MAYO CLINIC

A penny for your thoughts: survey science for medical physicists

TRANSLATION AND INTERPRETATION: ADAPTING ESTABLISHED AND VALIDATED SURVEY QUESTIONS

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DISCLOSURES

I have no disclosures relevant to this presentation or this work

After spearheading the delivery and successful completion of a three-site survey to hundreds of radiation oncology personnel within the Mayo Clinic, I am committed to responding to *every* reasonable survey that comes my way

I know the folks on the other end of the survey are sweating over each response!

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SO YOU HAVE A QUESTION…

…or maybe many questions that you'd like answered

But you don't know where to begin with writing your own questions, or don't have the (significant) time to devote to getting those just right

BORROW!

With attribution/credit/permission

Carefully selected survey(s) and questions

Thoughtful modification

Image copyright Classic Exhibi

VALIDATED SURVEYS AND VALIDATED QUESTIONS

"Is this survey validated?"

"Validated for what?"

1. What is a validated survey, and survey questions, and why are they important?
2. How can you tell if the survey you are interested in using is validated?
3. Are all validated questions useful? Are all useful questions validated?

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MODIFICATIONS: CAN YOU? SHOULD YOU?

- How much can the wording be modified without undermining the validity of the questions?
  - Can questions be omitted, or novel ones added?
  - Can descriptions of roles and facilities be modified at will?
  - Does changing the delivery mechanism affect validity?

WHAT ABOUT LANGUAGE?

- Literal translation to another language
- Scaling of language based on audience
  - Medical physicists – or other health professionals
  - Level of medical literacy
    - Public
    - Adult patients
    - Parents
    - Pediatric patients

Image copyright National Academy of Medicine
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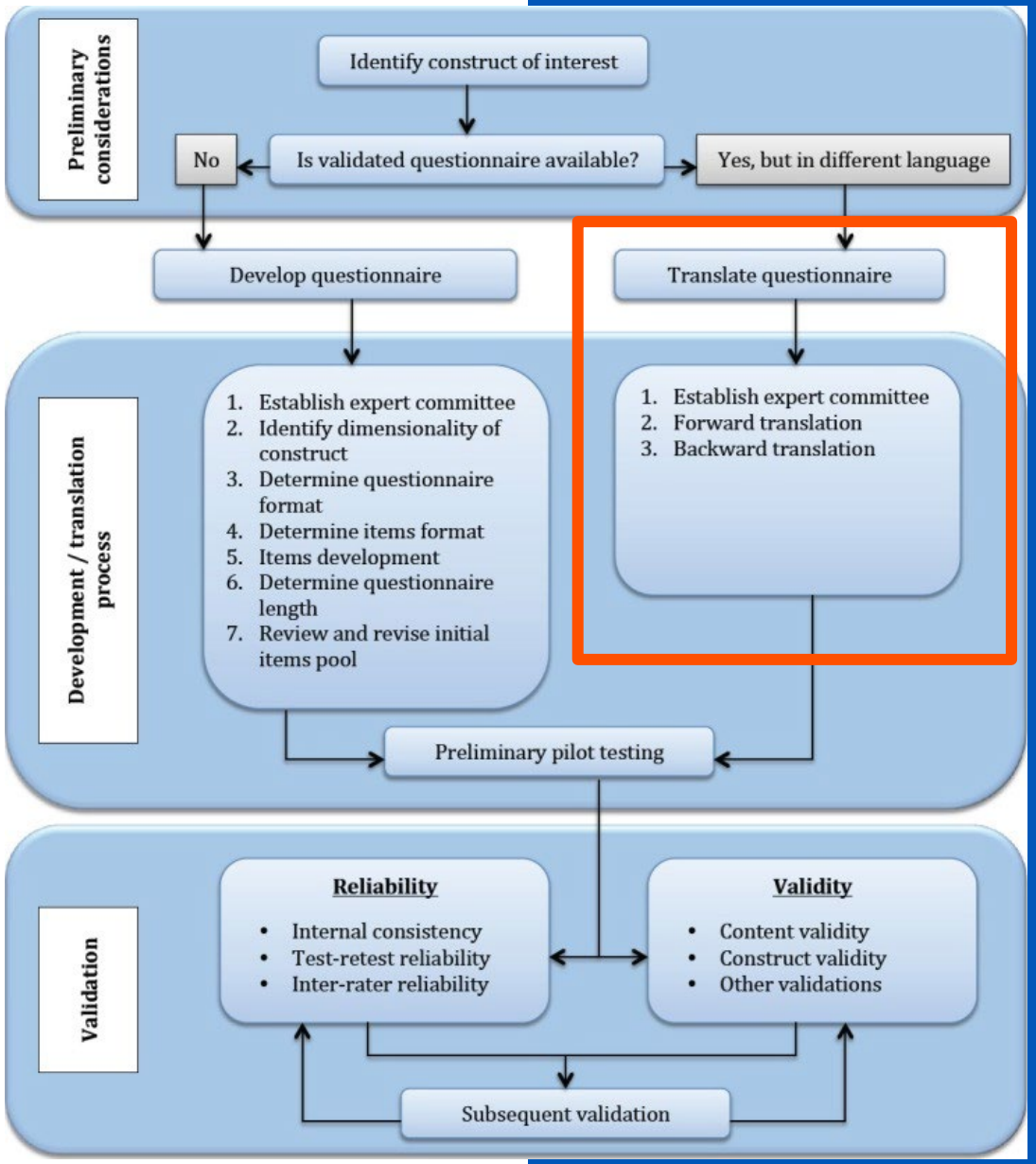

Image from Guidelines for developing, translating, and validating a questionnaire in perioperative and pain medicine
Siny Tsang, Colin F. Royse, and Abdullah Sulieman Terkawi

IF YOU NEED TO TRANSLATE YOUR SURVEY

- Do not dump it into Google Translate and hope for the best
  - These survey instruments are so carefully crafted, the translation needs the same thorough and nuanced approach
  - The translator should be briefed on socio-demographic characteristics of target population, the reading level they should be aiming for in the translation and whether they should use language that is going to be widely understood or that which is specific to a particular region or country

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OWNERSHIP AND INTEGRITY

Who owns the data? Will they maintain confidentiality? Where is it stored? For how long? What type of log-in is used?

