

Queensland University of Technology

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ACHPER Queensland Professional Learning 2023

Senior Health Uncovered

Teaching Health General Senior Syllabus 2019 v1.2





We will commence at 9:00 am

Presenters

- Georgina Amos Cavendish Road SHS
- Carolyn Jones Queensland Curriculum & Assessment Authority
- Dr Louise McCuaig Matthew Flinders Anglican College
- Dr Hugh Shannon Queensland University of Technology

Program overview



Time	Session topics	Presenters
9:05 – 10:15	Salutogenesis – Understanding the river of life	Dr Louise McCuaig
10:15 – 10:30	Break	
10:30 – 11:30	Overarching frameworks & resources of Senior Health	Carolyn Jones & Dr Hugh Shannon
11:30 – 12:45	Using the health inquiry model for a purpose (Unit 1)	Georgina Amos
12:45 – 1:15	Break	
1:15 – 2:00	Assessment design & assessment decisions	Carolyn Jones
2:00 – 2:45	Effective data collection & analysis	Dr Hugh Shannon
2:45 – 3:00	Panel discussion & concluding remarks	All presenters

Health General Senior Syllabus 2019 v1.2

Summary map

OVERARCHING APPROACHES¹, FRAMEWORKS² & RESOURCES³

- Salutogenic Model of Health¹ (Antonovsky) & Strengths-based approach¹
- Determinants of Health² (AIHW Conceptual Framework)
- Ottawa Charter for Health Promotion Enable, Mediate & Advocate² (World Health Organization)
- Framework for Health Promotion Action² (Murphy & Keleher)
- Health Literacy Functional, Interactive & Critical³ (Nutbeam)
- Social Justice Framework Equity, Diversity & Supportive Environments³

COURSE STRUCTURE

Topics (underlined) & health contexts (bold)

	UNIT 1	Resilience as a personal health resource		
	UNIT 2	Peers & family as resources for healthy living	• Elective topic 1: <u>Alcohol</u> • Elective topic 2: <u>Body image</u>	
	UNIT 3	Community as a resource for healthy living	Elective topic 1: <u>Homelessnes</u> Elective topic 2: <u>Road safety</u> Elective topic 3: <u>Anxiety</u>	
	IIT 4	Respectful relationships in the pc	est-schooling transition	

HEALTH INQUIRY MODEL

Seminal work (bracketed)

Stage 1: Define & Understand	Stage 2: Plan & Act	Stage 3: Evaluate & Reflect
Positive Psychology PERMA+ (Seligman)	Ottawa Charter for Health Promotion – <i>Action areas: DPS</i> ,	RE-AIM (Glasgow, Boles & Vogt)
Social Cognitive Theory (Bandura)	CSE, SCA, RHS & BHPP (World Health Organization)	
Social Ecological Model (Bronfenbrenner)	Diffusion of Innovation Theory	
Life Course Theory (Elder)	(Rogers)	

ASSESSMENT

*Suggested formative assessment techniques (1 – 2 assessments required per formative unit)

FORMATIVE	*FA1 Investigation – Analytical Exposition *FA2 Examination
FORM	*FA3 Investigation – Action Research *FA4 Examination
SUMMATIVE	IA1 Investigation – Action Research (25%) IA2 Examination – Extended Response (25%)
SUMM	IA3 Investigation – Analytical Exposition (25%) EA Examination (25%)













Dis-ease







'River of Life' metaphor diagram published with permission (Source: QCAA Health General Senior Syllabus 2019 v1.2 p. 10)





EFFECTIVE DATA COLLECTION & ANALYSIS

PRESENTER

Dr Hugh Shannon, Queensland University of Technology

Session overview

- Secondary research
- Primary research: Ethical considerations
- Common primary data collection methods
- Research study design
- Data analysis
- Senior Health: Teacher insights survey

Further discussion – Email:

h.shannon@qut.edu.au

Primary & secondary research

Some schools utilise legacy data



- Existing information
- Original analysis completed by others

Primary

- Original data
- Students as researchers (methods, analysis & reporting)

research

Φ

What do we want to know?

2. RESEARCH QUESTION(S)

What is already known?

3. BACKGROUND RESEARCH

Proposed explanation based on preliminary evidence

4. HYPOTHESIS

How will the research be conducted? What primary data will be collected?

