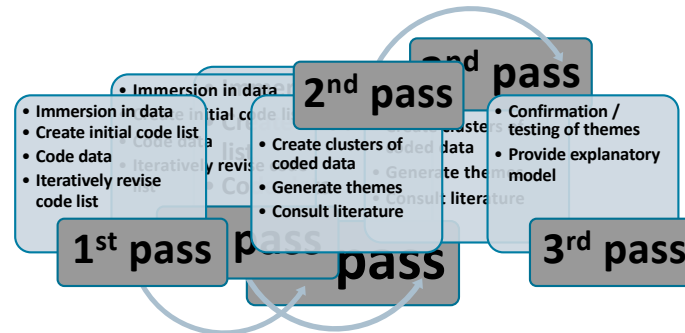
Med Teach. 2016 May;38(5):456-63

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Data Analysis – conventional content analysis

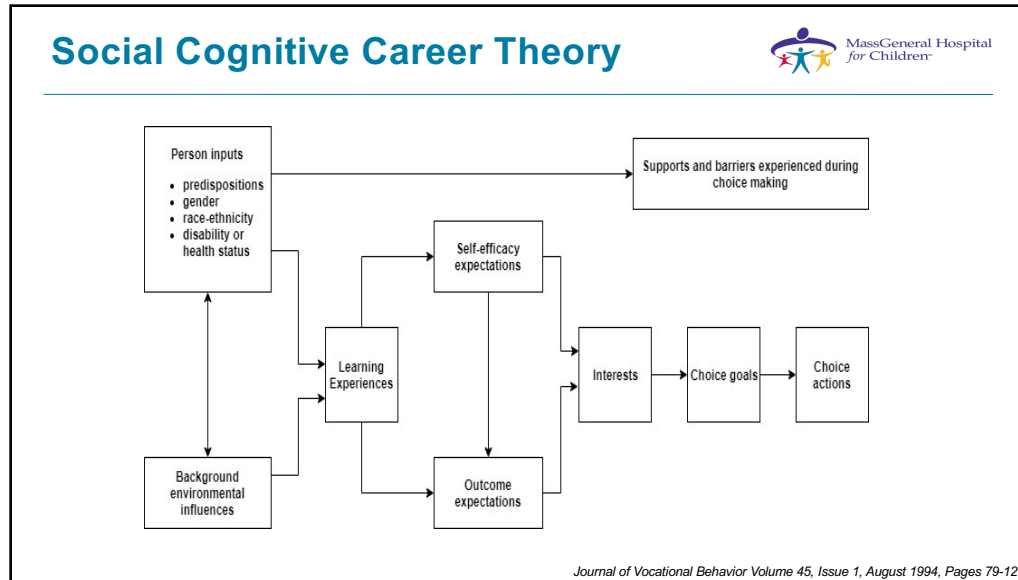


The One Step Initial Coding Strategy helps in the data structure



ACADEMIC PEDIATRICS 2011;11:375-386

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PRDS

Fellows Track Symposium
ATS 2019

Setting and Participants

➤ 8 focus groups over 2 days

How and Why Trainees Choose a Career in Pediatric Pulmonology. A Qualitative Study. ATS Sch. 2020 Aug 5;1(4):372-383

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Themes, Sub-Themes, and Trainee Quotes



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Attractive aspects of pediatric pulmonology draw trainees to the field

Respiratory physiology, bronchoscopy, longitudinal relationships and variety in clinical practice are highlights of the field

'I don't think I had considered pulmonology until I went to an actual **bronchoscopy**, so it was a procedure that pulled me in' (FTS_2)

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Exposure to the breadth and scope of the field is limited

Trainees current experiences in pediatric pulmonology are limited

Lack of exposure to the breadth and depth of pulmonary medicine leads to misconceptions about the field

'...it was basically an **inpatient rotation**...the inpatient service consists of chronic vent patients ...So that's kind of what they see [as] the breadth of peds pulm...they dreaded the rotation...**it's repelling them**' (FTS_2)

'at our hospital, our experience on pulmonary is **only inpatient**, and so you see really sick kids with really rare things, and I think some residents feel like **oh, this is pulmonary**' (PRDS_1)

