

Caesarean Section Teaching Practices: A Global Survey



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forward together
sonke siya phambili
saam vorentoe

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Background:

- **Caesarean Sections** are the most common major surgical procedure.¹ (Sung S, Ncbi 2024).
- Procedure-related **mortality is 100** times higher in Low and Middle-Income Countries (**LMIC**).² (Sobhy, Lancet 2019)
- Global **Teaching practices** have not been previously described or compared.

Objective:

To identify and describe **Caesarean Section(CS)** teaching practices
To compare these between High-Income countries(**HIC**) and Low-income and Middle-income countries(**LMIC**).

Methods:

Cross-sectional electronic survey

The survey included questions across 5 domains:

1. Participant demographics
2. CS performance experience
3. CS training experiences
4. Self-assessment of CS personal training
5. CS teaching strategies



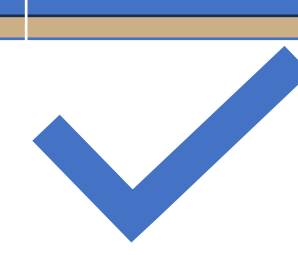
Survey developed
on Redcap, by
investigating team
and piloted
among O&G Dept
TBH



Survey distributed
at FIGO Paris
2023, through
SASOG, WATOG
meeting CS



Participation
voluntary ,
anonymous and
informed consent
prior to starting



Ethics approved
Stellenbosch
University

Countries 42

Participants 411

HIC – 172 (42%)

LMIC – 239 (58%)

Results:

- Age - mean 40 [SD 11]
- **Female – 69%**
- **Specialist O&G – 52%; Trainee O&G – 26%**
- 75% learned via **Apprenticeship**.
- Informal **feedback** predominated -64%.
- Formal feedback HIC- 35% vs. LMIC - 20% (p<0.001).
- Formal **assessment**: 22% (HIC) vs. 9% (LMIC) (P<0.001).

Survey Question	All	HIC	LMIC	P-Value
Nr of CS per year mean [SD]	99 [180]	44[64]	138[221]	<0.001
Nr Supervised cases Med [IQR]	15 [10-50]	50 [30-100]	10 [5-20]	<0.001
Major complications or mortalities during first year	27(8%)	1(1%)	26(10%)	<0.001

Open Ended Question Quotes Examples:

“I had to get professional help as an undergraduate student because i was so scared of just assisting my first C/s. This could have been prevented with formal training”

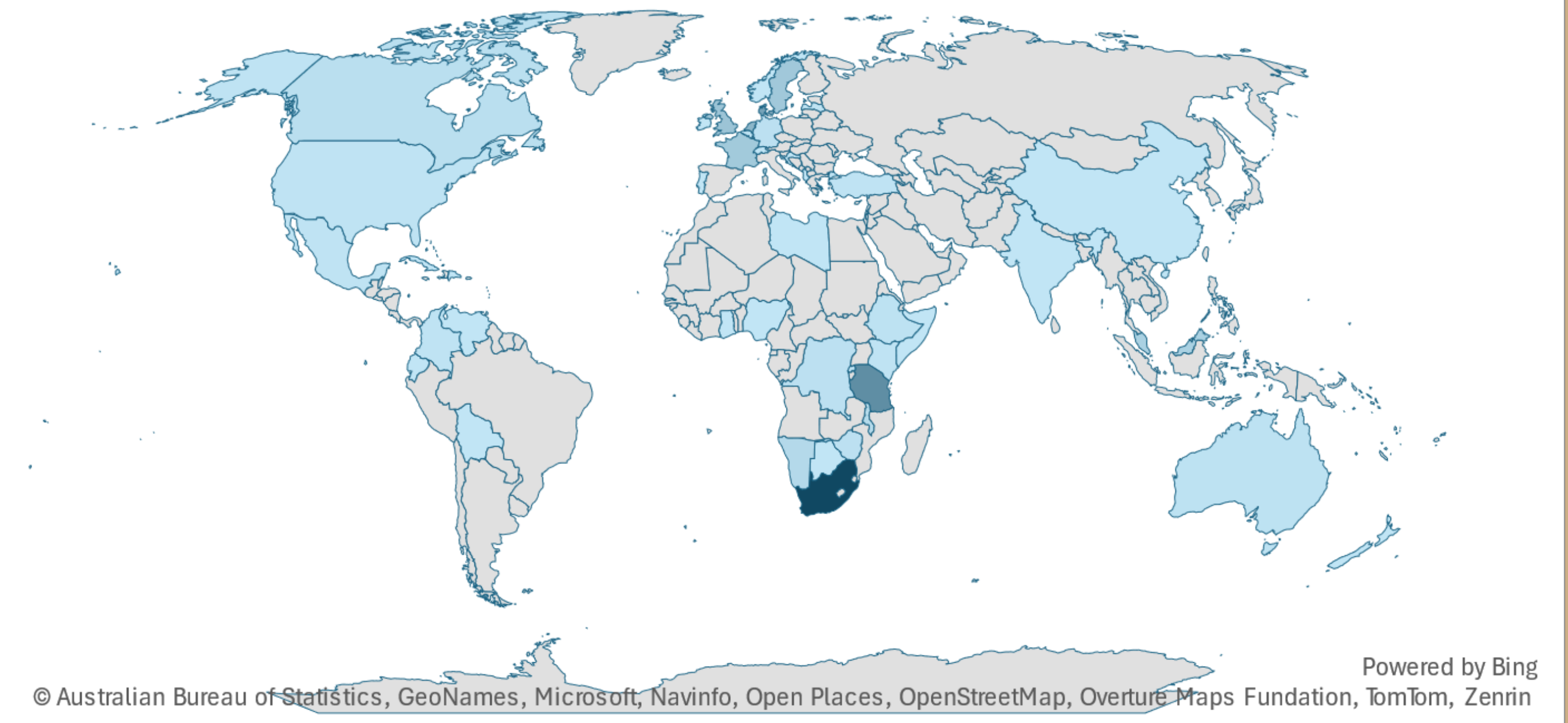
“I am a registrar from (HIC) who worked in a tertiary hospital in (LMIC) for few months. I think the culture and what is expected of you may be dangerous for patient and doctors safety...”

“I was overconfident when i should not have been in retrospect.”

“CS is easy if it is easy. But you never know that beforehand. Unforeseen complications and situations never cease to arise! Junior doctors are unaware of these, ignorance is bliss for those.”

Number of participants per country

1 112



Conclusion

Substantial differences in CS training experiences between HIC and LMIC. LMIC clinicians perform more procedures but receive **less supervision** and **competency assessment**.

Concerns regarding CS outcomes in LMIC are know², and now those individuals' performing CS in these countries have reinforced the need for **improving training**.

Standardised global training frameworks are needed including,

- Structured programs
- Standardised procedures
- Competency assessment and feedback

As mentors and trainers, we have a fundamental ethical and moral responsibility to deliver the highest quality training possible within the constraints of our available resources.

1. Sung S, Mikes BA, Martingano DJ, et al. Cesarean Delivery. [Updated 2024 Dec 7]. StatPearls Publishing; 2025 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK546707/>

2. Sobhy S, Arroyo-Manzano D, Murugesu N, et al. Maternal and perinatal mortality and complications associated with caesarean section in low-income and middle-income countries: a systematic review and meta-analysis. The Lancet. 2019 May 11;393(10184):1973–82.