5. **METHOD** (research design & ethics)

How will the quantitative and/or qualitative data be managed?

6. DATA COLLECTION

Does the data support the hypothesis? What conclusions can be drawn?

7. DATA ANALYSIS & CONCLUSIONS

What are the key findings, strengths and limitations of the investigation? How will the findings inform future research?

8. REPORT RESULTS

SECONDARY RESEARCH

Secondary research examples

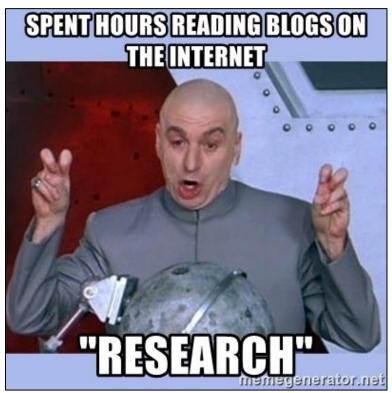


Image source: https://memegenerator.net/instance/58860780/drevil-meme-spent-hours-reading-blogs-on-the-internet-research

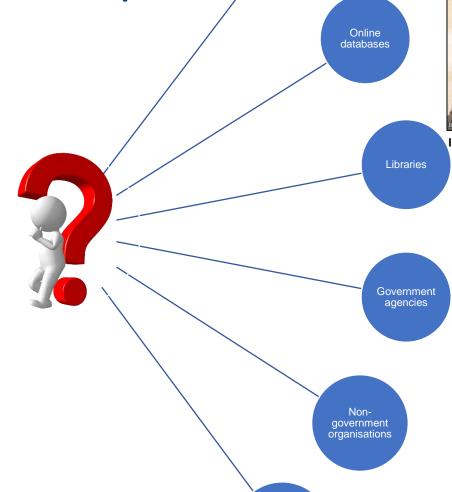




Image source: https://faithrpsite.weebly.com/memes.html

Online search

engines

Online search efficacy & efficiency

Resource – Online search strategies:

- Search engines
- Databases



Queensland University of Technology

School of Exercise and Nutrition Sciences

XNB197 – Foundations of Health Education Efficient online search strategies

The points listed in this handout may not be new information to you however it could prove useful to go through them as a quick refresher. The following points identify strategies for making the process of searching databases or using online search engines more efficient.

- Work out the key terms that you want to use and identify other terms that have a similar meaning <u>Example</u> – adolescent / youth.
- Use Boolean operators to narrow or widen your search: "AND" narrows the search, "OR" widens the search. <u>Example</u> – children AND diabetes
- Truncation Placing an asterisk next to a word stem will find words with alternative endings.
 Example child* could find child, children, children's etc.
- Wildcard Placing a question mark within a word can help find words with alternative spelling. <u>Example</u> – behavio?r could find behaviour and behavior.
- Phrase Place words in inverted commas to search for a complete phrase.
 Example "adolescent health".
- Nesting Parentheses can be used to combine different sets of terms can be included in the one search or to override
 precedence. A general rule of thumb When mixing operators, place brackets around the 'OR' part.
 Example (youth OR adolescent) AND health
- Proximity operators Will search for text that includes the two terms within the specified range.
 Example child n5 health could find any text where the words child and health are no more than five words apart.
- Combinations of multiple operators
 <u>Example 1</u> "type 2 diabetes" AND (adolescent OR youth)

 <u>Example 2</u> chil* n5 "type 2 diabetes"

Information adapted from: Fells, P. (2008). AIRS – Module 1 resources.



Efficient online search strategie

h.shannon@qut.edu.au

- 1. Work out the **key terms** that you want to use and identify other terms that have a similar meaning. <u>Example</u> – adolescent / youth.
- 2. Use **Boolean operators** to narrow or widen your search: "AND" narrows the search, "OR" widens the search. <u>Example</u> – children AND diabetes
- 3. **Truncation** Placing an asterisk next to a word stem will find words with alternative endings. Example child* could find child, children, children's etc.
- 4. **Wildcard** Placing a question mark within a word can help find words with alternative spelling. <u>Example</u> – behavio?r could find behaviour and behavior.
- 5. **Phrase** Place words in inverted commas to search for a complete phrase. Example "adolescent health".
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 Example (youth OR adolescent) AND health
- 7. **Proximity operators** Will search for text that includes the two terms within the specified range.

