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Mental health and wellbeing offerings in tertiary agricultural education: a content analysis

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ABSTRACT

Purpose: Those working and living on-farm are facing wellbeing challenges. Resilience can be built via education programmes at a tertiary education level. However, it is unknown to what extent wellbeing education is integrated in the curriculum. This study reports on a content analysis of current wellbeing education at five universities that provide agricultural degrees, located in Aotearoa New Zealand, the United Kingdom, Ireland and the United States.

Design/Methodology/Approach: The content analysis focuses on evaluating current wellbeing education. We use a framework developed from a comprehensive literature review on young rural people and mental health. The analysis involves examining course notes, learning materials, lecture recordings and related resources to identify key themes and content related to wellbeing.

Findings: Wellbeing education is delivered at all universities in this study. Most of the education has derived from a response to managing risk, but steps are being taken to provide a more rounded offering. Key aspects to consider in the development of wellbeing education are scaffolded learning and the inclusion of external stakeholders.

Practical implications: The findings offer actionable recommendations for universities to enhance their wellbeing education, strengthening support systems and promoting mental health and wellbeing among students.

Theoretical implications: The study enriches existing frameworks on youth mental health by providing insights into how wellbeing is integrated into higher education curricula for agricultural students, identifying key areas of focus and opportunities for improvement.

Originality/value: The study provides insight into wellbeing education in tertiary degrees in agriculture. It provides recommendations for future integration into the curriculum.

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1. Introduction

The agricultural sector is facing a myriad of financial, environmental, social and cultural challenges, which affect the mental health and wellbeing of those working and living on-farm (Nye et al. 2025). Suicide rates in rural communities are higher than national rates, as illustrated in several Western liberal democracies, such as Aotearoa New Zealand (N.Z.), Ireland, the United Kingdom (U.K.) and the United States (U.S.) (Rose et al. 2023). Young people appear to be particularly at risk when it comes to mental health challenges in agricultural settings. In the U.K., 40% of 18–24-year-olds who live or work on a farm experience anxiety or depression, significantly higher than the 12% reported by their non-farming counterparts (Wheeler and Lobley 2022). In the U.S., 34.7% of young farmers report experiencing moderate to severe anxiety symptoms (Rudolphi, Berg, and Parsaik 2020). Similarly, in N.Z., 64% of young men and 77% of young women involved in farming report at least one wellbeing issue that has a major negative impact on their wellbeing (Farmstrong 2018). In this paper, wellbeing is defined as a person having the ‘tools, support and environment’ (Mental Health Foundation of New Zealand 2022) necessary to ‘cope with the normal stresses of life’ (World Health Organisation 2022).

To address this concerning trend, extension and education programmes can be used to build resilience amongst future farmers (Knook et al. 2022). These programmes can be helpful in conveying mental health concepts to future land-managers, such as university students (Stallman and Shochet 2009). Mental health literacy developed through wellbeing education involves the knowledge and skills to identify when a person is becoming unwell and where to direct them for further support and assistance (Morgaine et al. 2017). Supporting young people to develop wellbeing skills can have long-term benefits for the individual, including the development of resilience into adulthood and improving mental health literacy (Ashwood et al. 2015; Ferris et al. 2019; Winzer et al. 2018; Young et al. 2020). The skills learned from wellbeing education programmes can also be translated into improved educational achievement and the development of healthy social behaviours (Ashwood et al. 2015; Ferris et al. 2019). Previous research recommends incorporating programmes to increase mental health literacy and create empathy into education programmes (Wynaden et al. 2014). Several studies have indicated successful implementation of these education programmes in agricultural studies (Knook et al. 2024; Winder et al. 2024), but there is no research yet focusing on the extent to which wellbeing education is integrated in the curriculum, what content is exactly delivered, and if this is tailored towards the challenges young people face.

Therefore, this study aims to assess the integration of wellbeing education in the curriculum of agricultural degrees. It does this by conducting a content analysis of current wellbeing education at five universities that provide agricultural degrees, located in Aotearoa New Zealand, the United Kingdom, Ireland and the United States. It responds to calls for more research on wellbeing in the agricultural sector to identify how to better support young people (Hansen, Bugge, and Skibrek 2020; Haugen and Blekesaune 2005; Peel, Berry, and Schirmer 2016).

