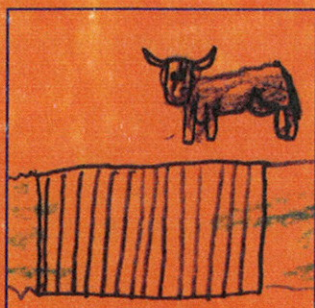
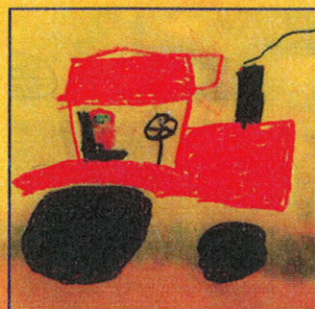


HEALTH, SAFETY & WELLBEING

In Rural Communities in the Republic of Ireland:
Main Results from the Agriproject



Centre for Health Promotion Studies
National University of Ireland, Galway

Health, Safety and Wellbeing in Rural Communities in the Republic of Ireland

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Cover illustrations by school children in intervention programme.

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Contents

Background	1
Health Promotion at Work	1
Development of Community Interventions	5
Community Engagement	5
The Planning and Implementation Process	5
Stage 1: Community Analysis	6
Stage 2: Design and Initiation	10
Stage 3: Implementation	12
Process Evaluations	15
Impact Evaluation	31
Conclusions and Recommendations	49
References	55

Tables

Table 1:	Summary of Agri-project	4
Table 2:	Summary of Quasi-experimental Intervention Design	12
Table 3:	Summary of Health & Safety Intervention Strategy in three areas:	14
Table 4:	Content of Drawings by junior primary school children pre and post intervention, % of children recording the item is GIVEN.	21
Table 5:	Safety lists recorded by senior primary school children pre and post safety lesson	21
Table 6:	The number of children who recognised each of the dangers and preventative measures where necessary from the worksheet in Area A and Area B combined.	22
Table 7a:	Numbers and Characteristics of Participants in Interventions in Galway, Limerick & Laois	23
Table 7b:	Mental Health Promotion Interventions in Donegal	28
Table 8:	Numbers and Characteristics of Participants in Interventions in Donegal	30
Table 9:	Demographic Characteristics of respondents (% in brackets)	32
Table 10:	Safety Measures: Responses pre and post intervention.	34
Table 11(a):	Reported attitudes and behaviours in relation to health - Pre and Post intervention	38
Table 11(b):	Self-rated Quality of Life and Social Services as perceived in each of the four communities	40
Table 12:	Mental Health: Differences in Mean (SD) responses to attitudinal items by Community pre and post intervention	43
Table 13:	Mental Health: Awareness & willingness to confide in others - Difference in percentage response frequencies by community at pre & post intervention	45

Abstract

Objective

To establish a health promotion intervention programme in a rural community setting particularly for agri-workers and those engaged in small-scale enterprises. The focus of the intervention, based on a prior needs assessment process, was on (1) health and safety issues around chemicals, machinery handling and backcare and (2) on mental health promotion initiatives in various settings.

Design

A multi-stage quasi-experimental design was employed over four years in four comparable rural district areas selected at random from each of the four provinces of the Republic of Ireland, Munster, Ulster, Connaught and Leinster. A menu of school, workplace and community interventions was undertaken over an 18-month period in association with statutory and voluntary agencies in each community. Because different interventions were undertaken in each community, a reference area for each type of intervention existed, facilitating a comparative impact evaluation.

Sample and Participants

- 1) At the outset of the project both a national quota-sample survey comprising 1938 people and a qualitative consultative process comprising focus groups with leading farm organisations, was undertaken. This established the need for further initiatives on topics of farm safety and mental health promotion. Once the four communities were selected, a consultation process was engaged in with key community players.
- 2) Prior to the intervention phase and at follow up two years later, surveys with a randomly selected community sample were undertaken (N=1007; 39.4% males at baseline and n=1051; 40.8% males at follow-up).
- 3) The process of over 20 small group intervention initiatives and 4 schools programmes was documented in detail; in all over 700 children and 300 adults were estimated to have participated actively in the programmes.