FUNCTIONALITY

What do you need it to do for you? Does it email? Does it track? Does it remind? Does it analyze? Does it export?

TRAINING AND LEARNING CURVE

Do you know how to use this tool?

Is there a local expert or paid support?

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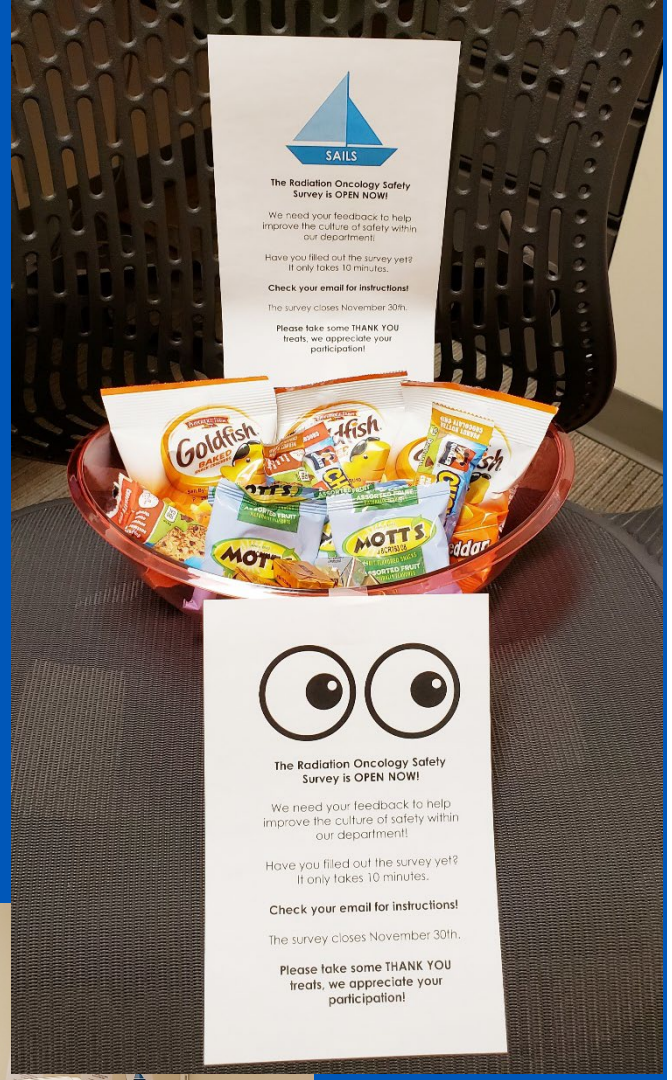
My winning combination for the treat bowls:

Mott's Fruit Snacks

Goldfish

Chewy Granola Bars

Hershey Chocolate Nuggets



TRACKING RESPONSES

- Confidential vs anonymous
- Voluntary vs Mandatory
- How to boost response rates
  - Reminders
  - Incentives (food, money, prizes, shame)

Even cartoon eyeballs can help!

Actual science here: A field study on watching eyes and hand hygiene compliance in a public restroom

Stefan Pfattheicher, Christoph Strauch, Svenja Diefenbacher, Robert Schnuerch

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WHAT SURVEYS ARE WE FREQUENTLY BORROWING IN MEDPHYS OR WOULD BE A GOOD FIT IN MEDPHYS

With the caveat that these are all instruments that I have used in my work, or read about in the context of the work I do for patient and staff safety

THE NASA TASK LOAD INDEX (NASA-TLX)

A subjective, multidimensional assessment tool that rates perceived workload in order to assess a task, system, or team's effectiveness or other aspects of performance

AHRQ SURVEYS ON PATIENT SAFETY CULTURE™ (SOPS®)

A subjective series of surveys that ask health care providers and staff about the extent to which their organizational culture supports patient safety

THE STATE-TRAIT ANXIETY INVENTORY (STAI)

A psychological inventory based on a 4-point Likert scale which measures two types of anxiety – state anxiety, or anxiety about an event, and trait anxiety, or anxiety level as a personal characteristic.

AHRQ PATIENT EDUCATION MATERIALS ASSESSMENT TOOL™ (PEMAT®)

A systematic method to evaluate and compare the understandability and actionability of patient education materials.

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AND LAST BUT NOT LEAST

A WORD ABOUT THE IRB

- It is more than likely that you will be performing your survey in the context of a QI/QA activity, and it will be exempt from any IRB approval
- However, that is for the IRB to tell you, so better to ask right from the beginning
- If this truly is a more research focus, and there are patients involved, much care will need to be taken
- Consult your own internal guidance, or that of your partner institutions to determine the best course forward

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THANK YOU

Looking forward to your questions in the Q&A

Feel free to reach out for more survey science fun!
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