The contribution of this study is two-fold. First, it tests the framework on mental health challenges amongst young people in agriculture by Hay et al. (2026), by applying it as an analytical tool to systematically assess how wellbeing issues and challenges are

represented within agricultural education. By applying this framework, insight is provided into the breadth and depth of wellbeing content, while also providing the opportunity to identify the suitability and completeness of the framework itself. Secondly, from a practical perspective, the findings provide insights into how wellbeing education is currently framed and delivered within a range of tertiary education environments targeting agricultural students. This highlights areas of strength and gaps. Having examples available from other institutions provides guidance for educators and programme designers to strengthen the completeness and relevance of their own wellbeing education.

2. Literature background

Young people, compared to other populations living and working on farms, are a vulnerable group in terms of their mental health risk. Research shows that the demanding nature of agricultural environments characterised by long hours, financial pressures and physically demanding work can be challenging for young farmers (Doherty et al. 2023; Rudolphi, Berg, and Parsaik 2020; Szymkowiak and Rhodes-Reese 2022). Alongside this, the geographic and cultural isolation of living and working rurally and remotely can leave this group of young people with little social connection and work/life balance to support their mental health and wellbeing (Knook et al. 2024; Rudolphi and Berg 2024). It is important that young farmers, who are the future of the rural sector, are supported to build their resilience to these stressors present within their working environments and to build their mental health and wellbeing knowledge (Winder et al. 2024).

However, there is a dearth of literature specifically relating to the mental health and wellbeing of young people living and working on farms and how best to support them to build their mental health and wellbeing knowledge and resilience for the demanding agricultural environment within which they work (Hay et al. 2026). The research that does exist highlights that mental health and wellbeing issues such as depression, anxiety and suicidal ideation are a concern for young people in rural communities (Rose et al. 2023). Whilst the demanding agricultural environment that they work in may affect their mental health and wellbeing, several other concerning factors have been identified such as readily available access to firearms (Alam et al. 2024; Beutrais 2018), apprehension around the effects of climate change on farming and public attitudes towards the farming community around it (Doherty et al. 2023; Rose et al. 2024), female farmers' experiences of sexism and misogyny (Rose et al. 2024), and stigma and stoic community attitudes towards mental illness and help-seeking (Rose et al. 2024; Rudolphi and Berg 2024; Stanley-Clarke et al. 2024). These concerns and issues, in particular prevailing stigmatising and stoic rural community attitudes around mental illness and help-seeking, call to attention the vulnerabilities of young farmers as they begin their careers living and working on farm and the need to break down barriers to help-seeking and support them to develop wellbeing skills.

As young farmers are the future of the agricultural industry, it is pertinent that further support for building their mental health and wellbeing resilience is developed to reduce the risks for this vulnerable group of young people. Research identifies preventative strategies for building resilience in this at-risk population, such as the dissemination of coping strategies (Bourke 2003; Doherty et al. 2023; Rose et al. 2024), building

connections and developing support systems (Hay, Stanley-Clarke, Maris, et al., 2024; Hay, Stanley-Clarke, Winder, et al. 2024b; Holton, Riley, and Kallis 2023; Rose et al. 2024) and providing accessible and effective health care services for rural populations (Ferris et al. 2019; Gregoire 2002; Rose et al. 2024). Recent young farmer research has shown the efficacy of educational programmes targeted at agricultural students for increasing mental health knowledge and reducing stigma (Knook et al. 2024; Winder et al. 2024). In addition, innovative study designs have emerged promoting the self-efficacy and self-esteem of young farmers, aimed at helping them with the isolation and disconnection of living and working on a farm (Holton, Riley, and Kallis 2023; Syson-Nibbs et al. 2009). These types of innovative designs in the agricultural space and research into agricultural educational programmes provide a foundation for further research to explore avenues for enhancing and strengthening support for young farmers.

3. Analytical framework

A recent study by Hay et al. (2026) presents a framework containing the wellbeing challenges and issues faced by young people living and working in agriculture. The analytical framework is depicted in Table 1. Key concerns identified in Hay et al. (2026), such as access to support services and stigma, are listed in the first part of the framework. These concerns are supported by a definition/explanation with relevant supportive evidence of where these have been identified, including from which country/region. The second part of the framework lists factors contributing to poor mental health, again with an explanation and where these have been identified.

The wellbeing education at each of the universities was assessed against the framework (detailed assessment can be found in the appendix). Five universities participated in this study: two in Aotearoa New Zealand, one in the United States, one in Ireland and one in the United Kingdom. Wellbeing education was predominantly offered in the undergraduate diplomas and degrees at these universities and is therefore the focus of this analysis. The degrees included in this analysis are all agricultural degrees. However, we do note that not all students undertaking these degrees end up working and/or living on farm. In addition to getting a job on farm, they also end up in roles within the agri-food industry, supporting farms more widely, such as rural consultancy, rural banking, and agri-sales.