Process and Impact Measures

The planning and implementation process was documented using the five-stage community organisation model developed by Bract et al (1999). The questionnaire instrument for the community survey recorded demographic characteristics of participants including age, sex, occupational and educational status. Reported safety practices in respect of machinery, backcare and chemicals were recorded. Change in levels of awareness and practice in relation to safety and mental health issues over the intervening two year period were assessed, using a four way factorial analysis of variance that took account of age, sex and location of respondents in assessing project impact, with educational status as a covariate.

Results

Useful materials and strategies were systematically developed and tested across a range of different settings in each community. Process evaluations revealed the acceptability of these for those who participated. Participation in adult programmes was more likely among women and those in early middle age. Schools based programmes on health and safety and on mental health issues demonstrated increased awareness and knowledge of the issues involved. The materials developed could be more systematically produced as professional educational materials, particularly as part of a life skills type programme. The mental health intervention programme was particularly successful in the Donegal community and further interventions are in train.

The follow up findings after two years with a representative sample on the impact of the programme were encouraging. Though the information was self-reported, there was little noticeable difference according to community at baseline, suggesting a useful and reproducible measure. There were changes over time consistent both with National initiatives in relation to health and safety issues and with the nature and type of programme intervention in the different communities. There were various reported changes in relation to chemical and machinery safety and the community where the most intervention occurred, Galway, showed most changes, compared with Donegal, where the least intervention on safety issues occurred. On the other hand, there were changes related to mental health in that community, particularly for younger people, consistent with the project's aims.

Conclusions

This 4-year intervention programme in four representative rural areas in the Republic of Ireland gives a detailed attitudinal portrait of health and safety related behaviours of people in rural Ireland. Useful materials for use in settings like schools and small-scale agri-enterprises have been developed and systematically evaluated. Impact evaluation suggests encouraging trends in line with the intervention objectives.

Background

Since 1989, with the introduction of the Health, Safety and Welfare at Work Act in the Republic of Ireland, there has been a framework for the systematic surveillance and monitoring of health and safety at work. The Barrington report¹ had earlier identified many gaps in coverage of workplaces. This included agriculture, a particularly significant sector in Ireland, which of its nature comprised many small sites. Though not part of the traditional industrial sector, nonetheless it presents increasingly complex work situations. There has also been a growing recognition that smaller scale and medium size enterprises (SMEs) generally, unlike the traditional industrial settings, may be difficult to reach with health and safety measures if a conventional policing approach is taken, rather than a self-monitoring one. We in Ireland are not alone in this problem. Argiworkers everywhere have a higher than average rate of fatality and because there is often an overlap between domestic and workplace, many non employees, including children, come to harm². Furthermore, the SME sector world-wide is growing, which means that the vast majority of workers everywhere are employed in this type of setting. Yet it is under-researched, whether in documenting work practices or in evaluating appropriate interventions. Our concern with this project was to extend previous research on effective health promotion strategies in large-scale work sites to these more challenging settings. We aimed to produce a comprehensive picture of need, to identify exemplar approaches that might be effective and to assess the short-term impact of such an approach at community level.

Health Promotion at Work

There is growing evidence in health promotion evaluation that the settings approach is effective^{3,4}. The workplace has been identified as a key setting for health promotion both internationally³ and nationally⁶. Wynne⁷ identifies that there are two basic approaches to workplace health promotion, one evolving from the United States tradition where programmes are orientated to single, often lifestyle-related issues, as demonstrated by the recent comprehensive literature reviews of topic based initiatives^{11, 12, 13, 14, 15}. Many of these are both effective and cost effective but are dependent on higher quality, tailored interventions. The second approach, developed in Europe, espouses more integrated programmes, that take more explicit account of the broader work environment, often incorporating needs assessment. A number of reviews

of workplace health promotion initiatives in Ireland (and elsewhere in Europe) have identified that the general level of awareness and activity is low ^{16,17}. Further findings indicate a consistent association between level of activity and company size so that in Ireland larger multi-national organisations are more likely to provide integrated health promotion programmes. Comer et al. ¹⁷ identify that there is little information available on the health promoting practices of small companies in Ireland (those with less than 50 employees). However, it is known that compliance with health and safety legislation is also low, suggesting that provision of health promotion is severely limited. This situation lends itself to further investigation, particularly because of the scale of unmet need. The ratio of small to large enterprises in Ireland is considerable; it has been estimated that 65% of all employees fall into the small business category, the majority of which employ less than 10 people ¹⁸.

