

# **Systematic review of human immunodeficiency virus (HIV) knowledge measurement instruments used on the Arabian Peninsula**

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# Disclosure Slide

- *First author:* **Maram Alghabbashi – Doctoral student, NEU**
  - I have no conflict of interest to declare.
  - Received graduate student travel grant from NEU
  - No other sponsorship or commercial support was given to either author for this work
- *Second author:* **Barbara J. Guthrie – Professor, NEU**
  - I have no conflict of interest to declare.
- *Learning Objectives:* At the end of this presentation, learner should be able to:
  - State one important event in the history of Saudi Arabia's response to the AIDS crisis
  - Explain what the WHO-KABP is and how it has been used to study HIV knowledge
  - State two main shortcomings of existing HIV knowledge instruments with respect to measuring HIV knowledge in Saudi Arabian women

# Agenda

- Introduction
- Purpose
- Methods
- Results
- Discussion



*Photograph courtesy of Shaker2013/Wikimedia Commons.*

# Introduction

- In 1984, the Kingdom of Saudi Arabia (KSA) began surveillance for human immunodeficiency syndrome (HIV)
- In October 1991, the Saudi Minister of Education implemented AIDS education in all schools.
- At the time, HIV was low prevalence and discussion was taboo
- With World AIDS Day in 1992, measuring public's HIV knowledge became important
- This led to the development of AIDS and HIV knowledge instruments

# Introduction

- In KSA, highest HIV prevalence among non-drug using heterosexual population.
- No HIV knowledge instruments developed for this specific culture

Table 1. Mode of transmission of HIV.

Mode of transmission	Male (n = 276) (%)	Female (n = 134) (%)	Total (n = 410) (%)
Haemophilia	57 (21)	0	57 (14)
Heterosexual	124 (45)	65 (49)	189 (46)
Men who have sex with men	20 (7)	0	20 (5)
Injection drug use	7 (3)	0	7 (2)
Perinatal	18 (7)	29 (22)	47 (12)
Blood transfusion	18 (7)	32 (24)	50 (12)
Organ transplantation	2 (0.7)	4 (3)	6 (1.5)
Others	2 (0.7)	0	2 (0.5)
Unknown	28 (10)	4 (3)	32 (8)

Alrajhi, 2004

# Introduction

- Saudi married women may be at especially high risk for infection.
- 2011 study shows that almost 93% of the patients presenting to a primary health center (PHC) for a sexually transmitted infection diagnosis were women
- 91% were married
- Women more likely to present at PHC for socio-economic reasons

**Table 2** Distribution of reported cases of sexually transmitted infections by socio-demographic characters.

Variables	n	%
Age in years <sup>a</sup>		
<2	42	0.8
2–	7	0.1
6–	12	0.2
13–	290	5.5
20–	1764	33.7
30–	1937	37.0
40+	1188	22.7
Mean ± SD	32.32 ± 9.58	
Sex <sup>a</sup>		
Males	373	7.1
Females	4889	92.9
Education <sup>c</sup>		
Illiterate	2071	40.8
Literate	3011	59.2
Marital status <sup>d</sup>		
Unmarried	465	9.0
Married	4722	91.0

Kabbash, 2011

# Purpose of Study

1. To enumerate appropriate HIV/AIDS knowledge questionnaires that could inform a current study of HIV/AIDS knowledge in the KSA population (especially women), and
2. To analyze them for their strengths and weaknesses in terms of reliability, validity, and cultural compatibility.

# Methods: Study selection

## Selection Criteria:

1. Must include discussion of a quantitative survey instrument used
2. Quantitative survey must be given either as an interview or self-reported questionnaire
3. Survey must include questions about knowledge HIV or AIDS
4. Survey must be given in either English or Arabic
5. Survey must be done in a population in the KSA or other countries bordering the KSA on the Arabian Peninsula, including: Bahrain, Kuwait, Oman, United Arab Emirates (UAE), Qatar, and Yemen.