4. Methodology

4.1. Data collection

Data on wellbeing education were collected at each of the universities separately and were led by a member of staff at the relevant university. At the universities in N.Z., Ireland, and the U.K., data were sought directly from degree coordinators and lecturers teaching in the agricultural courses. They were sent an email introducing the research and asked to provide information related to any wellbeing education designed and delivered to agricultural students in 2024. They were asked to provide the name of the course; the nature of wellbeing education, for example, wellbeing modules, guest lecturers,

Table 1. Framework outlining mental health concerns, as well as factors causing poor mental health, in young people (adapted from Hay et al. 2026). This framework was used for the content analysis.

Code	List of concerns around mental health	Explanation/Definition	Studies	Country
1.1	Access to support services	Contact with support services is often hindered by barriers in rural communities, e.g. travel distance to service, cost of accessing support and lack of targeted support for rural communities.	Doherty et al. (2023), Gregoire (2002), Judd et al. (2006), Rose et al. (2024), Rudolphi and Berg (2024), Szymkowiak and Rhodes-Reese (2022)	U.S. Midwest U.K. Australia U.K./Ireland U.S. Midwest U.S.
1.2	Community attitudes, stigma	Mental health and wellbeing are looked on in a negative way or as a disgrace, which hinders service utilisation and supports.	Gregoire (2002), Judd et al. (2006), Rose et al. (2024), Rudolphi and Berg (2024), Stanley-Clarke et al. (2024)	U.K. Australia U.K./Ireland U.S. Midwest N.Z.
1.3	Suicide	Statistics identify that young people on farm or in the agricultural sector are at greater risk of taking their own lives.	Beautrais (2018), Bourke (2003), Gregoire (2002), A. Hay, Stanley-Clarke, Maris, et al. (2024), A. Hay, Stanley-Clarke, Winder, et al. (2024b), Judd et al. (2006), Knook et al. (2024), Page and Fragar (2002), Ferris et al. (2019), Rudolphi and Berg (2024)	N.Z. Australia U.K. N.Z. N.Z. Australia N.Z. Australia N.Z. U.S. Midwest
1.4	Help-seeking	The farming community, including young farmers, is less likely to seek help or access support services.	Beautrais (2018), Gregoire (2002), Judd et al. (2006), Rose et al. (2024), Stanley-Clarke et al. (2024)	N.Z. U.K. Australia U.K./Ireland N.Z.
1.5	Optimism bias	Young people in agriculture display a positivity or self-serving bias that, as individuals, they are less likely to need mental health support and are less likely to engage in self-behaviours.	Stanley-Clarke et al. (2024)	NZ
	List of factors contributing to poor mental health	Explanation/Definition	Studies	Country
2.1	Alcohol and smoking	Alcohol misuse, dependence or addiction. Losing control through drinking alcohol. Smoking cigarettes, cigars/cigars or pipes/pipes. Tobacco/Tobacco	O'Connor et al. (2024), Alam et al. (2024)	Ireland Canada
2.2	Climate change worry	Changes in temperatures and weather patterns having adverse effects on farms. Criticism of farming in the environmental space and media negativity, and the pressure to implement systems to reduce the effects of farming on the environment.	Doherty et al. (2023), Vafeiadou et al. (2023)	U.S. Midwest Western Pacific Region
2.3	Finances	Concerns around money, socioeconomic decline. A feeling of stress or worry about money, related to e.g. paying debt, living costs.	Judd et al. (2006), Knook et al. (2024), Szymkowiak and Rhodes-Reese (2022)	Australia N.Z. U.S.