 <u>Example</u> child n5 health could find any text where the words child and health are no more than five words apart.
- Combinations of multiple operators
 Example 1 "type 2 diabetes" AND (adolescent OR youth)
 Example 2 chil* n5 "type 2 diabetes"

Confirmation bias

- Students may be susceptible when searching online or undertaking primary data analysis
- Can be reinforced by social media and search engine algorithms

Confirmation bias is the tendency to

search for, interpret and recall information in a way that supports what we already believe.

American Views: Trust, Media and Democracy, Gallup/Knight Foundation (2018)



Infographic source: https://newslit.org/tips-tools/dont-let-confirmation-bias-narrow-your-perspective/

ETHICAL PRIMARY RESEARCH CONSIDERATIONS

Research

What would be your normal reaction if someone approached you on the street or in a shopping centre and asked you to participate in research? Be honest:)



Senior Health students & teachers need to understand & demonstrate ethical practices to **establish trust**, encourage the highest possible **response rates**, promote **veracity** & **support future research**.

Ethical considerations

- 1. Confidentiality
- 2. Informed consent
- 3. Secure data management
- 4. Participant feedback
- 5. Reporting data



- Participant reassurance & trust
- Participant rights
- Strong response rates
- Future research participation



Ethical considerations – Confidentiality

Anonymous data:

- Researchers are not able to identify who the participants are
- Example: questionnaire with non-identifiable demographic data

De-identified data:

- Researchers know who the participants are, but protect their identity by designating unique labels for each participant such as P1, P2, P3...
- Examples: semi-structured interview, semi-structured focus group or field observation

Ethical considerations – *Informed consent*

- Research purpose, confidentiality & invitation to voluntarily participate
 - ✓ Why is this research being conducted?
- Explanation of procedures
 - ✓ What will the participant need to do? What is the time commitment?
- Voluntary participation & right of withdrawal
- Anticipated benefits, potential risks & addressing concerns
 - ✓ What is the potential value of this research?
 - ✓ Are there any risks beyond normal day-to-day living and how will they be managed? (e.g. teacher listed as the contact point & school leaders should know about the projects)



Meme source: https://lovestats.wordpress.com/dman/surveyresearch-statistics-meme/

Ethical considerations – Secure data management

- All data should be stored in a secure manner
- Examples:
 - ✓ Questionnaires locked in a filing cabinet in the teacher's staff room
 - ✓ Password protected folders on a secure school network drive <



Ethical considerations – *Participant feedback*

Sometimes neglected in school projects, but very important for establishing a positive research experience & encouraging future participation

- Gratitude should be conveyed to participants & the value of their input should be emphasised
- A summary of the main results or findings should be made available to all participants (can be at a school community level)

Ethical considerations – Reporting data

Data must be presented in a way that ensures participant confidentiality

- Quantitative data should be presented as aggregated (grouped) data, not individual quantitative data
- Aggregated quantitative data can be categorised according to demographic characteristics (e.g. gender or age) for comparative purposes
- Qualitative data should be presented as aggregated (grouped) data representing the main themes
- Individual participant qualitative responses can be presented as quotes to highlight examples, however they must be represented by de-identified labels (e.g. P1, P2, P3...)

COMMON PRIMARY DATA COLLECTION METHODS

Common primary data collection methods

Semi-structured <u>interview</u>:

- List of prepared questions (-structured) which can be extended upon during the interview as participant responses emerge (semi-)
- Responses are recorded (with permission) & transcribed (typed verbatim) for analysis

Semi-structured focus group:

- As per the interview description, but completed with a group of participants at the same time
- The size of the focus group requires careful consideration to encourage participation (ideally less than 10 as some may not contribute when the group is larger)

Common primary data collection methods

Questionnaire:

- Demographic data items (e.g. age, gender, geographical location of residence, year level, target groups if more than one: these variables could be used to make comparisons between sub-groups when analysing questionnaire data)
- Quantitative data items: dichotomous (e.g. Yes/No), interval scales (e.g. Likert 5 point: SA, A, N, D & SD) & continuous scales (e.g. visual analogue scale where respondents mark a point anywhere on a line that reflects their level of agreement)
- Qualitative response items

Common primary data collection methods

Field observation:

- Criteria for observing & recording behaviours
- Checklist style form for recording quantitative data
- Space for observational notes (qualitative data)