Workplaces employing few people present particular challenges for health promotion that have been well documented¹⁹. These small businesses represent a great diversity of enterprises with employees undertaking a very wide range of work activities. The need to form a conglomerate of enterprises to develop a critical body for effective and efficient intervention is necessary. A sectoral approach, linking small businesses by type of work is one way to do this, where common work activities are the link. Sectors could include financial, manufacturing, service and agricultural. In Ireland the agri sector employed at least 11% of the Irish workforce at the initiation of this project²⁰. The task force on small businesses excluded consideration of farmers to facilitate international comparison of data collected. However, many farms are in effect small businesses. About 140,000 people are employed in farming with 97% being owner-occupiers and 14% employing hired labour on a regular basis. In addition to those employed directly in this sector it is estimated that a further 450,000 people are exposed to this work environment, as they live on farms.

Basis for the present project

For these reasons, the Centre for Health Promotion Studies (CHPS) identified the need for investigation into workplace health promotion in relation to small businesses, particularly in the agri sector. The aim of the project was to develop, implement and evaluate health promotion initiatives for agricultural workers and workers in small rural enterprises. In this report we describe and summarise this project with a focus at each stage on key findings and also make recommendations based on the

future. The project stages are summarised in Table 1. At the outset, year 1, as part of the planning process in order to clarify whether significant variations in health and safety practices did indeed exist across socio-economic groupings in Ireland, both a national survey and consultative process with four organisations was undertaken. This work has previously been published and is summarised below²¹.

A representative quota sample ($n = 1,938$) of the Irish population was surveyed as part of a national omnibus survey on lifestyle practices and workplace risk assessment and control measures, in relation to chemical exposure, manual handling and machinery. Focus group discussions were conducted also with 47 representatives of national farming organisations. Compared with the general workforce, farmers had a significantly ($p < 0.01$) lower level of assessment of risk hazards associated with manual handling and machinery. Both farmers and employees in workplaces with less than 20 employees reported a significantly lower level of safety training. Male farmers had a particularly negative health profile with only 18% reporting regular dental checks, 26% practising skin protection and 29% taking regular exercise. Focus group discussions indicated that barriers to change included low perceived susceptibility, on the part of farmers to personal risk, lack of time and resources. Mental health issues were particularly highlighted. We concluded that farmers differ significantly in many instances from the rest of the workforce in regard to occupational health and safety issues and specific interventions in key areas are required for the agri-sector.

At the end of the first year it was clear that the priority for the project was therefore appropriate. During year 2 a process of community identification, recruitment to the project and a needs assessment (which included a detailed door to door community survey), was undertaken. Over the next 18 months, in each of the four selected communities, an intervention framework, comprised of exemplar projects and initiatives, was put in place. Two years after the initial survey a follow up survey was undertaken in the communities. Finally, in year 5, a detailed analysis of the findings and of the report implications was undertaken. The stages of the work are now described in further detail.