(Continued)

Table 1. Continued

Code	List of concerns around mental health	Explanation/Definition	Studies	Country
2.4	Firearms	Access to, and exposure to, firearms on farms.	Alam et al. (2024), Beautrais (2018), Judd et al. (2006), Page and Fragar (2002)	Canada N.Z. Australia Australia
2.5	Isolation	Geographic, social and/or cultural isolation e.g. separation from family and friends, living remotely, loneliness from a reduction in socialising.	Holton, Riley, and Kallis (2023), Knook et al. (2024), Rudolphi and Berg (2024), Syson-Nibbs et al. (2009), Winder et al. (2024)	U.K. N.Z. U.S. Midwest U.K. N.Z.
2.6	Lack of mental health knowledge	Absence of, or inadequate, knowledge or literacy around mental health and wellbeing issues e.g. knowledge around mental health issues or of coping strategies for stressful times.	Gregoire (2002), Stanley-Clarke et al. (2024)	U.K. NZ
2.7	Low resilience	The ability to bounce back in the face of adversity, or the capacity to withstand and recover during stressful periods.	A. Hay, Stanley-Clarke, Maris, et al. (2024), Winder et al. (2024)	N.Z. N.Z.
2.8	Sexism/misogyny – young female farmers' experiences.	Prejudice or dislike of women or girls in farming. The historical patriarchy of farming is still prevalent where terms or sayings may be used by men (farmers) that are derogatory towards female workers regarding their strength, ability to work on farm, or place in society.	Rose et al. (2024)	U.K./Ireland
2.9	Time pressures	Feeling pushed for time. On-farm related to e.g. work hours, time to complete tasks, having time to take time 'off-farm'.	Doherty et al. (2023), Rudolphi, Berg, and Parsaik (2020)	U.S. Midwest U.S. Midwest

lectures on health and wellbeing, material delivered on stream, videos, readings, links, etc., as well as the frequency of delivery. At the U.S. university, the wellbeing content provided was authored and co-authored by a support service for farmers that is part of the University. The content is available to the public and entire campus community. This material was shared with the researchers, which allowed them to conduct the content analysis.

A limitation of the method was the reliance on staff identifying course content to send to researchers. This may mean that some aspects of wellbeing content delivered across the universities were missed and therefore not included in the data analysis.

4.2. Data analysis

Content analysis provides a systematic and replicable methodological framework for analysing various forms of data such as verbal and written text (Haggarty 1996; White and Marsh 2006). It can be used within quantitative or qualitative research and applied either deductively and/or inductively depending on the research design (Khirfan, Peck, and Mohtat 2020). The approach involves the coding and assigning of data content to

categories, which are either predetermined, deductive and statistical in nature or derived from data through a process of interpretation, searching for meanings and codes for categorisation (Forman and Damshroder 2007). Qualitative content analysis may involve both deductive and inductive analyses, where categories used for analysis may be informed by existing knowledge and derived through an iterative process searching for themes through a close reading of text (Forman and Damshroder 2007; Khirfan, Peck, and Mohtat 2020).

This study applied a qualitative content analysis approach that involved two layers of analysis, both deductive and inductive. Initially, predetermined categories derived from a scoping literature review were used to generate a summary of content from the wellbeing programmes being delivered to agricultural students. Alongside this, data were also built up inductively through a close reading of the wellbeing content within programmes to identify categories inconsistent with the codes derived from the scoping review (Vears and Gillam 2022). This inductive analysis enabled unexpected data to be collected, including considerations and insights critical for informing the future development of programme content to better support young people engaged in agricultural programmes.

4.3. Ethical procedures

The research involved obtaining wellbeing education content from key stakeholders at each institution. Ethical approval was obtained for both N.Z. universities from the North Island University as the lead institution (HE005-4000028501). This approval extended to cover the South Island University. However, due to the differences in international contexts and ethical processes, ethical approval could not be extended to the other international partners. This meant ethical approval was sought and obtained from the U.K. University (00776570ST-P1735) and Irish University (091-LS-LR-25-Flannery). Ethical approval was not required for the U.S. University as the information is publicly available. Key ethical principles that were addressed in the applications and upheld across the research process included: addressing conflicts of interest, confidentiality, informed consent of those from whom the information was sought, and beneficence. These principles ensured that the research data was collected and analysed in a way which prioritised key learnings and opportunities in relation to wellbeing education in agricultural programmes.

5. Findings and discussion

The analysis considered the design and delivery of education alongside the topics outlined in the framework. The first section of the findings elaborates on the analysis based on the analytical framework (for a detailed analysis see the Appendix), to subsequently address additional observations in relation to design and delivery of content.

5.1. Topics and focus of wellbeing education

Across all five universities, there is recognition of the importance of wellbeing education for agricultural students. Each institution addresses the concerns around wellbeing listed

in the framework through a combination of student support services and educational programmes aimed at reducing stigma and promoting help-seeking behaviours. Furthermore, each of the universities offers wellbeing education and support at a university-wide level and to agricultural students specifically.

