The sexual health literacy of the student population of the University of Tasmania: results of the RUSSL Study

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Introduction

- Sexual health literacy (SHL) is the knowledge and familiarity with healthy practices as regards sexual health, and risk reduction strategies to engage in sexual activity safely and minimise negative consequences (STI, unplanned pregnancy)
- There is evidence to suggest that SHL is not uniformly distributed, with some groups more deficient than others[1]
- Particularly concerning are deficits in SHL among students planning to enter medical/nursing/allied health professions, as their deficits will have negative consequences for patients seeking reproductive health/sexual health care[2]

Aim

To evaluate the sexual health literacy of the student population at the University of Tasmania (UTAS)

Methods

Background of UTAS

- Only university in Tasmania
- Three campuses: Hobart/Sandy Bay, Launceston/Newnham, Cradle Coast
- As of September 2013, Tasmanian-based UTAS population: 21,698 students
  - Predominantly Hobart campus (64.1%), followed by Launceston (31.7%), then Cradle Coast (4.3%)

Study design

- Researching University Students' Sexual Literacy Study (RUSSL) utilised an online and anonymous questionnaire
- Recruitment August/September 2013, by email invitation to all current Tasmanian-based UTAS students, social media and flyers around campuses

Sexual literacy assessment

- ARCSHS Secondary Students and Sexual Health Survey (ARC): includes knowledge and HIV/Hepatitis domains, total 31 points[3]
- University of Missouri Sexual Health Survey (SHS): includes knowledge, STI and pregnancy domains, total 20 points[4]
- Total scores calculated by summating the number of correct answers for each instrument

Covariate assessment

- Age, sex, study area queried
- Place of birth used to generate regional identification categorical
- Self-identified ethnic and religious affiliations used to generate these categorical variables
- Sexual education queried by period of exposure, content covered – used to generate sexual education quality categorical
- Sexual experience queried by age of sexual debut, lifetime number of opposite and same-sex partners, and sexual activities ever engaged in
  - Latter component used to generate sexual experience behaviour category

Statistical analysis

- SHL score predictors assessed by linear regression
- Multivariable models adjusted for age, sex, sexual education, region of birth and sexual experience
- Transformation applied to reduce heteroskedasticity, but all coefficients reported on original scale
- Test for multiple comparisons by Holm's Step-down method[5]
- Where data was missing, analyses restricted to persons with complete data

Results

Cohort characteristics

- 1,786 participants recruited (8.2% of UTAS student population)
- Cohort majority female (62.8%), Caucasian (84.5%) , & Australian-born (85.5%)
- 30.7% of cohort medicine/nursing/allied health students
- Distributions of age, sex, global region of birth, campus or study discipline not statistically different from UTAS population
  - However, overseas-born sample lower than extant proportion among students (12.3% vs. 25.3%)

Distribution of SHL scores

- ARC average score was 24.6 (79.4%), ranging from 0-31 points
- SHS average score was 15.7 (78.3%), ranging from 5-20 points

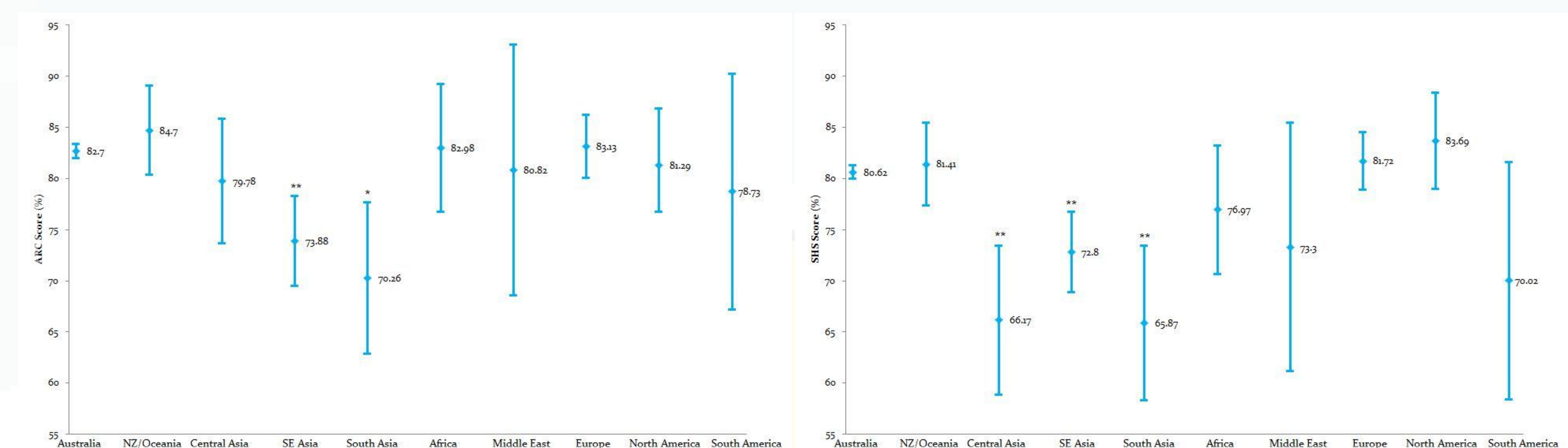
Demographic and other predictors of SHL score