Table 1: Summary of Agri-project

	Year 1 1996	Year 2 1997	Year 3 1998	Year 4 1999	Year 5 2000
Q1: Jan-Mar	Audit of Farm Organisations Focus Group Recruitment	Intervention planning: Protocol devised and 4 communities randomly selected	Community Feedback and newsletter Donegal, Limerick Galway, Laois	Mental Health programmes ongoing in Donegal. Further safety initiatives in Laois and Galway	Impact data analysis
Q2: Apr-Jun	Preparation of National Survey (n=1938)	Meeting with community players in each community, questionnaire instrument devised	Chemical Safety Schools programmes in Galway and Limerick. Focus groups on Mental Health in Donegal	Mental Health Awareness Week in Limerick, including Schools pilot. Farm Safety Intervention.	Process evaluations prepared.
Q3: Jul-Sep	Focus Groups with Farm Organisations (n=47)	Community Needs assessment undertaken by house to house Interviews (n=1014)	Schools Write and Draw evaluation undertaken. Farm intervention programmes initiated. Workshops on Mental Health.	Follow up Community Interviews (n=1051)	Preparation of report and recommendations
Q4: Oct-Dec	Data Analysis Priority setting	Analysis of needs assessment data	Small Enterprise seminars. Farm cue cards intervention. Mental Health programmes in Donegal	Write-up of process evaluation	Final report and recommendations

Development of Community Interventions

Based on the findings from the National survey and the focus groups, the main areas of concern identified were safety (machine safety, back care, chemical use, access to services) and mental health promotion. The recommendations from the focus groups suggested a community based approach, using existing community organisations, as the most effective way to access the farming community and small rural enterprises^{22,23}. As a result of this baseline work it was decided to recruit four communities with which to work towards improving safety and health through health promotion intervention programmes. A community settings approach was formulated to facilitate access to agri workers and the aim of the project was then extended to promote the health of people living and working in a rural environment generally rather than in specific work sites. Four geographically distinct rural communities were randomly selected for participation in the intervention phase of the study. Within each of the four geographical regions or provinces in the Republic of Ireland (Leinster, Munster, Connaught and Ulster) counties were matched in terms of average farm size and economic size unit. A rural district (population between 750 and 2,000) was then randomly selected from the rural electoral divisions' list from four comparable counties within each of the four regions.

Community Engagement

The project, though initiated by the university research team, sought to develop the work as a partnership between the university, local community organisations, farming agencies and health service agencies in the area. To this effect discussions were first entered into with the local community development organisations and groups to discuss the proposed project and to engage their interest in being involved in the development of the project in their area. In a parallel process, key health professionals in the statutory and voluntary agencies were also approached to engage their interest, support and involvement in the project. A research framework to support the development and implementation of the project was developed by the research team.

The Planning and Implementation Process

The planning and implementation process of the community-based programme can be described by applying the Five-Stage Community

Organization Model developed by Bracht and colleagues²⁴. This model is based on partnership and empowerment principles and has been applied to a number of community-based demonstration projects.

There are 5 stages; 1) Community Analysis, 2) Design and Initiation, 3) Implementation, 4) Maintenance – consolidation, 5) Dissemination – reassessment.

Stage 1: Community Analysis

There are two main aspects of community analysis, firstly understanding the needs of the community and secondly assessing the capacity and support for the project. This was achieved by an in-depth, purpose-designed community survey and an assessment of both available human and physical resources and existing health service infrastructure across all four participating communities. It was aimed to achieve an age and sex representative weighted random sample of at least 250 people in each area. With a response rate of 71%, a total sample of 1,014 people were surveyed at the pre intervention stage across the four communities.

Data Collection

A systematic framework, based on geographical spread within a five mile radius, was used to randomly select households. This resulted in every second house in the village areas and every house in the open countryside being approached by the researchers. The district electoral division (DED) areas selected were quite small, therefore within any given area households had a high probability of being selected. Anyone present over the age of 15 years in each of the households was deemed eligible to complete the questionnaire, with a ceiling of up to four members from each house. Within households most provided only one respondent so familial factors were not an inordinate influence.

The survey technique used was an interview-administered purpose-designed questionnaire, divided into a number of sections exploring attitudes related to general health and safety and mental health issues. The questionnaire explored the following dimensions:

- 1) levels of awareness and knowledge,
- 2) current practices and attitudes concerning the health services,
- 3) perceived barriers and benefits of service take-up,
- 4) confidence in dealing with safety and health issues,

- 5) sources of information community support and channels of communication for promoting safety and health.