Several factors contributing to poor wellbeing are recognised in the education offerings. All institutions include reference to substance use, as well as social isolation, limited mental health literacy and low resilience as key risk factors. Some universities additionally address financial stress. Interestingly, climate change worry (Doherty et al. 2023; Vafeiadou et al. 2023), although recognised to be a factor contributing to reduced wellbeing (Dorner et al. 2024), is not explicitly addressed in any of the programmes reviewed. Likewise, issues of sexism and misogyny, particularly as they affect young women in male-dominated agricultural settings (Rose et al. 2024), receive little direct attention. This suggests that several emerging stressors remain insufficiently integrated into wellbeing education for agricultural students. These identified gaps highlight the need for curriculum design to remain current and informed, through regular review and the updating of content to reflect current knowledge that best meets student needs (Kumar and Rewari 2022; Vela, Polo, and Castillo 2024). Furthermore, a more strategically informed approach, that is underpinned and informed by current knowledge, aligns with research in the mental health and wellbeing space that calls for responsive curriculum development for educational mental health interventions (Barkham et al. 2019; O'Reilly et al. 2018).

There are also context-specific factors that are only addressed by universities facing these challenges. For example, only the universities in N.Z. and the U.S. incorporate the discussion on firearm safety and connection to wellbeing. In the U.S., firearms are easily accessible, and the right to bear arms is supported by the U.S. Constitution. Firearms are seen as part of U.S. culture. The mention of firearms was also briefly included in the N.Z. wellbeing programmes, but presents itself a bit more elaborately in the U.S. programmes. The gun culture in N.Z. and the U.S. is not only different from the U.K. and Ireland but also different from each other. In N.Z., farmers are a group in society more comfortable with firearms and have easier access than the general population, as N.Z.'s gun laws have made allowances for farming. Generally, there would be less comfort around talking about guns in relation to suicide in settings outside of agriculture due to this lack of access.

Universities also offer specific topics at different times in the curriculum. For example, the U.K. and Irish universities focus more on wellbeing education, with a specific emphasis on resilience, when students start their practical work. With the knowledge that students can face a range of risks due to personal safety, harassment, age, and limited life experience while undertaking WIL (Hay and Fleming 2021), which can result in physical and mental injury. The WIL literature highlights a need for the implementation of wellbeing education before students go on placement (Ramaswamy and Mosher 2015). At the U.K. university, students get repeated sessions on how to make sure they are well and stay well while on practical work within a short period of time before their placement. The university in Ireland showed high similarity in education delivery to the university in the U.K.. The analysis showed that many of the students at the Irish University come from urban backgrounds and therefore do not necessarily have any on-farm experience. This means that for many students, there is a knowledge gap in terms of understanding

the farming context and the challenges that might present. The content reflected a strong focus on wellbeing education to address this gap before students complete their practical work.

Although all universities offer free individual counselling support, which can cover all the topics as listed in the analytical framework, we would like to highlight the importance of wellbeing education offered to all students that does not rely on the individual's initiative. Agricultural students are reluctant to engage in help-seeking activities, with reasons cited including stigma, stoicism and prevailing attitudes to help-seeking (Knook et al. 2024; Rose et al. 2024; Stanley-Clarke et al., 2026, 2024; Winder et al. 2024). Research undertaken by Stanley-Clarke et al. (2024) found that amongst these prevailing attitudes is an optimism bias. This optimism bias is embedded in long-held stereotypes about help-seeking within the wider farming community. It manifests in agricultural students believing that stressful situations will resolve themselves without help or intervention (Stanley-Clarke et al. 2026). This means that students minimise the potential impacts of stress and challenges and do not see a need to access wider university wellbeing supports (such as counselling based on the individual's initiative). The findings of Stanley-Clarke et al. (2024) acknowledge the unique wellbeing needs of agricultural students and emphasise the need for population-specific, peer-delivered wellbeing education to address wellbeing concerns within the agricultural student population, which is also supported by Gunn et al. (2021).

5.2. Observations beyond the analytical framework

Although the primary focus of this study was on testing the analytical framework to gain understanding into the breadth and depth of wellbeing education delivered, our analysis showed the importance of not only acknowledging the topics covered but also the mode of delivery and design of the programme. This section elaborates on topics that might be beneficial to include in the analytical framework and reflects on the importance of delivery and design.

