Towards safer farms - Understanding farm safety cultures

BeSafe Research Seminar (Online)
April 27th 2020

13:30 – 13:40 Welcome and Overview

David Meredith, Principal Investigator, BeSAFE Project, Teagasc

13:40 – 14.45 Chaired by Pat Grifin (HSA)

1. *Farm Safety Culture – Evidence from a survey of European farmers.*
   Prof Stephan Van Der Brooke (Université Catholique de Louvain).

2. *Farm Safety: What gets in the way?*
   Dr Denis O'Hora, Dr Jenny McSharry, Ms. Aswathi Surendran, (UCG), Dr David Meredith, Dr John McNamara (Teagasc).

3. *Farm safety attitudes and behaviours of livestock farmers in Ireland*
   Ms Niamh Woods, Dr Mohammad Mohammadrezaei, Dr Mark McGee, Dr Marijke Beltman (UCD), Mr Francis Bligh, Dr John McNamara, Dr David Meredith, and Dr Bernie Earley (Teagasc).

14:45 – 14:50 Break

14:50 – 15.45 Chaired by Pat Grifin (HSA)

4. *Farmer's perspective on farm machine accidents and safety: An investigation using focus groups*
   Ms. Aswathi Surendran, Dr Jenny McSharry, Dr Denis O'Hora, (UCG), Dr David Meredith, Dr John McNamara (Teagasc).

5. *Are farm advisors reluctant to discuss farm health and safety? A psychosocial assessment of intentions.*
   Dr Mohammad Mohammadrezaei, Dr David Meredith, (Teagasc)

6. Closing discussion

Farm Safety Culture – Evidence from a survey of European farmers.

Prof Stephan Van Der Brooke (Université Catholique de Louvain).

Abstract

Agriculture is one of the most hazardous industrial sectors with a high prevalence of occupational injuries and work-related health problems. Most of these problems are caused by the interplay of human behavior and ergonomic factors, and are thus preventable. Interventions to prevent occupational injuries and diseases among agricultural workers should aim to change risk behaviors and conditions by addressing the determinants of unsafe or unhealthy behavior. To that effect, an evidence based prevention approach can be adopted, consisting of four steps: (1) identify behavioral risk factors; (2) identify the cognitive, motivational and environmental determinants of these risk behaviors based on psychological models; (3) develop and test interventions to influence health related behavior; and (4) investigate the conditions for successful implementation of these preventive interventions. In the presentation, the application of this approach to promoting farmers' health and safety will be illustrated by referring to the EU COST Action SACURIMA (Safety Culture and Risk Management in Agriculture). This international, European-wide action draws on psychological theory to identify and measure the main individual and contextual determinants of farmers' safety behavior (i.e., knowledge, attitudes, perceived risks, perceived norms, safety culture, and cues to action) in an international comparative survey that can serve for benchmarking national performance. The implications for panning and evaluating policies and interventions to enhance safety among farmers will be discussed.

Farm Safety: What gets in the way?

Presenter: Denis O'Hora

Contributors: Jenny McSharry, Aswathi S, David Meredith & John MacNamara

Attempts to understand farm safety have in the main employed social-cognitive approaches. In addition to social and cognitive influences, farm safety is highly dependent on non-cognitive characteristics, such as physical ability, financial, time and work resources and the particular environmental context of each farm. The Capability-Opportunity-Motivation-Behaviour (COM-B) model proposed by Michie (2011) includes such non-cognitive characteristics. Specifically the COM-B model proposes that Behaviour is the product of three classes of influence: Capability (physical and psychological), Opportunity (physical and social) and Motivation (reflective and automatic). The Opportunity domain and the Physical Capability component, represent the contribution of ecological frameworks to the COM-B model to supplement social-cognitive approaches. The current paper introduces the COM-B model and explores its potential to supplement current approaches to farm safety.

Farm safety attitudes and behaviours of livestock farmers in Ireland

Ms Niamh Woods[1,2], Dr Mohammad Mohammdrezaei[3], Dr Mark McGee[1], Dr Marijke Beltman[2], Mr Francis Bligh[4], Dr John McNamara[5], Dr David Meredith[3], and Dr Bernadette Earley[1]

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[5]Teagasc, Kildalton, Piltown, Co. Kilkenny

Abstract

Livestock production systems consistently rank as one of the most hazardous with regard to farmer safety, accounting for 16% of total fatalities in the Irish agricultural and forestry industry between 2009 and 2018. Human-animal relationships (HAR) play an important role in animal welfare, production, and the safety of those working with livestock.