The organisation of the needs assessment was carried out in close collaboration with the community groups, who facilitated planning and helped notify the local communities of the timing of the data collection. The active engagement of the communities in the needs assessment phase is regarded as being particularly important as it lays the groundwork for community participation in the development of the project as a whole and sets the stage for collaboration between the researchers and the community. Simultaneous to the administered community survey three additional studies were undertaken within the communities to provide a comprehensive understanding of important issues. These site studies were on the community perceptions of depression²⁵, the quality of life of older people living alone²⁶ and safety practices with chemical use among farmers²⁷.

The needs assessment survey began to involve local people in a raised community awareness of health and safety issues. At the same time it provided a clear assessment of the starting point for the work in terms of existing levels of awareness and current perceptions. Based on feedback and discussion of the needs assessment findings in each community, the specific focus of the interventions were determined.

Needs Assessment Summary Findings

Only the key findings from the baseline survey will be summarised here, in order to highlight how the needs assessment results and their implications guided the development of the intervention plan. Results have been published in more detail elsewhere^{28, 34}. The findings from the survey suggest that the following issues needed to be addressed:

Health & Safety Issues

- **Chemicals Use and Storage:** There was a high level of personal concern about using chemicals and a confidence in their own ability to handle and store properly. However their knowledge and practice in storing chemicals safely was low.
- **Machine Safety for Children:** There was a high level of concern, yet a substantial number allowed children to travel as passengers on farm machinery and about one in five allowed children to drive farm machinery.

- Backcare and manual handling: Taking care of their back was the issue of least relative concern. Yet 14% reported back problems that resulted in lost workdays. Very few people had participated in a manual handling course.
- Quality of life : Those over 40 years were more satisfied with life and in particular were satisfied with personal health and health services. Those under 40 years were more concerned about their social network and in particular with limited opportunities to meet others and the distance from the hospital.

Farming organisations, family and other farmers were seen as most influential in farm safety matters.

Mental Health Promotion

The following key findings emerged from the survey questions relating to emotional and mental health:

- Awareness: While general levels of knowledge and concern in relation to depression and suicide were high, they were lowest among those at highest risk, i.e. males and those under 40 years. In addition there is generally low awareness of the risk of suicide linked to depression.
- Skills: Symptom recognition and help-seeking emerged as particular issues for younger adults and males. The survey found that there was a general lack of confidence in dealing with depression and suicide in others, even when the symptoms are recognised. Likewise, an expressed unease about advising others of where they should go for help emerged.
- Disclosure: The value of openness and confiding in others concerning emotional matters needed to be reinforced. In the rural communities surveyed there seemed to be a general reluctance to share one's worries and joys with others. This was particularly so among males. The value of interpersonal communication and the use of informal sources of support, such as family or peers, needed to be highlighted.
- Stigma: Social stigma remains a major barrier to service take up. Again this is of particular relevance to those under 40 years of age. Some 28% of the sample declared that they would 'talk openly' about

someone close to them receiving treatment for depression. This figure contrasts with 66.6% responding positively to this question in a recent Norwegian Mental Health Campaign²⁹.

- **Services:** Belief in the efficacy of the professional services was generally high but again lowest among the under 40 age group. This group was less willing to consult these services and also less likely to believe in their effectiveness.
- **Channels of communication:** Local media were cited as the most direct and effective means of reaching rural populations. Likewise, local talks, other people, i.e. non-health professionals, and word of mouth tactics emerged as influential in the local context.

Assessment of Community Capacity and Barriers

In order to identify potential collaborators and to establish a network of local contacts, meetings were held with key community groups, organisations, professional community workers and community leaders in the area. The interviews/meetings sought to assess the degree of local interest in the project, to determine general awareness of health and safety issues among diverse groups in the community and to determine the feasibility of focusing the community's interest on the priority proposed topics. The meetings were also used to inform local players about the nature of the proposed project and to solicit their collaboration if possible. All were willing to co-operate in whatever way possible. This exercise also served to establish networks that could be built on at a later date.

