TAKE A TABLET: A NEW TOOL FOR ASSESSING SEXUAL INTEREST

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WHAT AM I GOING TO TALK ABOUT?

- Why sex interest research?
- Sex interest measures & evaluation
- Introduction of a new measure
- Testing and evaluation of a new measure
- Future directions
WHY SEX INTEREST RESEARCH?

- Not greatly researched in terms of typical sexuality
- Important and current!
  - Marriage equality in the UK in March 2014 & USA in June 2015
- Extrapolation to deviant sexual interest
  - Single strongest predictor of sexual offense recidivism, especially in CSOs (Kanters et al., 2014)
  - Exclusive paedophilic preference?
  - Accurate and reliable measurement to aid management and treatment
CURRENT SEX INTEREST MEASURES

- **Subjective**
  - Questionnaires
  - Card Sorts
  - Interviews

- **Objective**
  - Phallometry (PPG)
  - Thermography
  - Heart Rate/Galvanic Skin Response
  - Pupillometry
  - Eye-tracking (& viewing time)

- **Indirect**
  - Implicit Associations Test (IAT)
  - Implicit Relational Assessment Procedure (IRAP)
  - Choice Reaction Time (CRT)
  - Rapid Serial Visual Processing (RSVP)
  - Emotional Stroop
EVALUATION OF SEX INTEREST MEASURES
SUBJECTIVE

- Influenced by observer’s personal judgement.
- Open to interpretation and opinion.

- Rich and detailed information

- Assumes the information required is consciously accessible (Snowden et al., 2011) – sexuality is complex!

- Sensitive topic, so prone to socially desirable responding (Meston et al., 1998) – SOs have an incentive to distort the truth!
OBJECTIVE

- Involves impartial measurement, that is, without bias or prejudice.
- Not subject to personal opinion.

Penile Plethysmography (PPG) - Measures penile blood flow in response to stimuli using a rubber gauge

- PPG is the current ‘gold standard’ in sexuality research (Fromberger et al., 2012)
- Very invasive and in some countries (e.g. Germany) it is seen as unethical so is prohibited (Babchishin et al., 2013)
- Assuming that erection equates to sexual arousal – not always the case! (Janssen et al., 2008)
- Prone to faking behaviours! (Trottier et al., 2014)
OBJECTIVE

- Involves impartial measurement, that is, without bias or prejudice.
- Not subject to personal opinion.

**Eye-Tracking** - Used to estimate an individual’s gaze direction (*Weigle & Banks, 2008*) from a video image of the participant’s face (*Drewes, 2010*)

- Individuals less likely to decline vs. PPG (*Rieger & Savin-Williams, 2012*)
- Comparable data because from the same organ (the eye)

- Individuals may be able to manipulate their eye-gaze – eye-tracker awareness (*Risko & Kingstone, 2011*)

- Eye-tracker awareness abolished after a period of time (*Nasiopoulos et al., 2014*) – free viewing stimuli (e.g. videos) may be the way forward
IAT (Implicit Associations Task) based on the premise that RTs are faster for internally held beliefs; if two complimentary concepts are ascribed to the same computer key, you will be faster than two conflicting concepts.

Self-assesses an attribute based on another response (De Houwer & Moors, 2010)
CHILD
Or
SEXY

Category

Attribute

BREASTS

ADULT
Or
NOT SEXY
INDIRECT MEASURES

- Self-assesses an attribute based on another response (De Houwer & Moors, 2010)

IAT (Implicit Associations Task) based on the premise that RTs are faster for internally held beliefs; if two complimentary concepts are ascribed to the same computer key, you will be faster than two conflicting concepts

- Been shown to precisely identify sexuality (Snowden et al., 2008)

- Association between children and sex cannot be said to be definitive proof of abnormal sex interest in children (Snowden et al., 2011)
CRT (Choice Reaction Time Task) uses SCID to assess sex interest by indicating the location of a dot on an image; longer RTs = greater attraction to the image.
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- Validated with heterosexual individuals (Wright & Adams, 1994; Santtila et al., 2009)

- Only small number of studies exist, so may not be predictive of sexuality (Snowden et al., 2011), and few studies using CRT with CSOs with Gress et al. (2013) finding no difference between CSOs and controls.
Sex interest assessment isn’t very good!