5.2.1. Cultural inclusion: indigenous knowledge

Although country-specific issues were highlighted in the analytical framework (e.g. the incorporation of firearm safety and connection to wellbeing in N.Z. and U.S.), one country-specific topic appeared to be missing: the acknowledgement of indigenous knowledge. The universities in N.Z. are the only ones that have integrated an indigenous perspective in their wellbeing offerings: Te Whare Tapa Whā – a wellbeing framework that is built on the Māori holistic model of health (Durie 1985). The Whare Tapa Whā conceptualises wellbeing as the balance between four interconnected dimensions: (i) taha tinana (physical health); (ii) taha hinengaro (mental and emotional health); (iii) taha whānau (social relationships) and (iv) taha wairua (spiritual wellbeing). The model encourages a more holistic understanding of student wellbeing than approaches focused solely on mental health, which potentially resonates more with Western students.

Research has shown that recognising Indigenous knowledge, culture, and perspectives within university environments contributes to culturally safe learning spaces and strengthens Indigenous students' sense of belonging and wellbeing (Durmush et al.

2024). This can be in the form of educating students on different wellbeing frameworks, or as Durmush et al. (2024) highlight, via including role models. For countries where the inclusion of indigenous values is relevant, we recommend the inclusion thereof to provide a safe space for wellbeing education.

5.2.2. Frequency of wellbeing education in the curriculum

In the institutions analysed, wellbeing education is often embedded in only one year of study (consisting of one-off sessions), and therefore not embedded throughout the whole curriculum. For example, the N.Z. North Island university offers the workshop 'WellMates' in the first year of study. The WellMates programme is a two-hour face-to-face workshop, or an online 60-min module, facilitated by students in their second or third year of study [further information in Winder et al. (2024) and Knook et al. (2024)]. Previous study on this programme has shown its single delivery in the first year of study limits opportunities for students to revisit and build on the information over time, especially for students studying towards a 3- or 4-year degree. Research highlights the challenge of ensuring retention and long-term impact from one-off interventions, particularly when not reinforced through repeated learning (Knook et al. 2024). In the N.Z. South Island university, students taking a multi-year diploma or degree received education from N.Z.'s leading mental health organisation in the agricultural space, and the scaffolded learning allowed the focus to shift from purely wellbeing education and teaching students how to stay well, towards building resilience in their future (on-farm) jobs.

Reflecting on the delivery of wellbeing education at the different universities, critical education points seem to emerge, linked to different phases in the degree. Providing wellbeing education embedded in the curriculum at these points in time can result in a coherent programme. In the first year of study, a focus on addressing how to be and stay well, is beneficial for new students as they settle into university life (Knook et al. 2024; Winder et al. 2024). Wellbeing support before students go on their first practical work placement is another key point, as this is again a phase of change and new potential stressors (K. Hay and Fleming 2021). Then lastly, new wellbeing challenges emerge as students prepare for entering the workforce.

5.2.3. Delivery mode of education

The delivery mode of wellbeing education differs per university, and even per workshop or lecture offered. The delivery of wellbeing education can take a variety of forms (Reavley et al. 2014; Worsley, Pennington, and Corcoran 2022). At the N.Z. North Island university and the U.K. university education for example, content is delivered both online and face-to-face, with the student cohort being both distance and in-person. Previous research has observed the importance of understanding the student cohort in deciding what type of delivery is appropriate (Knook et al. 2024). Having the same wellbeing programme in an online and face-to-face format supports the educators to target the right mode for the cohort.

5.2.4. External stakeholder inclusion in education

A last observation is the embedding of external stakeholders in education delivery. This was observed at all the universities. Although no specific literature is available on the

inclusion of external stakeholders in wellbeing education, literature on the inclusion of external stakeholders in sustainability education highlights that this inclusion leads to more learner-centred learning based on real-life experiences (Sadovska et al. 2024). The opportunity to better embed real-life experiences can, especially for students that go on placement, prove highly beneficial.

6. Conclusion

This study set out to report on a content analysis of current wellbeing education at five universities that provide agricultural degrees, located in Aotearoa New Zealand, the United Kingdom, Ireland and the United States. The purpose of the content analysis was to assess the integration of wellbeing education in the curriculum of agricultural degrees.