# Methods: Study Search

- *Search tools:* Google Scholar, Google Web
- *Databases searched:* PubMed, PLoS, WHO publications, UN publications, news, other peer-reviewed publication databases.
- *Search terms:* Saudi Arabia, HIV, “HIV knowledge”, questionnaire, instrument, survey, AIDS.

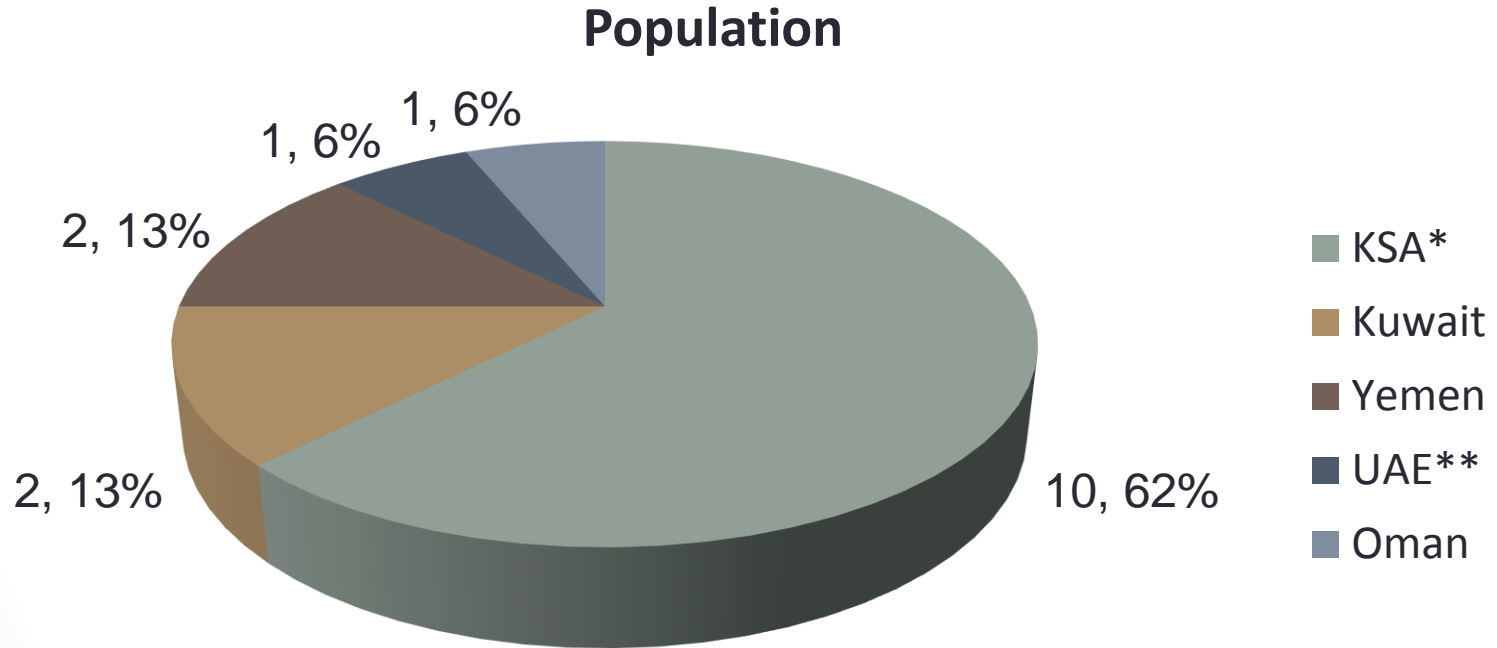
# Methods: Study Selection & Data Collection

- Articles were assessed manually for meeting criteria
- Those that met criteria had the following data collected:
  - Primary author
  - Year of publication
  - Characteristics of population studied
  - Total sample completing instrument
  - Response rate (if reported)
  - Sampling approach
  - Survey instrument description
  - Language of instrument, and
  - Any results of reliability or validity studies reported.