Need a more comprehensive measure
OBJECTIVE e.g.
PPG

NON-INVASIVE e.g.
EYE-TRACKING

NON-SPECIALIST

IMPLICIT e.g.
INDIRECT MEASURES

EXPLICIT e.g.
QUESTIONNAIRES

PORTABLE

AFFORDABLE

?
PROPOSAL OF A NEW MEASURE
Tablet measure based on approach-avoidance procedures & embodied cognition

- Movements of the arm are related to an individual’s evaluation i.e. ‘pulling’ associated with ‘approaching’ (Markman & Brendl, 2005)
- Individuals were faster at pulling movements for positive vs. negative words (Chen & Bargh, 1999)
  - Stimuli automatically classified as ‘good’ & ‘bad’ – ideal for use with CSOs who are likely to try to manipulate responses
Approach-Avoidance with Sex Interest
- Hofmann et al. (2009) investigated this in men and found individuals were faster to pull the joystick towards them when they were interested in the stimuli
  - Automatic approach-avoidance tendencies predicted uncontrolled sex interest behaviour = ideal as a sexuality measure, as uncontrolled behaviours are harder to manipulate!

Swiping and Approach-Avoidance
- Kraus & Hofmann (2014) used SwAAP to assess approach-avoidance, but not with sexuality. Found that SwAAP was capable of assessing approach-avoidance tendencies, with further research being highly valuable
‘Swipe’ image towards or away from you to indicate like and dislike, respectively.

- Faster RTs to pull ‘liked’ image towards you (‘approach’) and push ‘disliked’ image away (‘avoidance’) than the reverse.
CONGRUENT    INCONGRUENT
PILOT TESTING
METHOD

Participants

19 heterosexual only participants (6 male, 13 female)

Materials

Sexuality questionnaire with 3 sexuality measures

Samsung Galaxy Tab S running OpenSesame and 30 grayscaled catalogue model stimuli from 3 age groups (child, young adult, older adult)

Procedure

Counterbalanced across conditions

Practice phase & experimental phase

Around 30 minutes long, depending on participant response rate
Repeated measures ANOVAs were conducted for each of the dependent variables:
- Swipe Speed
- Reaction Time
- Response Given
- Touch Data

And then paired samples t-tests were used for post-hoc analysis.
RESULTS!
Differences for gender were significant for ‘Attraction to Women’ ($F(1, 14) = 129.006, p<.000$) and ‘Attraction to Men’ ($F(1, 14) = 104.008, p<.000$)

NS effect of gender on ‘Sex Drive’

NS differences across KS
TABLET RESULTS
How fast, in ms, the participant ‘swipes’ the image after it has been presented to them on the screen.
Effect of condition was significant (F (1, 17) = 6.276, p < .05)

NS effect of gender!
Significant interaction for Picture Gender and Gender ($F (1, 17) = 84.201, p < .000$), meaning they were faster for preferred gender
Paired samples t-test showed NS difference for both approach and avoidance
Males show quicker approach patterns in the incongruent condition, perhaps due to habituation.
REACTION TIME ("RT")

How fast, in ms, the participant reacts to the image presented on screen (from presentation to first touch).
Condition was NS
Effect of picture age was significant ($F (2, 34) = 18.496, p < .000$
Effect of picture gender was significant ($F (1,17) = 8.803, p < .005$
Difference between Stimuli Age

- Child Stimuli
- Young Stimuli
- Old Stimuli

Difference between Stimuli Gender

- Male Stimuli
- Female Stimuli
NS effect of gender, but significant interaction between Picture Gender and Participant Gender (F (1,17) = 42.358, p < .000)

Perhaps because of SCID – delay in responding to sexually attractive stimuli
The ‘approach’ or ‘avoidance’ response given by the participant i.e. did they like it or not.
Overall, effect of condition was NS, meaning few errors were made.
Effect of picture age was significant (F(2, 34) = 26.884, p < .000)
Where on the image, in coordinates, the participant touches.
NON-SIGNIFICANT

Female stimuli

Male stimuli
DISCUSSION

What have we learned?
- Men have an odd ‘approach’ pattern that is skewing the data
  - Sample size?
    - Conditioning – 67% males did congruent condition first vs. 38% women; faster as they had already seen the pictures?
- Slower RTs for preferred gender, possibly due to SCID, consistent with other research
- Young images ‘approached’ most and gained slowest RTs – most appropriate for the age group
- Men and women don’t ‘touch’ images differently – this cannot distinguish sexual preferences
- More testing needs to be done!
Currently recruiting for Part B of the pilot
- Testing use age appropriate erotic and non-erotic images
- Assessing for resilience to faking
  - Application to deviant sex interest

Plans for the main study already in place
- Large repeated measures design
- Comparison between different, already-established sex interest measures
THANK YOU!

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