In addition to covering the topics outlined in the analytical framework, our study found that three key findings are of importance in the development and implementation of a coherent wellbeing education programme. Firstly, the involvement of external stakeholders in both the design and delivery of content. At each university, this was apparent through partnerships with national rural mental health organisations (e.g. FarmStrong in N.Z. and the Farm Safety Foundation in the U.K.). Involving stakeholders ensures that programmes are relevant, context-specific, and grounded in lived experience, increasing their credibility and uptake among students (Sadovska et al. 2024). Secondly, there is a need to scaffold learning. Several studies highlight the doubt around information retention when only one wellbeing session is in place in the entire multi-year curriculum (Knook et al. 2024; Winder et al. 2024). Having scaffolded learning, especially in multiple forms, allows students to embed new knowledge and practices. Providing this scaffolded learning at key points in the degree (which can be seen from the timing of education by the different universities being first year of study, before embarking on practical work and before entering the workforce) would be most effective. Finally, to accommodate diverse learners, it is important that wellbeing education is offered in a variety of modes, with some programmes more suited to in-person education and others needing to accommodate distance students (Knook et al. 2024).

There are also areas for further research. With education for students being important, there is an equally important need for the education of hosts on agricultural placements to improve their ability to train, supervise, support and communicate about wellbeing and health and safety. Although possibly not apparent in the material that we studied, we have found little mention of host and university responsibility. Rohlman, Campo, and TePoel (2022) highlight that young adults in agriculture are at elevated risk of injury and that supervisor training in safety and communication is especially important in mitigating that risk.

One limitation in our research is the reliance of programme coordinators and lecturers to provide material on wellbeing education. There is a chance this has led to the omission of some taught material, for example, one-off guest lectures or field visits. This highlights the need for the development of embedded programmes, where, similar to other content taught in the degrees, it is possible to keep track of the education delivered to the students.

Furthermore, from a university perspective, it is important to reflect on the ethics of care. The analytical framework shows the drivers of poor wellbeing, and these often vary amongst different students. Therefore, education needs to be similarly mixed, for example containing content and stories from, and targeted to, different situations. Further research is needed to understand how universities can best support a diversity of students – not only during their university time but potentially also once they leave. Lastly, this study has provided insight into current wellbeing education. However, it has not evaluated the impact of such education. To ensure robust education, evaluation of such programmes is key.

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Appendix

The following tables present the detailed content analysis for each of the universities that participated in this study.

Table A1. Content analysis of wellbeing programmes delivered at NZ's land-based university in the North Island and how these address concerns for young people's mental health living and working on-farm.

Programme	Delivered to?	Content analysis	Code	Extra observations
WellMates	First year agricultural students	The WellMates workshop consists of slides and interactive videos, as well as scenarios that students discuss as a group. Although only 2 h in length face-to-face and 60 min online, it covers a range of topics, including access to support services, community attitudes, help-seeking and with help of scenarios addresses factors that can contribute to poor mental health such as isolation, finances and sexism.	1.1; 1.2; 1.3; 1.4; 1.5 2.1; 2.3; 2.4; 2.5; 2.6; 2.7; 2.8	Additional topics addressed, which are not included in the framework, include the inclusion of indigenous perspectives and how to support peers when they display signs of poor mental health. Consuming unhealthy food is also mentioned as a factor potentially contributing to poor mental health.

Table A2. Content analysis of wellbeing programmes delivered at NZ's land-based university in the South Island and how these address concerns for young people's mental health living and working on-farm.

Programme	Delivered to?	Content analysis	Code	Extra observations
WellMates	First year agricultural students	The WellMates workshop consists of slides and interactive videos, as well as scenarios that students discuss as a group. 2 h in length face-to-face, it covers a range of topics, including access to support services, community attitudes, help-seeking and with help of scenarios addresses factors that can contribute to poor mental health such as isolation, finances and sexism.	1.1; 1.2; 1.3; 1.4; 1.5 2.1; 2.3; 2.4; 2.5; 2.6; 2.7; 2.8	Additional topics addressed, which are not included in the framework, include the inclusion of indigenous perspectives and how to support peers when they display signs of poor mental health. Consuming unhealthy food is also mentioned as a factor potentially contributing to poor mental health.
FarmStrong Session 1	Second year agricultural and diploma students	This session builds on information provided by WellMates in the first year, such as repeating the 'Five Ways of Wellbeing': a framework of five strategies to improve mental health. It also emphasizes other strategies to increase wellbeing, and repeats where to seek for help.	1.1; 1.4 2.6	The majority of the information in this 1-h session is a repetition of WellMates, but delivered in a different format (guest lecturer from FarmStrong; NZs main rural mental health organisation).
Wellbeing conversational session	Second year agricultural and diploma students	This informal 1-h session is delivered by the faculty's mental health advocate. It is delivered without slides, and although it covers basic aspects around help-seeking and overcoming stigma, the content is mostly driven by the students in class.	1.2; 1.4 2.5; 2.6	This session again repeats where to seek help and what strategies to use (building on WellMates in first year). It's a different mode of delivery, with the faculty's wellbeing advocate leading the conversation.
FarmStrong session 2	Third year agricultural students	This third-year session is focused on what is resilience and how to build it. It is delivered by a practising farmer/consultant, and aims to prepare students for their working life.	1.2; 1.4 2.7;	This session focuses specifically on resilience, and is delivered by a practising farmer/consultant. This allows the presenter to give examples of how this applies to the actual working environment.

