

## familiarity with dimensions of sustainability

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### Abstract

**Background:** There is increased focus on integrating sustainability in University level nutrition and dietetic curriculum, however developing relevant learning activities and assessment can be challenging due to varied experiences and views of this topic. Understanding the student perspective can provide interesting and important insights which may identify current curriculum needs and student knowledge gaps.

**Objective:** To describe a cohort of Australian nutrition and dietetic (N&D) students' familiarity with dimensions of sustainability.

**Study Design, Settings, Participants:** An observational cross-sectional study used a self-administered online survey completed by 95 N&D students enrolled in a nutrition or dietetic undergraduate course at a regional Australian University.

**Measurable outcome/Analysis:** Familiarity with sustainability and related concepts of social development, environmental integrity, economic resilience and cross-cutting issues were measured on a 5-point Likert scale and analysed using descriptive statistics.

**Results:** Most students reported being very familiar (28%), quite familiar (45%), or familiar (23%) with the term sustainability. A greater proportion of students were very or quite familiar with the term environmental sustainability (75%), compared to economic (47%) and social (22%) sustainability. The sustainability related issue of widespread availability of highly processed foods (environmental integrity concept) and secure livelihoods (economic resilience concept) had the highest level of familiarity (90.5% and 80% very or quite familiar respectively), while least reported familiarity was living conditions of farm labourers (social development concept) and the use of food and agricultural policies (cross-cutting concept) (41% somewhat or not at all familiar respectively).

**Conclusions:** Students reported varying levels of familiarity with terminology and concepts of sustainability. Identification of gaps and areas of student interest may assist with the design of curriculum and associated learning, teaching and assessment resources.

### Background

This study recognises the importance of enhancing future focussed nutrition and dietetic curriculum in higher education environments that includes the ethically problematic and multifaceted concept of sustainability.

Nutrition and dietetic graduates require an understanding and appreciation of sustainability for professional practice.<sup>1</sup> In Australia there is a lack of explicit delineation of competencies that focus on sustainable food systems and sustainability in general.<sup>2-4</sup>

Additionally sustainability is often perceived as an abstract concept,<sup>5</sup> and a lack of time and resources,<sup>6</sup> and consensus of what sustainability means in practice,<sup>7</sup> can lead to academics experiencing difficulty integrating sustainability related learning & teaching activities and assessment into curriculum. This may lead to inconsistent or limited exposure to sustainability related teaching experiences for students.

**Objective: To describe a cohort of Australian N&D students' familiarity with dimensions of sustainability**

### Method

- Self-administered online survey using a 5-point Likert scale
- Survey questions developed based on existing tools<sup>8,9</sup> assessing
  - Importance of sustainability, including for future practice (1: Very important – 5: not at all important)
  - Familiarity with concepts of sustainability – environmental integrity; economic resilience; social development and cross-cutting (1: very familiar - 5: not at all familiar),
- Ethical approval provided by the Human Research Ethics Committee of the authors institution (A16837)

### Results

#### Students familiarity with sustainability related concepts

Concept	More familiarity with:	Less familiarity with:
<b>Economic Reliance</b>	<ul style="list-style-type: none"> <li>Secure livelihoods (80%)</li> <li>Relationships between food choices and the local economy (78%)</li> </ul>	<ul style="list-style-type: none"> <li>Resilience to economic risk (23%)</li> <li>Economic viability of the agriculture sector (31%)</li> <li>Preservation of rural communities (35%)</li> </ul>
<b>Social development</b>	<ul style="list-style-type: none"> <li>Access to education and knowledge (74%)</li> <li>Issues related to food security of vulnerable populations at the household level (73%)</li> </ul>	<ul style="list-style-type: none"> <li>Living conditions of farm labourers (30.5%)</li> <li>Labour rights (36%)</li> <li>Social justice in the food system (37%)</li> </ul>
<b>Cross cutting</b>	<ul style="list-style-type: none"> <li>Issues with food additives and genetically modified foods (60%)</li> </ul>	<ul style="list-style-type: none"> <li>The use of food and agricultural policies (28%)</li> <li>Issues related to food security at a national and global level (45%)</li> </ul>

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### Results

#### Participant characteristics

- 95 students enrolled in either a Bachelor of Nutrition (n=32, 34%) or a Bachelor of Nutrition and Dietetics (n=63, 66%).
- Majority aged between 18 – 25 years of age (n = 54, 56.8%), 26 – 30 years (n = 11, 11.6%) and 36 years and over (n=21, 22.1%).
- Females: n = 86 (91.5%), males: n = 7 (7.4%), prefer not to say: n= 1 (1.1%).