# Articles Selected

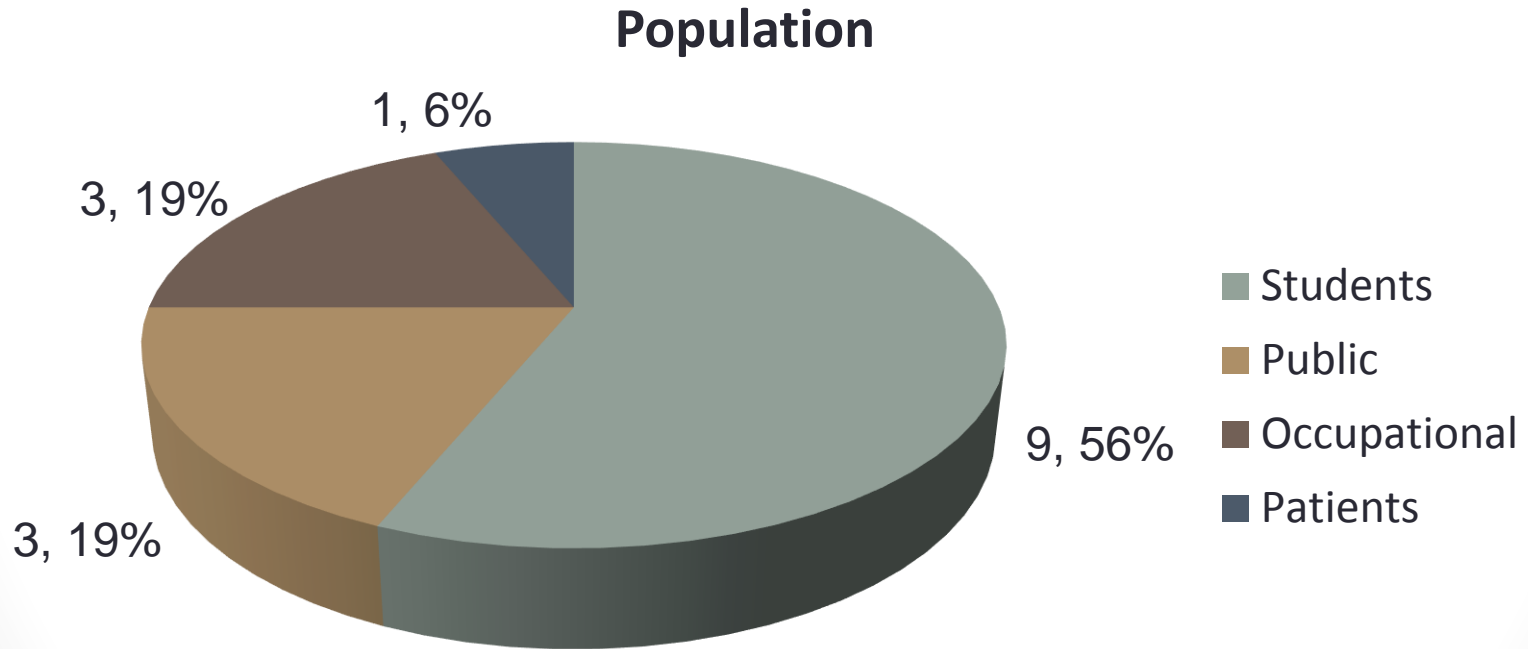
- Initial search for articles identified 4,410 results
- Most studies did not qualify because they were not on the population of interest.
- A smaller proportion of studies were disqualified for these reasons:
  - They did not include a survey
  - They did not study HIV or AIDS knowledge
- 16 studies met criteria for this systematic review

