Musculoskeletal Biomechanics

BIOEN 520 | ME 527

Session 7B

Mini-Lab 3

Literature Reviews

Literature Reviews…

FYI: Clinical Significance ≠ Lit Review

>> a subset of a lit review...

Clinical
Significance

Lit Review

Literature Reviews…

[Q]: What is the purpose of a lit review?

- **Synthesize background information**
  - Establish what's been done?
  - What model/methods were used (good/bad?)
  - Limitations (what was controlled/not controlled?)
  - What were the findings?

- **Interpret what is known/unknown**
  - Collectively, what do we know (…and, still don't know)
  - What's important to further investigate and why?

- **How does the proposed study fit in?**
  - What's the significance of the proposed study?

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Literature Reviews…

Small Group Discussion…

- Review and compare lit reviews (…2 helmet papers)
  - Bowman et al., JOB, 2012
  - Mizuno et al., AA&P, 2014

- How well do they achieve the lit review objectives?
  - Synthesis of relevant research?
  - Interpretation of known/unknown/needs?
  - Rationale for current study?

Literature Reviews…

[Q]: What tools/strategies do you use?

- **Tools**
  - PubMed (database) search
  - "Ancestor tree" recent papers (esp. review papers)
  - Books
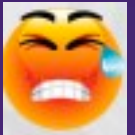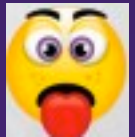 - Web of Science via UW Libraries*

- **Organize results**
  - Sheri's tabularized example

*http://apps.webofknowledge.com.offcampus.lib.washington.edu/

Literature Reviews…

Tips on how NOT to write it up?

- "Many studies have examined XYZ [1-52]."

- Series of paragraphs… one for each study

- Critiques ("trashes") other studies

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Literature Reviews…

Good practices…

- Synthesize previous studies by grouping ideas into themes

- Summarize what are the knowns, unknowns, and current needs

- State the objectives (hypotheses) for your study and how it fits in

Online Resource:

https://emedia.rmit.edu.au/learninglab/content/literature-review-tutorial

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