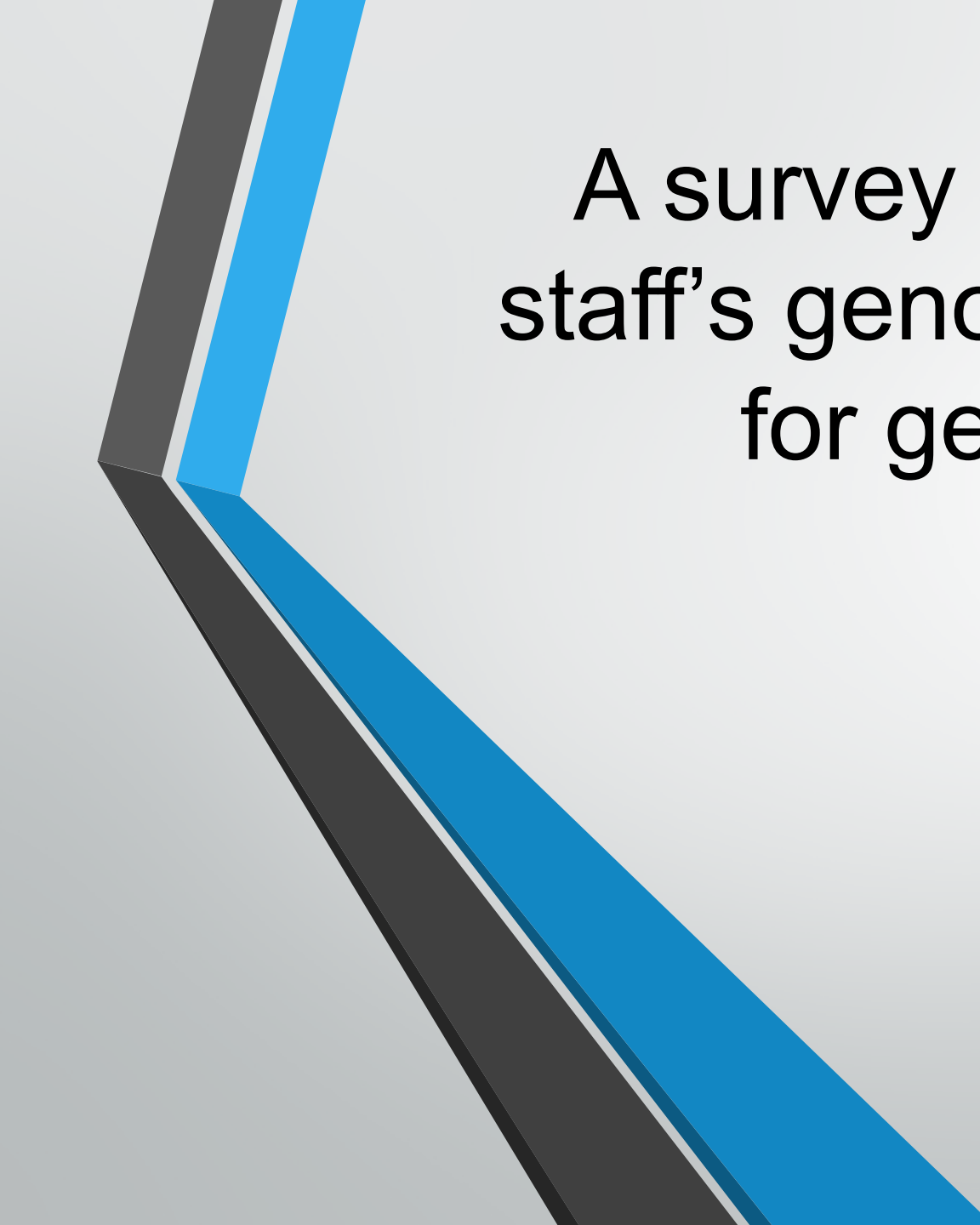
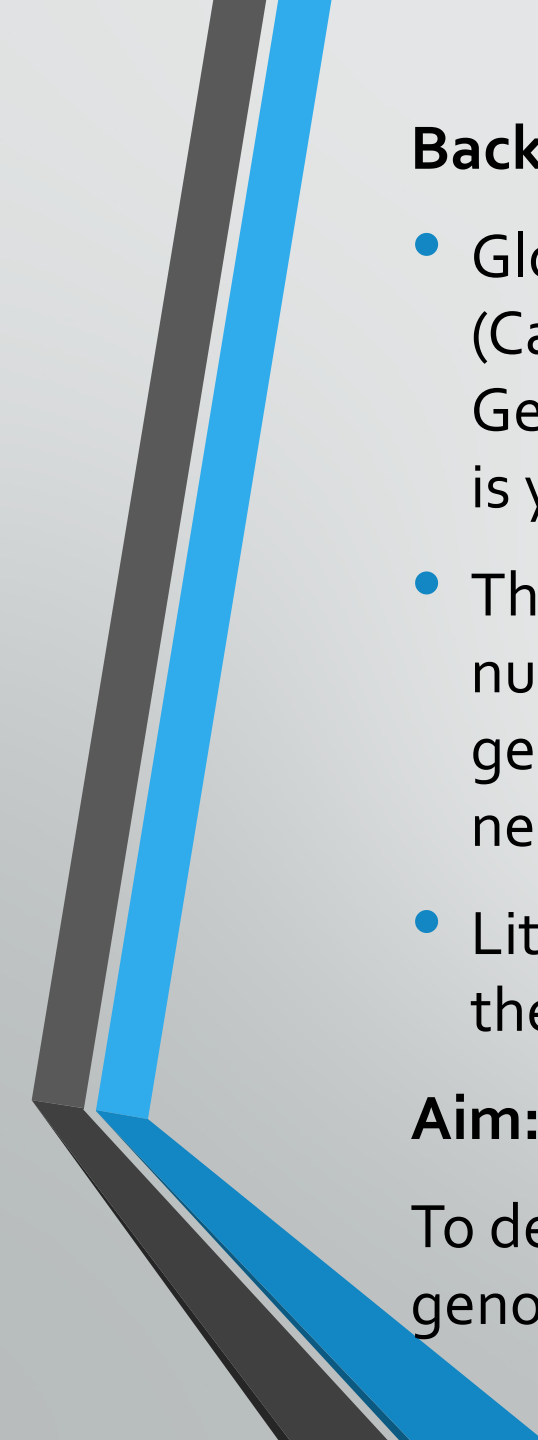