The community groups were all at different stages of development and took various forms when the project was initiated. In the Co Galway rural community there was a well-established community development group that had been running for a number of years. The motivation for the group was predominantly one of economic rejuvenation for the area. The committee was made up of local people. The organisation had employed a salaried community development project worker to instigate and co-ordinate project development. The community in Co Limerick also had a development association that had been established for a number of years. The focus for the group had been the conservation and development of a local church into a heritage centre, which is now complete. The central committee was organised into sub committees for specific initiatives such as tidy towns, historical society and swimming safety.

The development association in the Co Laois had only been in existence for two months prior to contact. The aim of this group was to promote the tourist appeal of the area and so generate business for local people. In the fourth community in Co. Donegal, community infrastructure was relatively well developed in the form of a local Community-in-Action group, which acts as an umbrella for a range of community organisations in the area. The aim of this group is to bring together the whole community on projects of mutual benefit, such as the conversion of a local building into a community centre.

Lines of communication were opened between the research team and each community, which involved several meetings. The aims of these meetings were role clarification, expectations and the initial planning process. This whole process took four months to complete. The community organisations all agreed to participate with the study in partnership with the research team. In liaising with community organisations to organise the survey, the communities actively requested that any information gathered through the needs assessment should be made available to the community. This was done through public meetings and a newsletter with survey results reported.

Stage 2: Design and Initiation

A protocol for process evaluation data collection from community meetings was devised so that the community participants' perspective of the project could be ascertained. Following community meetings attended by the research team, a follow up telephone interview with key players was conducted. As a result of the needs assessment the interventions evolved differently in each community.

Organisational Structures

In each of the communities the researchers suggested that a steering committee be formed to oversee the project. This was felt to be unnecessary by three of the communities. As an alternative it was suggested that representatives of CHPS would be invited to the standing committee meetings of the local Development Association.

In the community where a steering group was established, in Co. Donegal, their function was to oversee the development of the project and to guide the planning and implementation of the project activities locally. The committee members were drawn from all three-partner groups; that

is the community groups, health professionals and the university researchers. The Community-in-Action group was approached to nominate members onto a sub-committee to sit on the Steering Group. Likewise, community members who expressed an interest in being involved during the needs assessment phase were also invited to participate. The make-up of the community representatives had to be expanded in order to ensure balance in terms of gender and religious group representation. The health professionals comprised the local primary care team (local GP and Public Health Nurse), a senior Health Promotion Officer from the North Western Health Board's health promotion team, and the Community Psychiatrist Nurse and Consultant Psychiatrist from the mental health services. The university research team and the local co-ordinator were also members of the Steering Group. Membership of the Steering Group is currently 22 people of which eleven are community representatives, eight are from the local health board and three are from the research team. The Steering Group meets on a regular basis, usually monthly, since its formation in Spring 1998 and is actively engaged in the planning of the intervention programme.

Local Co-ordinator

A local co-ordinator was appointed in three of the four communities. In the fourth community the project co-ordinator for the Community Development Association initially acted in this capacity, and subsequently recruitment to interventions was undertaken by the research team with support from local people. In the community where there was agreement on the establishment of a Steering committee, the first co-ordinator left the project after six months due to her work commitments and she was replaced by the current co-ordinator who also works part-time with the local Health Promotion Service.

The local co-ordinators were appointed to work on a sessional basis in developing the project locally, facilitating meetings and the organisation of events. The co-ordinators had a background in community development and/or a qualification in health promotion. The co-ordinators were required to keep a diary of events, meetings and communications and to provide regular progress reports to the Steering Group and to the research team.

Stage 3: Implementation

Intervention Design

The design of the intervention phase involved each of the four communities receiving an intervention in one or both of the two key areas with at least one of the other communities acting as a reference area or control (Table 2). The two broad areas of intervention were safety promotion and mental health promotion. This comparative quasi-experimental design permitted the specific impact of the intervention programmes to be rigorously evaluated. The option of a non-intervention control site was not considered ethically feasible, given the involvement of each of the communities in the needs assessment phase and the expectation of some follow through on the issues raised.