- Females and older participants had significantly higher SHL scores, persisting on adjustment for covariates and multiple comparisons
- Sexual education and increased communication freedom about sex in childhood household strongly predicted increased sexual literacy
- Sexual experience (ever, partner number, earlier age of debut and greater variety of sexual experience) strongly predicted increased sexual literacy
- Medicine/nursing/allied health students had significantly higher SHL scores, moreso for ARC and only ARC persisting on adjustment for multiple comparisons
- No difference by campus

Birthplace & SHL

- Overseas-born students have significantly lower ARC and SHS (-3.6% and -4.2%)
- SE Asian and South Asian have significantly lower ARC and SHS; Central Asian have significantly lower SHS (Figure 1)
  - SE Asian associations driven by Malaysians; South Asian associations driven by Indians and Pakistanis
- All associations persist on adjustment for confounders and multiple comparisons

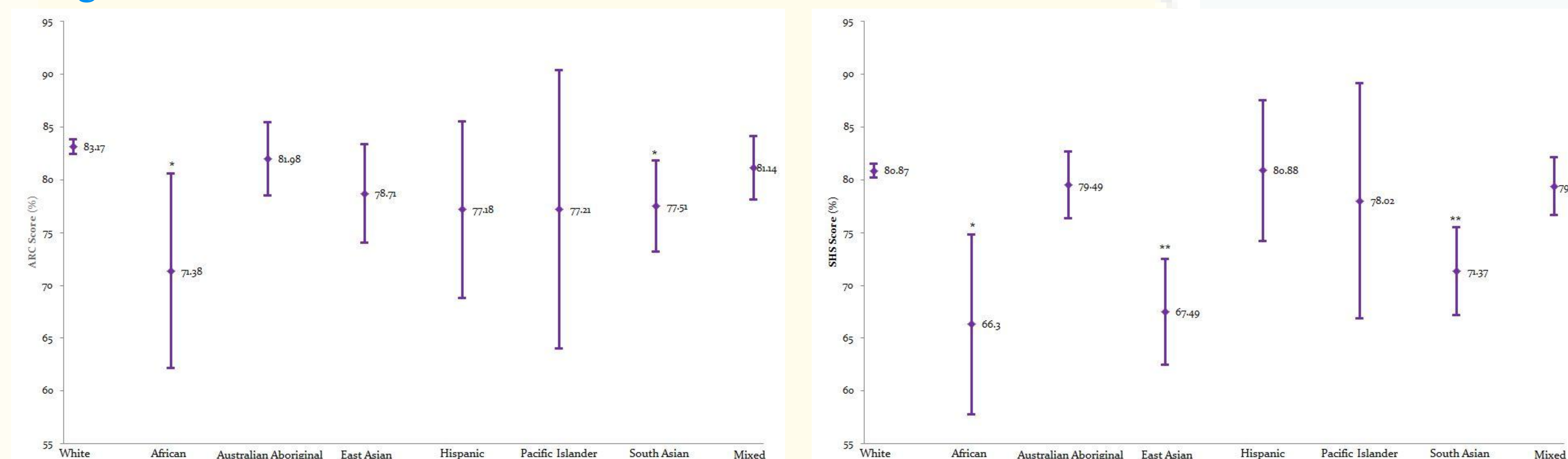
Figure 1



Ethnic affiliation & SHL

- Relative to whites, African and South Asian self-affiliations have significantly lower ARC and SHS scores, while East Asian identifying have significantly lower SHS but not ARC (Figure 2)
  - African associations were robust to adjustment, but East and South Asian associations were greatly attenuated by adjustment for age, sex and sexual education
  - Only SHS associations persist on adjustment for multiple comparisons