Resource – Research instrument tips

XNB394 Advanced Health Education - Research Instrument Tips

QUESTIONNAIRE SEMI-STRUCTURED INTERVIEW OR FOCUS GROUP FIELD OBSERVATION Components Components Components: Community information statement disclosing what Participant instructions explaining why the data is Instructions able to be read to participants explaining what will occur & why, estimated time being collected, estimated time commitment, will occur & why (able to be shared with school indicating return of the completed questionnaire commitment, seeking participant consent, seeking leadership team & via broader communication reflects participant consent, & an explanation of how permission to record. & explanation of the need to channels such as newsletter, website, social media or to respond to the items (e.g. tick/cross the boxes & wait for the whole question to be asked or others to write comments on the lines/within the boxes Space for procedural notes (e.g. date, location & Space for procedural notes (e.g. date, location & Include demographic response items that will enable Review your research objectives & hypothesis, then interesting comparisons during the analysis (e.g. age, Review your research objectives & hypothesis, then prepare a list of observational foci or criteria that prepare a list of questions that will generate enable behaviours to be recorded (include space for Review your research objectives & hypothesis, then valuable data quantitative & qualitative data) prepare a list of items (questions and/or statements) Leave space between questions for notes (e.g. that will generate valuable data (consider what scale additional questions or to support analysis) types are necessary: e.g. even numbered Likert Clear & easy to navigate layout (rapid data entry may be required for real-time observation) interval scales with some dichotomous scales) Sufficient space for the type of data collected Clear, concise & age appropriate language Include some qualitative comment items to help participants explain their responses to particular No leading questions or statements (should not influence the response or lead them to a response which may not be accurate) Principles: Clear, concise & age appropriate language · No leading questions or statements (should not Suitable length (sufficient data but not excessive, e.g. 10 - 15 items aligned with your research objectives) influence the response or lead them to a response which may not be accurate) Consistent & user friendly layout Suitable length (sufficient data but not excessive, e.g. demographic items plus 10 - 15 items aligned with your research objectives)

- Clear & concise: prevent respondent fatigue & formatting OCD:)
- No leading questions for open responses!

Example leading question and statement:

Our presentation successfully raised awareness of X. What aspects of our presentation influenced why you believe X is so important?



XNB394 Research instrument development tips.doc

How many questions?

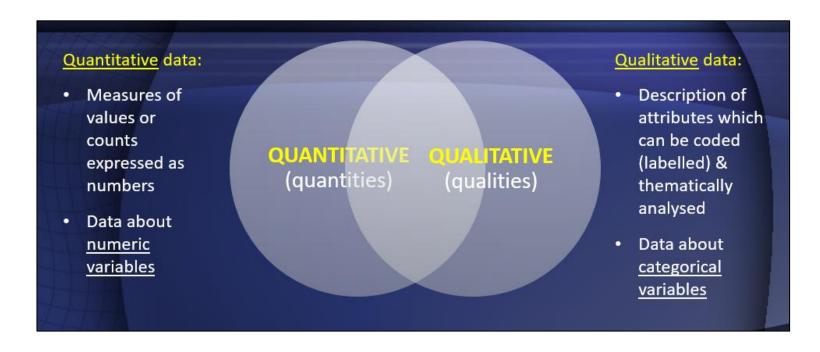
Quality over quantity!



Excessive Q may be due to:	Potential impacts:	Strategies:
 Fear of not having enough information to work with 	Lower response rateLower re-completion rate	 Focussed planning (What do I/we want to determine?)
 Insufficient confidence in the efficacy of questions 	(time series data) requiring a higher inflation factor	 Pilot/trial testing (small target group sample)

RESEARCH STUDY DESIGN

Data types



- Quantitative = *numbers*
- Qualitative = words

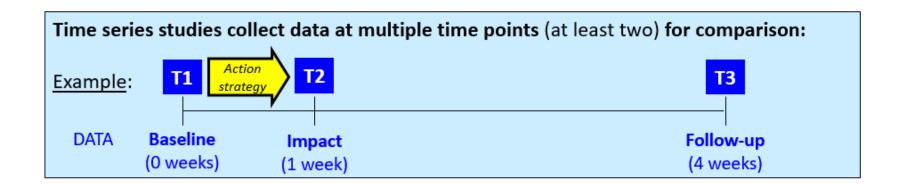
Definition source p.102: ABS 2013 cited in Health 2019 v1.2 General Senior Syllabus (QCAA)

Research study design

- What primary data collection method? (e.g. semi-structured interview, focus group, questionnaire or field observation)
- What type/s of data? (e.g. quantitative, qualitative or both)

Research study design

- How many data collection time points?
 - o **Time-series studies** collect data at two or more time points
 - Two time points will enable pre and post implementation comparisons
 - Three time points enable follow-up data which may provide preliminary indicators of maintenance



Research study design

- What is the target group?
- How many people do we need?