A survey to assess academic health staff's genomic literacy and readiness for genomic curricula integration

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On behalf of GENRE



Background:

- Global genomic literacy is poor, and is ill-integrated into nursing (Calzone, Kirk, Tonkin, Badzek, Benjamin and Middleton, 2018). Genomics is developing in the Australian healthcare setting, but nursing is yet to adopt a clear genomic role.
- The successful translation of genomics into healthcare requires that nurses be knowledgeable about genomics, and able to integrate genomics into their practice (Calzone & Jenkins 2011). There is a clear need for a genomics enhanced curriculum at UTS.
- Little is known about educator's preparedness for genomic content in the curriculum at UTS.

Aim:

To develop an understanding of tertiary educators' preparedness for genomics based content in a university curriculum.

Methods

Sample: An anonymous online survey was distributed to the teaching staff in the Faculty of Health at UTS, via Survey Monkey. Full-time and casual staff were invited to participate, and were from a range of disciplines, such as nursing, midwifery, and sports science.

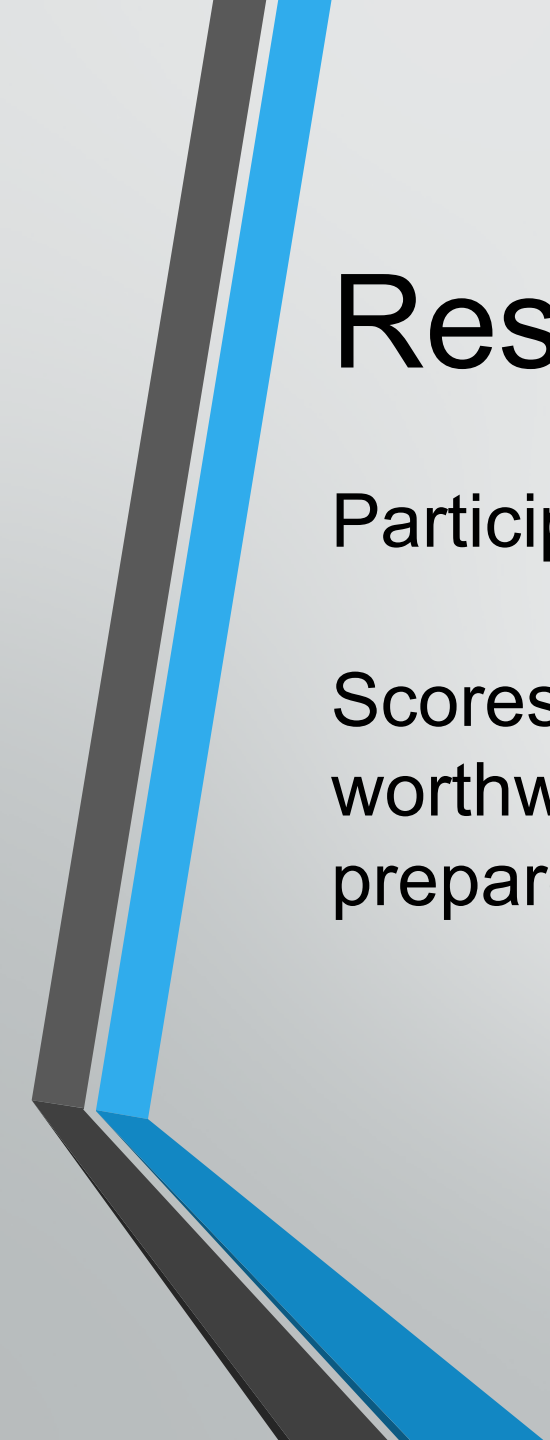