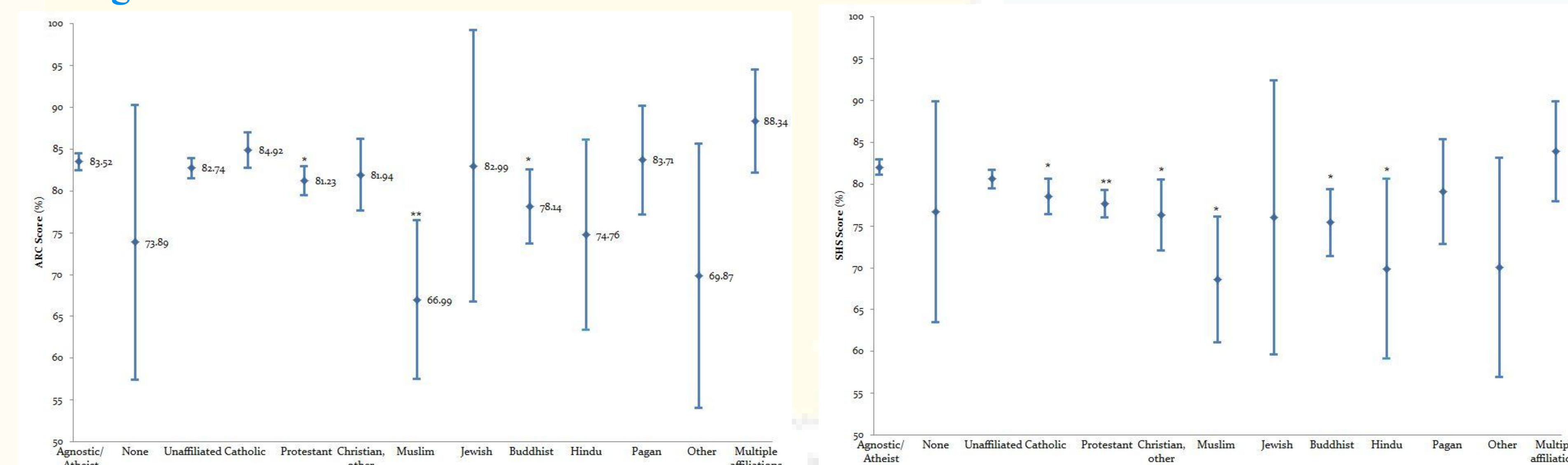
Figure 2



Religious affiliation & SHL

- Relative to atheist/agnostics, Muslims, Buddhists and Protestants had significantly lower ARC and SHS scores
- Hindus, Catholics, and Other Christian affiliated students also had significantly lower SHS but not ARC scores
- Muslim association with ARC greatly attenuated by adjustment for age, sex and sexual education, and further still by birthplace and age of sexual debut; other religious affiliations robust to these adjustments
- Only Islamic association with ARC and Protestant association with SHS robust to adjustment for multiple comparisons

Figure 3



Conclusions

- Sexual health literacy at UTAS is moderate/good, but marked deficiencies exist for some student minorities, and particularly among the overseas-born students from South and SE Asia
- Under construction of ARC and SHS as 'academic' and 'applied' SHL, deficiencies are greater in 'applied' SHL compared to 'academic'
  - Results reflect impact of sexual education on topics of biology/reproduction and HIV/STI, but suggest deficiencies in knowing risk reduction strategies against STIs or unplanned pregnancy
- Evidence supports remedial sexual education programs at UTAS focussing on risk reduction strategies.
- Given relatively poor participation by overseas-born students and other minorities in this study, repeat of study oversampling these groups indicated to substantiate findings in these groups

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