Risk Factors of Food Insecurity and Coping Strategies in University Students

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Introduction
Food insecurity exists when there is limited or uncertain ability to acquire nutritionally adequate, affordable, culturally acceptable or safe foods1. It is an issue that reduces physical and mental ability, decreases social and economic development through reduced social participation and increases risk of diet-related diseases2.

The knowledge that university students are at greater risk of food insecurity has increased the need for further research into their risk factors and coping strategies. Exploring such aspects will assist in planning interventions to improve social and economic development, and to aid in reducing the prevalence of diet-related diseases.

Aim
The study aimed to:
1. Identify groups amongst the student population at increased risk of food insecurity.
2. Identify individual coping strategies employed to reduce the likelihood and severity of food insecurity.

Methods
Overall
A mixed methods approach (quantitative and qualitative) was used to determine student risk factors of food insecurity and to explore their coping strategies.

Measures
• Questionnaire - 39 food security & 15 demographic questions.
• Convenience sample of 399 individuals enrolled in part-time and full-time study across Griffith University (Gold Coast, Australia).

Data analysis
Percentage and degree of food insecurity was interpreted based on:
• The United States Department of Agriculture (USDA) Community Food Security Assessment Toolkit (multiple item questions).
• The Australian 1995 National Nutrition Survey (NNS) (single item question) – In the last 12 months, were there any times that you ran out of food and could not afford to buy anymore?2.

Data was analysed using frequencies and Chi-squared tests.

Results
Sample characteristics
• Response rate of 71.9% (575 students asked to participate).
• Total sample captured 2.9% of students on the Gold Coast campus.
• Majority of those surveyed were:
  - Female
  - Single
  - Without children
  - Employed
  - Domestic students
  - Employed
  - Income ≤$16 000

Populations at risk
Particular sub groups identified as having a statistically high risk of food insecurity included (Table 2)*:
• Students paying rent or board.
• Those with an annual income below the poverty line ($≤$16 000 after tax).
• Those receiving government assistance (of whom 58.1% believed such benefits were insufficient to meet living expenses3).

Students with poor food access were also found to have a higher incidence of food insecurity.

Table 2: Student sub groups identified to be at greater risk of food insecurity

<table>
<thead>
<tr>
<th>Population Group</th>
<th>(n)</th>
<th>Single Question*</th>
<th>Multiple Question*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renters or boarders</td>
<td>223</td>
<td>14.9</td>
<td>50.2*</td>
</tr>
<tr>
<td>Income ≤$16 000</td>
<td>253</td>
<td>13.2</td>
<td>47.6*</td>
</tr>
<tr>
<td>Receiv. gov benefits</td>
<td>130</td>
<td>15.4</td>
<td>40.8</td>
</tr>
</tbody>
</table>

*In response to the single NNS question ‘In the last 12 months, were there any times that you ran out of food and could not afford to buy anymore?’. 

Coping strategies and support
Coping strategies identified for those students with food insecurity included:
• Increased reliance on others (monetary or other) – 37.7% had borrowed money to pay for everyday expenses, 22.3% had relied on others to provide them with food after running out and being unable to afford more, 3% had used emergency measures (e.g. stealing, pawning), 2.3% had used Food Banks (due to an inability to afford food).

Support services – 10.3% of students reported knowing of support services, while only 3.8% had utilised them. Similar finding were seen with Food Banks, 6.8% knew of them in their local area, only 2.3% had used them. Further research is needed to develop an understanding to why Food Banks are not being utilised.

Work – 69.5% of surveyed students worked (72.9% reporting it reduced their study time). These working individuals were significantly more likely to suffer from food insecurity.

Student health – Students with food insecurity reported that their perceived health was worse than their food secure counterparts4.

Study Conclusions
Suggestions to improve food security
• Increase government income support for students to above the poverty line.
• Ensure the provision of affordable student housing.
• Education and skills programs to enhance student competencies regarding food security (cooking, shopping, budgeting).
• Ensure the food supply on campus is affordable and nutritious.
• Develop student food purchasing cooperatives.

Conclusion
At risk groups amongst this student population include those renting or boarding, with incomes below the poverty line, or receiving government assistance. Coping strategies included borrowing money and food, stealing or pawning items to obtain food, or seeking food from Food Banks; with many students continuing to work though reporting it reduced their ability to study efficiently.

Government policies relating to student income support, tertiary education fees and the need for universities to generate income from on-campus food services, all appear to be contributing to unacceptable levels of food insecurity amongst university students. Aside from the negative impact this has on student well-being, it works against quality tertiary outcomes.

Food insecurity amongst the student population is an area that requires further research and needs to encompass the wider national student population. Interventions should be developed and implemented to improve food security amongst this population group, providing all individuals with an increased ability to improve their education and human capital while reducing their risk of suffering from diet-related diseases.

References