Table 2: Summary of Quasi-experimental Intervention Design

Munster (Limerick)	Connaught (Galway)
Health & Safety on the Farm - farm unit (youth, farmers, spouse)	Health & Safety on the Farm - farm unit (youth, farmers, spouse)
Small-scale Mental Health Promotion Initiative in school and community	Health & Safety at Work: Small scale enterprises
Ulster (Donegal)	Leinster (Laois)
Mental Health Promotion at community and various settings level	Health & Safety on the Farm - farmers only
	Health & Safety at Work: Small- scale enterprises

Intervention Objectives

Health and safety promotion interventions were specifically designed for the agri-sector and small-scale enterprises. Health and farm safety interventions focused on the family unit, that is the farmer, spouse and children. Small-scale enterprise interventions focused on businesses with less than 20 workers and addressed issues relevant to their workplace. The main objectives for 'Health and Safety at Work' interventions were to:

- Evaluate the level of awareness, perceived usefulness and impact of health and safety materials currently in use.
- Increase awareness across the community on the specific safety issues of children and farm safety and chemical safety.
- Increase awareness of key hazards in the workplace and on the farm.
- Develop and reinforce the skills of hazard recognition.
- Develop and reinforce strategies for reducing hazards.
- Create a process for greater safety compliance.

Mental health promotion interventions focused on the whole community and specifically on young adults, farming families and parents. The main objectives were to:

- Increase public awareness and understanding of mental health issues such as depression and suicide
- Reduce social stigma associated with depression and suicide
- Improve ability to recognise the warning signs of depression and suicide
- Improve young people's attitudes and willingness toward dealing with emotional problems
- Re-orient existing services to address rural mental health promotion through the development and facilitation of interagency programmes

Intervention Recruitment

To engage, actively, the community members and ensure participation in the interventions, individuals were recruited in a number of different ways. For community events, posters, church notice, word of mouth, local radio and local papers were the main channels of communication. In three of the four rural communities the local development group played a key role in the recruitment process, especially the initial contact. The development officers from Teagasc were particularly important in a number of ways for recruiting farmers. They had valuable personal

knowledge on farming practices in the locality, they acted as credible experts and delivered many of the farm safety interventions. Small businesses were more diverse and required a personal visit of invitation and/ or phone contact. In one community the farming organisations, Macra Na Feirme and the Irish Farmers Association (IFA), were the key recruitment agents. The children were recruited through the full co-operation of the school principals. The school was also used to recruit by means of an invitation to mothers of children from farming families. Throughout years 2 and 3 therefore, a process of intervention took place in each community, which involved a range of projects and activities. As no two communities received an identical intervention, the other areas served as a reference for the impact of that intervention: and hence changes in practice or attitudes documented in the process and impact evaluations. The detailed process of undertaking the interventions is described elsewhere ^{22, 23, 25, 26, 27, 28, 30}.

Table 3: Summary of Health & Safety Intervention Strategy in three areas:

Action	Limerick	Galway	Laois
Evaluation of Health and Safety Materials	Content analysis at NUI, Galway and Focus groups Farmers and Farmer Spouses Health and Safety Authority video and 5 leaflets	Health and Safety Authority video and 5 leaflets content analysis at NUI, Galway and focus groups with Farmer spouses	
Community Education Workshops	Farm Walk for farmers Interactive session Mental Health Association	5 Workshops for farmers, talks, farm walks and cue cards 1 Workshop for SMEs on safety Statement	2 workshops for farmers, talks, farm walks and cue cards 4 workshops for SMEs on food and hygiene safety, manual handling and safety statement compliance
Schools interventions	Feelings exploration class for 2/3 years in 1 primary school 6 point leaflet guide on safe chemicals to take home in 2 primary schools	Interactive lesson in primary schools with take home lesson on farm safety in 3 primary schools	

Process Evaluations

Safety Information Analysis

Safety information has been developed by a number of agencies (statutory and non-statutory) in response to the high level of accidents that occur each year on farms. Traditionally most of the safety information presented was in the written form, usually leaflets. However, with technological advances videos have been developed more recently.