Farmers' attitude and behaviour towards safety were assessed by means of a survey. In 2019, a questionnaire was designed for completion by farmers (who were enrolled in the Teagasc Beef Knowledge Transfer discussion groups (n = 350)), and by agricultural education students (n = 38). It consisted of 60 questions, some of which contained multiple parts. Questions were aimed at personal (farmer and farm) characteristics, frequency of contact with animals, facilities on farms, safety and risks associated with livestock handling, attitudes, behaviours, intentions and importance of safe farming. The final section addressed 'near misses' and accidents on farm. A mean total farm size of 50 ha (SD; 34) and total mean herd size of 120 animals (SD; 173) were calculated. Of the participants, almost 82% considered beef farming as their main enterprise, 49% occupied farms on a full-time basis and 51% on a part-time basis, with a high variation in work hours found. In general, farmers' attitudes towards safety were positive, however 15% did not have a *Risk Assessment Document* in place for their farm. Younger famers were less likely to take risks while older farmers had a greater perceived ability to work safely and had more positive attitudes and intentions. Older farmers were also less critical of their animal handling facilities. Farmers with larger herd sizes, farming their own area of land were more likely to ask inexperienced individuals to help with livestock on farm. Farm occupation (full time versus part time) affected attitudes, behaviour and intention to work safely.

Farmers' perspective on farm machine accidents and safety: An investigation using focus groups

Aswathi S[1], Denis O'Hora[1], Jennifer McSharry[1] & David Meredith[2]

[1]National University of Ireland Galway

[2]Teagasc

Farm safety is a critical issue of concern to farmers, farm households and a range of agricultural and health policy stakeholders. The occupational characteristics of farming, e.g. self-employed workers that generally work alone, limit the effectiveness of conventional approaches to enhancing safety and health. In order to facilitate the development of efficient and tailored intervention programs to improve safety on farms, it is essential to take inputs from the stakeholders. Internationally, farmers have not generally being included in the development and design of farm health and safety initiatives. This qualitative study aimed to; explore farmers' insight into farm accidents; develop recommendations for safety guidelines; identify priority behavioural risk components; and investigate the prerequisites for a behavioural safety intervention. Though there is a body of research identifying older farmers as being disproportionately affected by farm accidents, there are no known safety interventions designed specifically for older farmers. Using a semi-structured interview guide, four focus group discussions were conducted online, consisting of 19 older farmers(above 60) from various types of farms. Using MAXQDA, an inductive thematic approach was applied to analyse the focus group transcripts. Generated themes were then mapped to the Capability-Opportunity-Motivation-Behaviour (COM-B) model to explore the capability, opportunity, and motivation of farmers to adopt safety behaviours. These insights from farmers should encourage new perspectives on the development of novel farm safety interventions.

Are farm advisors reluctant to discuss farm health and safety? A psychosocial assessment of intentions.

Dr Mohammad Mohammadrezaei[1], Dr David Meredith[1], Dr John McNamara[2]

1. Rural Economy Development Programme, Teagasc, Ashtown, Dublin 15.
2. Kildalton College, Piltown, Co. Kilkenny.

Abstract

Despite the important role of farm advisors' in supporting farmers engage with and participate in farm health and safety (FHS) initiatives, the factors shaping advisors' intention's related to FHS have not been well document. To address this gap we use the Theory of Planned Behaviour (TPB) framework to assess and explain the extent to which advisors' attitudes, subjective norms, perceived behavioral control (PBC) affect their intention. We apply Structural Equation Modelling (SEM) to analyses data collected through a survey of farm advisors and consultants who participated in a national farm development programme. The SEM findings illustrated that all TPB constructs explain 62% of the variance in intention. Advisors' low attitude and PBC were associated with perceived low social confirmation or high social pressure from both leading farmers and other farmers. This resulted in advisors viewing FHS as an unimportant/unfavourable issue and contributed to perceptions of no control and confidence discussing FHS with farmers. The results indicate that advisors 'attitudes and PBC are influenced by the views of leading farmers as the main end-users. This highlights the importance of understanding the social and professional context within which advisors operate and demonstrates that improving engagement with FHS by both advisors and farmers requires co-designed and participatory interventions (collective social learning approach) that embrace leading farmers, other farmers, and advisors.

BeSafe

Behaviours for Safer Farming (BeSafe) is a DAFM RSF funded research project that aims to develop a comprehensive understanding of the factors that influence farmer safety and to exploit this understanding to effect positive lasting change. The project develops an Irish multidisciplinary research network, who will design and assess pilot interventions.

BeSafe creates a critical mass of researchers across disciplines. In addition to generating numerous research papers, this project will introduce a number of new young talented researchers to farm safety from relevant disciplines, such as implementation science, and broaden the research base in Ireland to support the development of future interventions targeting behavioural change across a range of areas, i.e. not just farm safety.

BeSafe involves collaboration between Teagasc, NUI Galway and University College Dublin