Data Analysis: A descriptive approach was used to report the results. No inferential analysis was possible due to the small sample size. The scores from the survey items were summed to reveal a description of staff perceptions of readiness. The distribution of scores from the two subscales were compared, and the scores of individual items were also examined.

Ethics: This study was approved by the UTS Faculty of Health Human Ethics committee (Approval 18-2939), October 2018.

Methods

Measurement: The instrument measured the perceptions of readiness for the introduction of a curriculum enhanced by genomic content.

- The instrument used consisted of 18 items, scored on a 6 point Likert scale.
- The instrument broadly measured staff perceptions of readiness over two sub-scales: 'worthiness' (8 items) and 'viability' (10 items).
 - 'Worthiness' refers to the merit of including genomic content (i.e. *how 'worthwhile' is the integration of genomic material?*).
 - 'Viability' refers to the feasibility of integrating genomic content (i.e. *is the integration of genomic material realistic?*)



Results:

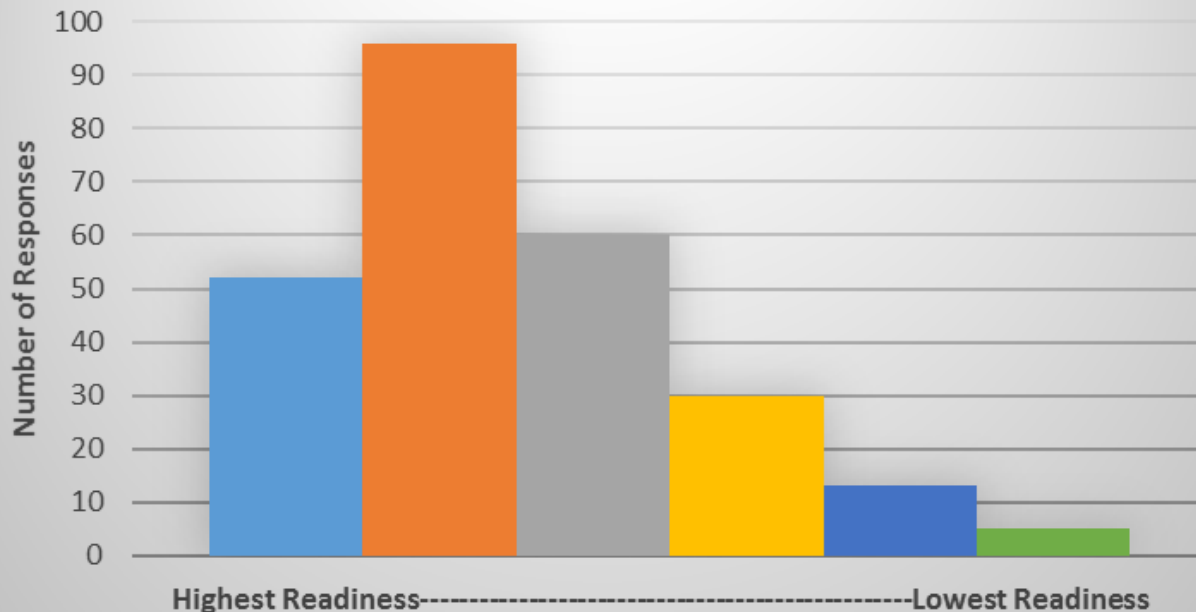
Participants: $n=32$

Scores suggest that educators perceive genomic content as worthwhile, however there is a relative perception of ill-preparedness for the viability of a genomics enhanced curriculum.