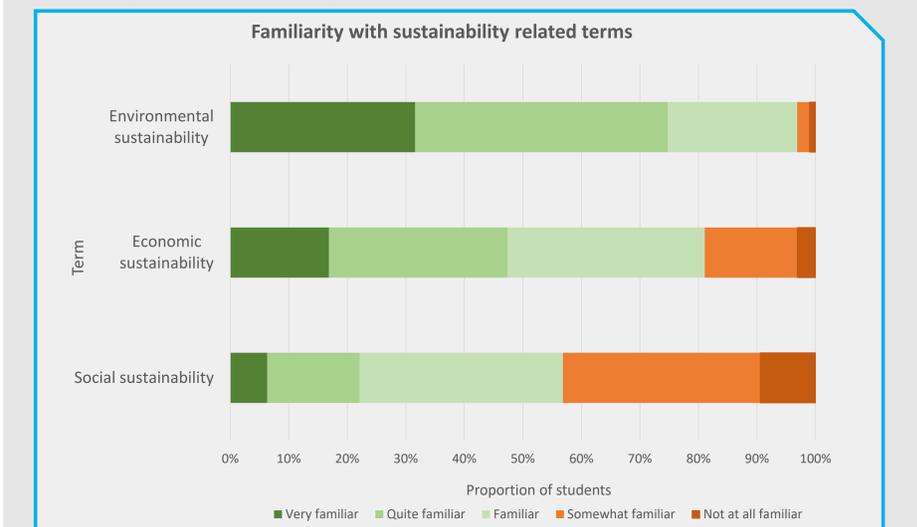
#### Overall importance of, and familiarity with the term of sustainability



#### Sustainability as an important issue in future practice

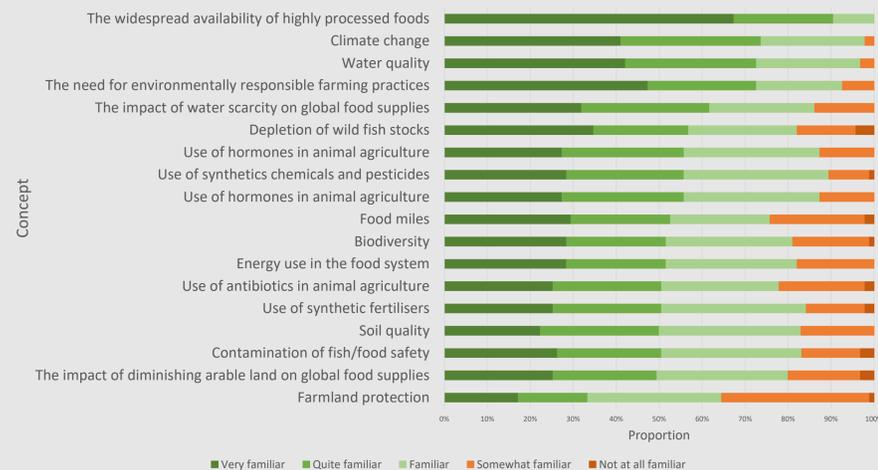
92.6% students reported that sustainability was a very important, or important issue for their future practice as a nutritionist or dietitian.

#### Familiarity with sustainability related terms



### Results

#### Familiarity with concepts of environmental integrity



### Conclusion

Students overwhelmingly reported that sustainability was an important issue. This finding supports movements across the higher education sector towards a more explicit integration of sustainability thinking in learning outcomes across diverse curricular areas (See Reid and Petocz, 2006). Key in mobilising positive professional change in N&D graduates is to develop a better understanding of sustainable development as part of a professional practice lens through the meaningful integration of sustainability content through all levels of education.

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