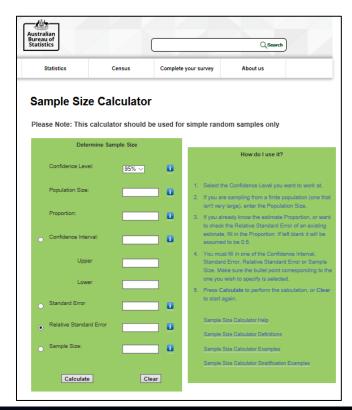
Why perform a sample size calculation?

- Efficient use of resources
- May not be possible to manage a large volume of data (realistic for the context)
- Identifying the minimum required to have confidence in the results
- Inflation factor: Aim to exceed the minimum (within reason). This is particularly
 important for time-series study designs as the calculated sample size is the number of
 participants required to complete <u>all time points</u> (allowing for absence on one occasion
 and the option to withdraw from participation (ethical requirement).

Activity – Sample size calculation

- What is your target group?
 Describe them & estimate
 the target group size (N=?)
- What is the minimum sample size required?
 Complete a sample size calculation, report the minimum sample size required (n=?) & report the applied Confidence Level, Proportion & Relative Standard Error (RSE)

ABS online calculator: http://tinyurl.com/y4csfavd



Recommended settings:

- Confidence Level 95%
- Proportion 0.75
- RSE 10

Click on the **blue information icon** next to each of these inputs to develop your understanding of the terms.

ABS website:

www.abs.gov.au/websitedbs/D3310114.nsf/home/Sample+Size+Calculator

Sample size inflation factor (time-series studies)

- If utilising a time series study design, your 'n' value is the minimum number of people that must complete all time points
- We need to account for attrition: people who may be absent or choose not to complete T2 and/or T3

We can prepare for this situation by applying an inflation factor

- Example 1 Two time points: If we are aiming for 70% of the starting group to complete T2, our inflation factor is 1.3 x 'n'
- Example 2 Three time points: if we are aiming for 70% of the starting group to complete T2 and T3, our inflation factor is 1.3 x 1.3 x 'n' or 1.69 x 'n'

DATA ANALYSIS

Quantitative data analysis

Measures of central tendency

- Mean
- Median
- Mode

Measures of variability

- Range
- Standard deviation (quantifies variability or dispersion)

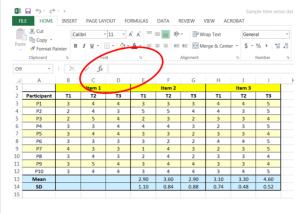
Reporting example:

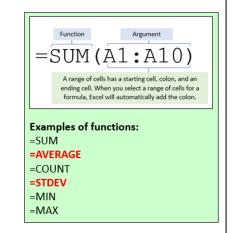
Sample group age range 17 - 56 years (M = 38.60, SD = 10.25)



Activity – Quantitative data analysis

Data management skills – Excel functionality





ACTIVITY:

- 1. Download the quantitative sample from the Blackboard site Week 6 Tutorial folder
- 2. Set up formulae to calculate mean & standard deviation for Item 1 (T1, T2 & T3)
- 3. Discuss the results & process Potential foci: standard deviation (SD) is a measure of variability & how students might interpret results (e.g. the mid-point for this scale is 3 not 2.5)

XNB394 Advanced Health Education



Demonstration spreadsheet files

- 1. Sample time series data (formulae removed)
- 2. Sample time series data

Qualitative data analysis

- Systematically extracting meaning from text (e.g. interview transcripts, focus group transcripts, written questionnaire responses & field observation notes)
- Analytical process of <u>coding</u> (labelling), organizing, sorting & synthesising qualitative data to enable <u>identification of significant themes</u>
- Coding involves assigning a word, phrase, number or symbol to the associated text (labelling process)