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Mentorship is Key

Faculty engagement can heavily influence decisions

Faculty are pivotal when explaining the field and recruiting potential trainees

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Decisions surrounding fellowship selection occur early in the second year

Exposure to pediatric pulmonary medicine during intern year is crucial to the consideration of pulmonology as a career choice

'... I had been completely set on endocrine...and then I did my pulmonary rotation, and I just fell in love with it, and I did it pretty [early] on during intern year which was helpful because it was a big switch for me' (PRDS_1)

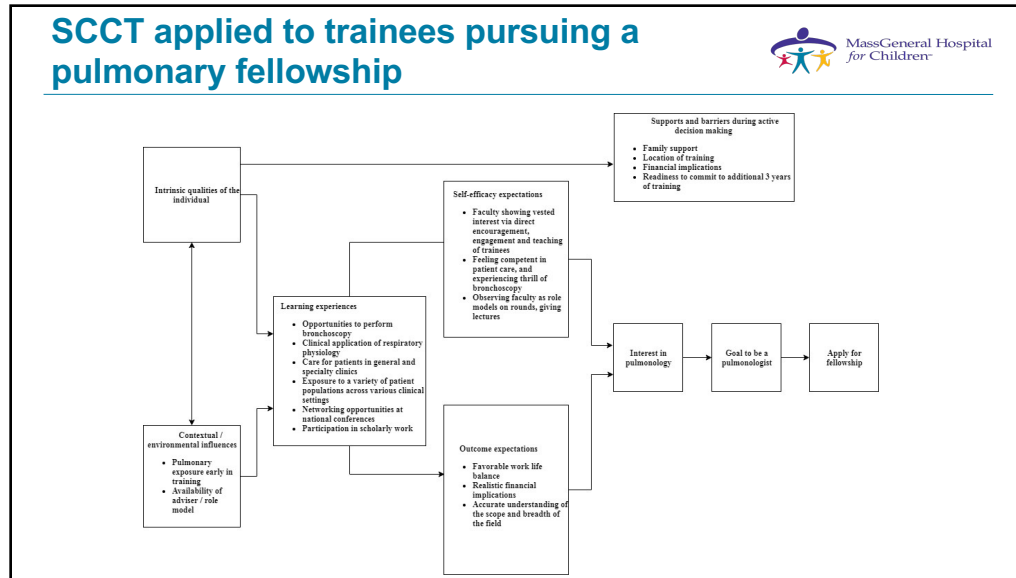
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Financial considerations are not the driving factor in decision making

Pediatric residents have already made the decision to forgo some future earnings when they chose the field of pediatrics

'At this point, I figured I've been training for so long, I may as well do something I like' (RBC_Pulm_2)

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Recommendations to increase recruitment in pediatric pulmonology based on qualitative themes aligned with the SCCT

SCCT Category	
Contextual / Environmental influences	<ul style="list-style-type: none"> Schedule must allow for adequate exposure or dedicated elective time during intern year Provide broad exposure to the field Provide faculty development in the following areas: teaching and learning in today's clinical environment, advising, coaching, mentoring, and time management

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Recommendations to increase recruitment in pediatric pulmonology based on qualitative themes aligned with the SCCT

SCCT Category	
Learning experiences	<ul style="list-style-type: none"> ○ Hands on exposure ○ Provide care for a variety of patients in all clinical settings, not just the inpatient unit ○ Avoid counting inpatient pulmonary coverage as pulmonary elective time ○ Faculty should identify interested trainees early in training, engage them in scholarly work, and send them to national conferences

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Recommendations to increase recruitment in pediatric pulmonology based on qualitative themes aligned with the SCCT

SCCT Category	
Self-efficacy	<ul style="list-style-type: none"> ○ Tailor electives to individual resident's goals ○ Avoid shadowing, encourage active participation in all aspects of patient care ○ Faculty should teach on rounds, attend morning report, give lectures on a regular basis, and be an active participant in the resident curriculum

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Conclusion

- **Through qualitative methods:**
 - Delineated factors influencing pediatric trainees' decision to pursue pulmonary fellowship
 - Highlighted opportunities for recruitment
- **Next steps:**
 - Hopefully increase the pipeline

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Ask me Anything

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