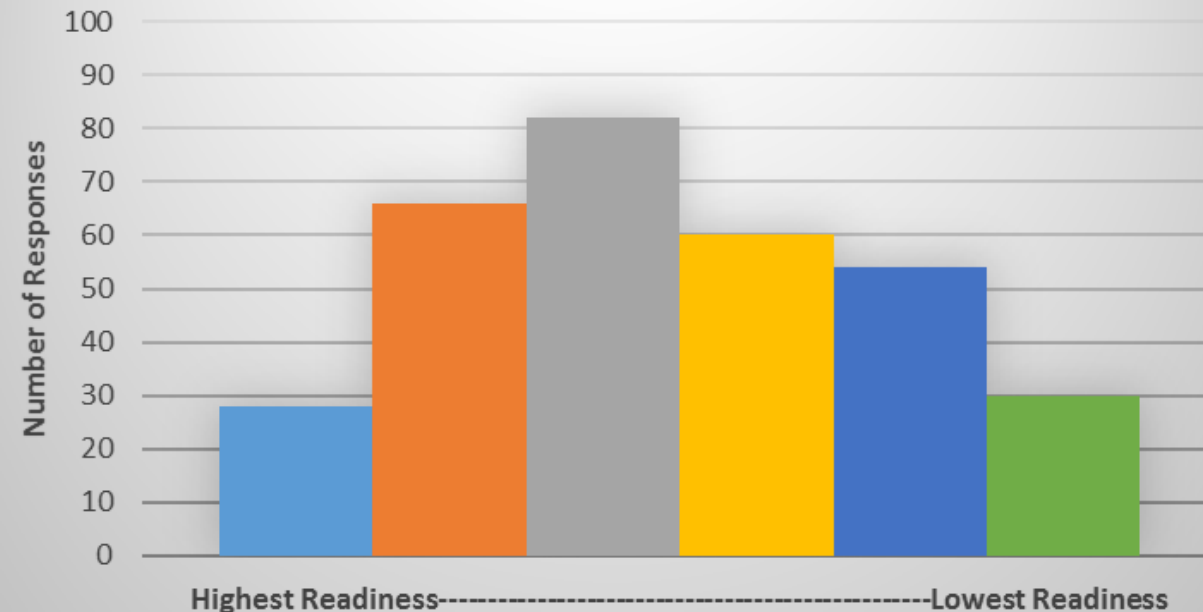
Results:

The below bar graphs indicate the overall distribution of scores in the sub-scales. A higher proportion of responses that indicate high readiness can be seen in the 'Worthiness' subscale.

Readiness: Worthiness



Readiness: Viability



Closer Examination of the 'Worthiness' Sub-Scale

The following items from the Worthiness sub-scale indicated lower degrees of readiness:

- **Item 6:** *'Ideally, all Faculty of Health students should be introduced to genomic content relevant to their discipline from the first semester of their course'*
- **Item 8:** *'I think that competency assessments of genomics related concepts are less important than other areas in Faculty of Health courses'*

Closer Examination of the 'Viability' Sub-Scale

The following items from the Viability sub-scale indicated lower degrees of readiness:

- **Item 2:** *'I have a sound understanding of what the science of 'genomics' means'*
- **Item 4:** *'I currently integrate one or more aspects of genomic health topics in my subject/s'*
- **Item 5:** *'I think that, generally, there is a current lack of genomic health literacy theory, evidence and practice in UTS Faculty of Health subjects and courses'*
- **Item 11:** *'I do not currently have the required knowledge and skills in genomic concepts to enable me to effectively deliver it to students in my subject/s'*

Conclusions

Academics understand the importance of genomic content in a tertiary course, however a lack of confidence in genomic literacy is embedded in the perceptions of academics. This finding is consistent with other literature of nursing attitudes towards genomics reported elsewhere. That is, nurses recognise the importance of genomics, but lack confidence in their understanding (Calzone et al., 2013). The findings of this study suggest that educators should be informed about current knowledge and practice involving genomics.

Implications

- Further education of academic staff
- Offer online genomics subject as self-directed/non-award further education
- Focus group interviews to explore this further
- Publish in scholarly journal

References

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