SENIOR HEALTH: TEACHER INSIGHTS SURVEY

ACKNOWLEDGEMENT

Survey respondents – Queensland Senior Health teachers

Background

- Distributed via EQ Senior Health
 Discussion list & Senior Health
 Education QLD Facebook group
- Respondents: Queensland Senior Health teachers (n=53)
- Brief 5-item survey (anonymous)

Senior Health: Teacher insights

Responses to the following questions about your experiences teaching the subject Senior Health (Health General Senior Syllabus 2019) will be invaluable for teachers attending professional development provided by ACHPER Queensland.

Lengthy responses are not required. A few insightful words or sentences for each question will be appreciated. This brief survey comprising five questions is anonymous and the expected completion time is approximately five minutes.

If you have any questions about this survey, please contact Dr Hugh Shannon via email h.shannon@qut.edu.au or phone (07) 3138 3577.



qualtrics.**

Background

Survey items What do you enjoy most about teaching Senior Health? Why is Senior Health a valuable subject for your students to study? What strategies do you use to promote student motivation to learn and complete assessment? What do students find most challenging about Senior Health and how do you overcome these challenges? Have you observed any misconceptions* amongst staff, students or parents about the subject Senior Health? If so, what are they and how do you address them?

^{*}Definition - Misconception: An inaccurate idea, belief, view or opinion due to misunderstanding or incorrect assumptions.

Survey data

- You have been emailed a copy of the raw data
- I encourage you to take the time to read it and consider the suggestions and strategies
- We will explore some samples...



Qualitative coding, thematic analysis & frequency mapping Q1. What do you enjoy most about Senior Health?

- Authentic, relevant & engaging (real world learning) 19
- Agency for change (others), impact & legacy 6
- Observing & supporting personal growth (knowledge & life skills) 6
- Observing & supporting academic growth/achievement 3
- Creativity & innovation (thinking/design)
- Theoretical frameworks (new lens/perspectives)
- Cross unit relationships (concepts, theories & frameworks)
- Student relationships 2
- Health literacy 2
- Salutogenic & strengths-based approaches 2
- Health field career preparation
- Content 6

Qualitative coding, thematic analysis & frequency mapping

Q4. What do students find most challenging about Senior Health and how do you overcome these challenges?

- Academic rigour & volume (reading, writing & research) 7
- Examination assessment
- Understanding relationships between theoretical concepts 5
- Terminology & language (unfamiliar)
- Analytical skills (data) 3
- Understanding & meeting assessment criteria
- Innovation implementation
- Insufficient requisite skills
- Discussion Enabling input from all
- Some topics can be dry without contextualisation

Strategies:

- Frequent reading/writing
- Scaffolding
- Routines
- Regular feedback
- Examples/scenarios
- Demonstrating skills (explicit teaching)
- Quizzes
- Using terminology
- Concept videos
- Graphic organisers, mind maps
 & concept maps
- Self-reflection drafting
- Exit slips
- Peer masterclasses
- Supportive environment

Qualitative coding, thematic analysis & frequency mapping

Q5. Have you observed any misconceptions amongst staff, studest or parents? How did you address them?

- Alternative version of H/PE: theoretical or inclusive of PA 6
- Narrow view of health (solely personal or biomedical)
- Easy subject perception & not expecting/prepared for the actual academic rigour 8
- Too difficult/not achievable
- Feminine perception
- Implicit bias (assumptions made narrow world-view)

Strategies:

- Marketing (videos, slides, subject talks, student presentations to year 10)
- Reinforcing what the subject is/is not
- QCAA website & resources
- Success stories/previous cohort achievements (perception - too hard)
- Show case student work (perception easy subject)
- Quality Senior Education & Training (SET) planning
- Male teachers & diversity in examples/scenarios/foci

Something to ponder...

The potential of education as a powerful tool for social mobilisation has been lost in some cases through health promotion intervention that is "...done 'on' or 'to' people, rather than 'by' or 'with' people." (Nutbeam, 2000, p.265)

Source: Nutbeam, D. (2000). Health literacy as a public health goal: A challenge for contemporary health education and communication strategies into the 21st century. Health Promotion International, 15(3), 259-267.

QUESTIONS? Use the chat box to post a question



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