Table A3. Content analysis of wellbeing programmes delivered at the UK university and how these address concerns for young people's mental health living and working on-farm.

Programme	Delivered to?	Content analysis	Code	Extra observations
Farm Safety Foundation session	Second year students	60-min farm health and safety session, of which 20 min specifically focus on wellbeing in farming.	1.1; 1.4 1.6	There is approximately 20 min of mental health education covered, which is at the end of the session. The physical health and safety has a larger emphasis. Students are referred to the websites around strategies to cope with mental health, but strategies are not explicitly discussed
Placement briefing	Second year students	70-min session, part of it focuses on wellbeing during placement. Examples are included around loneliness and isolation, time pressures and alcohol use.	1.1; 1.2; 1.4 2.1; 2.5; 2.6; 2.9	This is a follow-up from the Farm Safety Foundation session. It is an online recorded session. Some strategies are discussed, but not the focus of the session.
Placement problems, resilience and wellbeing	Second year students	65-min session, specifically targeted towards mental health, wellbeing and resilience on placement.	1.1; 1.2; 1.3; 1.4 2.5; 2.7; 2.9	Focus on not only problems, but also strategies around resolving problems. Again, specific focus on practical work. The link between mental health and wellbeing and being safe at work was highlighted.

Table A4. Content analysis of wellbeing programmes delivered at the Irish university and how these address concerns for young people's mental health living and working on-farm.

Programme	Delivered to?	Content analysis	Code	Extra observations
Core module on Health, Welfare and Safety	Second-year students	12-week module, which includes aspects of mental health and wellbeing education throughout the course. Although the module is predominantly focused on health and safety, a range of topics in the mental health and wellbeing space are also addressed.	1.1; 1.2; 1.3; 1.4 2.1; 2.3; 2.5; 2.6	The 12-week-long module allows scaffolding of learning. The module starts off with information about fatal and non-fatal accidents, and links mental health as a risk to health and safety.
Dignity and Respect workshop	Third-year students prior to going on placement	60-min workshop, specifically targeted towards students going on placement, with scenarios (including sexism, bullying and discrimination) developed that present challenges they might face while on placement.	1.1; 1.4 2.6; 2.8	Addresses additional factors that can cause mental health distress, such as bullying, harassment and discrimination. With the help of scenarios, the focus is on developing coping strategies and actions after being presented with a challenging situation (bullying/harassment/discrimination/etc)

Table A5. Content analysis of wellbeing programmes delivered at the US university and how these address concerns for young people's mental health living and working on-farm.

Programme	Delivered to?	Content analysis	Code	Extra observations
Mental health awareness and suicide prevention for rural America	Agricultural undergraduate students	The 60-min online module contains personal stories about mental health, discusses signs and symptoms, steps to support mental health and how to recognise signs in others. It is created by the university in collaboration with industry stakeholders, such as Rural Minds (non-profit organisation for rural health in America), NY FarmNet (resource for diverse, dynamic and health agricultural communities).	1.1; 1.2; 1.3; 1.4 2.1; 2.4; 2.5; 2.6	There is a strong emphasis on recognising signs in others and providing tools to help others (e.g. talking points). Mainly videos are shown, with an interactive quiz component at the end of the module.
NY FarmNet session	Agricultural undergraduate students	60-min lecture session, contains information on the role of NY FarmNet, as well as information about what mental health is, and exercises (e.g. breathing exercises) to stay mentally well.	1.1; 1.2; 1.3 2.1; 2.5; 2.6	Contains class exercises on breathing and gratitude.
NY FarmNet session suicide	Agricultural undergraduate students	60-min lecture session, specifically focused on suicide, including how to recognise signs and strategies to help others.	1.1; 1.2; 1.3; 1.4 2.1; 2.4; 2.5; 2.6	Similar to other programmes delivered in US, it contains information on substance use and firearms. This seems to be more heavily featured in those programmes compared to the other countries.