# Populations in Studies Reviewed

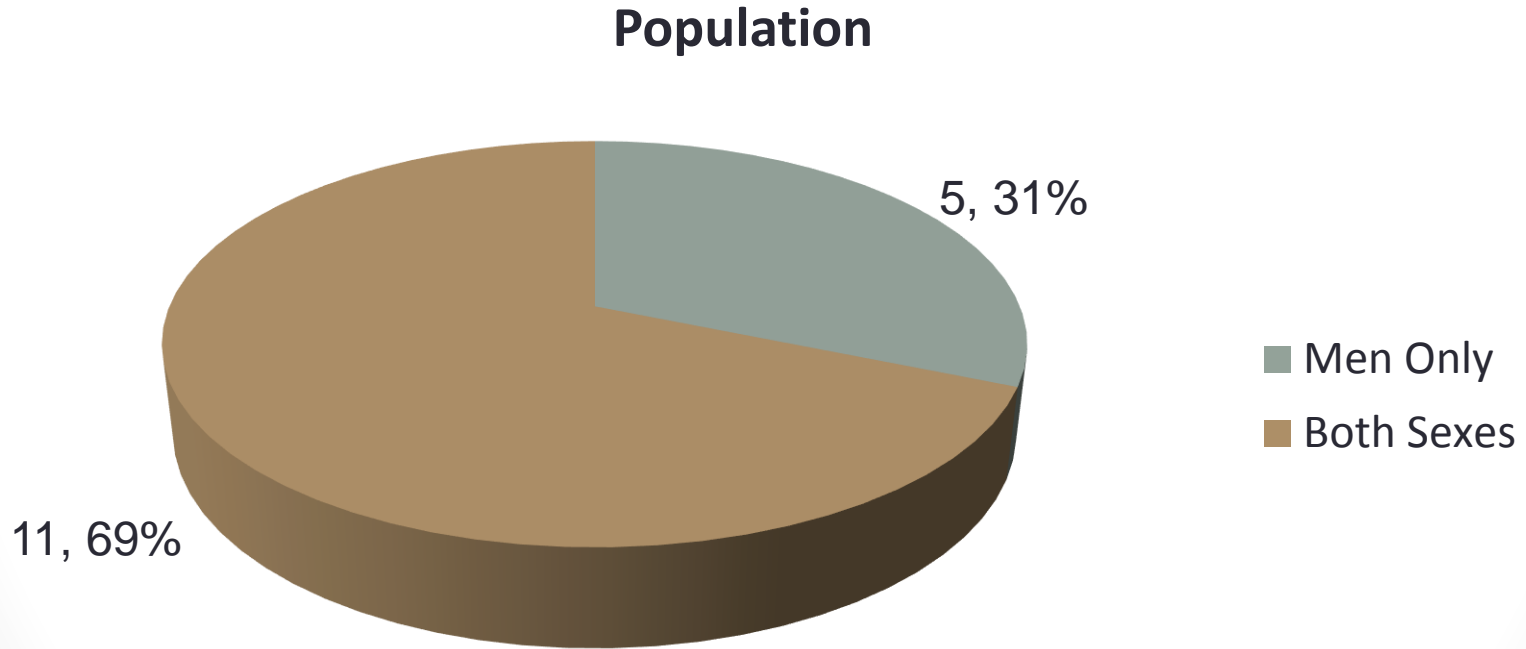


\* Kingdom of Saudi Arabia, \*\* United Arab Emirates

# Types of Populations Studied



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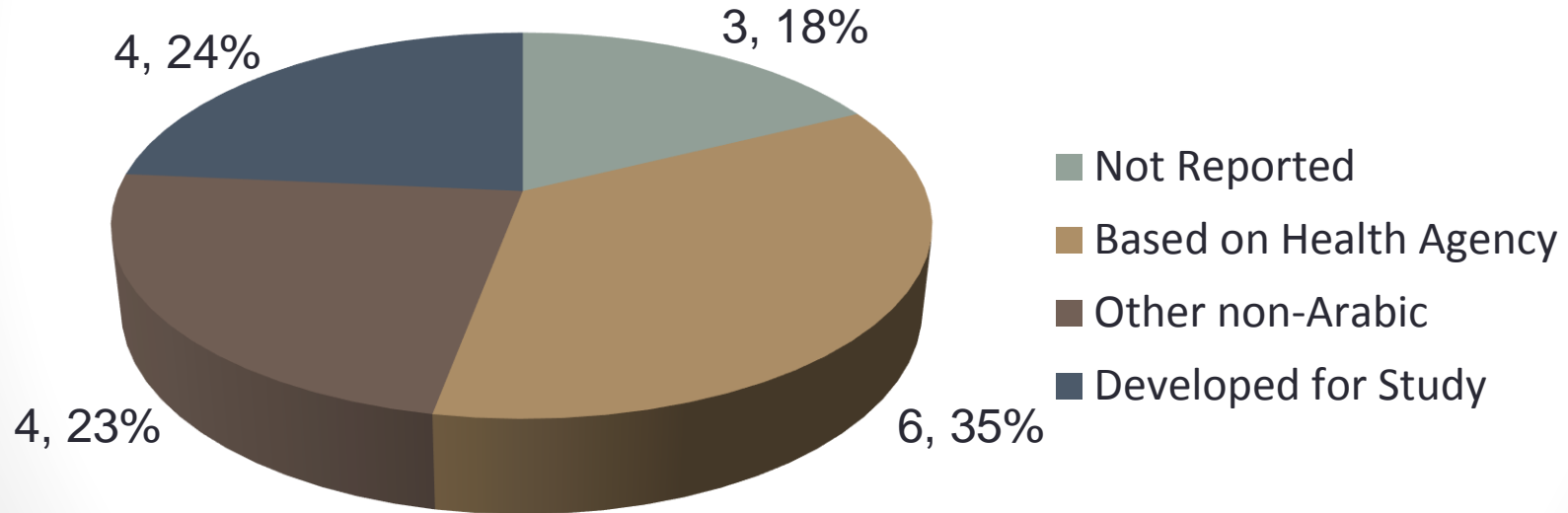


# Study Features

- Response rate was either unavailable or not reported for 9 studies (56%)
- For those that reported response rates, all were 80% and above.
  - Three studies reported 100% response rate.
- 8 studies (50%) administered the survey in Arabic only, 1 translated it into multiple languages, and the other 7 did not report language of survey.
- A variety of sampling approaches were used.
  - The most common was cluster sampling, which was used in 6 studies (38%).
  - Sampling approach not reported for 3 studies.

# HIV/AIDS Knowledge Instruments

Instrument Used





# Reliability & Validity Results

- Of all 16 studies
  - Only one commented on validity studies
  - Only two commented on reliability studies
- In those articles that commented, no description was provided as to how reliability or validity were assessed.
  - It was not clear, also, if reliability or validity statistics were available from previous uses of the instrument

# Discussion

- 16 articles published 1995-2014 were identified and reviewed.
- Important weaknesses were found:
  - Lack of quality reporting
  - Lack of evolution of instrument
  - Lack of cultural-appropriateness of instruments

# Discussion

- Populations selected for study seemed inappropriate given the epidemiology of HIV in KSA
- KSA women, especially married women, were largely unrepresented in the studies
- Lack of sex-specific instruments

# Conclusion

- 16 papers were reviewed that included HIV knowledge measurement in the KSA or bordering populations.
- Response rates, when reported, were high, but populations studied were inappropriate
- Studies lacked quality reporting
- There is no culturally-appropriate instrument for the KSA population, so measurement of HIV knowledge in KSA populations is likely inaccurate

# Conclusion

- Gender-specific instruments have not been developed for the KSA population, even though gender-specific transmission patterns exist.
- KSA's public health goals should more specifically focus on
  - Developing a high-quality gender-specific HIV knowledge measurement instruments appropriate for men and women in KSA
  - Measuring and improving knowledge in high-risk populations in KSA, such as married women
- Currently, there is no instrument available to accurately measure HIV knowledge in Saudi Arabian married women, who are a high risk population for HIV in KSA.
- Future studies should focus on developing this research base.