The video, *Farming – A Way of Life*, was developed as part of an education package for fifth and sixth class primary school children on farm safety. The video, along with the teachers' manual, is designed to help pupils to examine the dangers around the farmyard and reflect on the safety of the farm. The video examines the key areas of high risk to children, illustrating each with a typical role-play situation that leads to accidents. The consequences and personal trauma caused by injury and fatality are shown in personal case studies and testimonies of the victims and those bereaved. The video is divided into seven sections; general introduction, heights and falls, tractors and machinery, chemicals, electricity, slurry pits and animals (IFA Farm Family Committee, 1992).

Five health and safety leaflets were selected for analysis. Four of the five leaflets were on farm safety, one of which had a specific focus on children and safety on farms. The Health and Safety Authority (HSA) was involved in the production of all of the farm safety leaflets and two of the leaflets were in Association with Teagasc and the Animal & Plant Health Association (APHA). The fifth leaflet, a health promotion leaflet on sun protection, was specifically designed to target farmers and was produced by the Irish Cancer Society (ICS) in association with the Irish Farming Association (IFA).

Content Analysis

The materials were evaluated firstly by a detailed independent content analysis. Both the video *Farming – A Way of life* and the 5 leaflets were analysed, sentence by sentence, using clearly defined categories of safety promotion, fear appeal, fear induction, informative and neutral. Two coders with experience in health education independently coded the materials with an overall intraclass reliability coefficient of 0.89.

The video sections on heights and falls, machinery and slurry pits were

seen as the most frightening with very high fear appeal and very strong images. No section was rated as having a high amount of safety promoting information. The chemical and machinery sections were deemed to have the best clarity of messages related to safety promoting information.

The 5 leaflets were also reviewed. The HSA leaflet on children and safety on farms was judged as the most safety promoting and that on sun protection on the farm, produced jointly by the Irish Cancer Society and the Irish Farming Association as the most informative.

Focus Group Discussions: Video

Four focus groups involving 20 participants were also conducted with farmer spouses and farmers in two areas, Limerick and Galway on the same materials. Most were parents under 40 years of age. These groups were generally satisfied with the content, quality and thrust of the video *Farming – A way of life*.

All three spouse groups were positive about the video, all described it as excellent. Group C also talked about how strong it was. One woman felt that its power deterred some teachers from showing the video, out of concern for any children who might be particularly sensitive. They all felt that to be effective it had to be frightening. All groups found the video frightening. Group A felt the slurry pit scene was most frightening, while Group B mentioned the sudden disappearance of the children from the classroom at the beginning to be particularly startling. Group C mentioned the fall from the hay barn as frightening for a child. If they see it, it would frighten them and that's what you want (20/4/99)

When asked to specify what they liked, all three groups talked about the effectiveness of Mick Lally as narrator. They all mentioned how he was instantly recognisable, associated with farming, and easy to listen to. Group B and C said they liked the use of 'real' people telling their own story rather than actors. These things (situations) happened just the way they happen every single day on farms (25/9/99)

The three groups had different views as to what they disliked. Group A thought the final vignette about the death of Fergal was unclear and should have shown his grave to emphasise he died. They also felt that the section on electricity was very technical for children. Group B talked mostly about errors of omission, although they accepted that one video

cannot cover everything. Items they felt should have been included were a burial scene to follow the slurry accident, an example of an animal injury, dangers of bulk tanks, of water troughs of round bales of silage making and silage pits.

They discussed in detail the risks associated with silage making. Group B felt that the boy driving the tractor was too young, stressing that in an unusual situation or crisis a young lad is unlikely to have the maturity to respond appropriately. Even though they were legally entitled to drive one, they felt it was a 'lethal cocktail' to put a young lad of sixteen or seventeen in charge of a powerful tractor. Group C also felt that risks associated with animals were not covered well especially concerning a newly calved cow. Showing the girl's scar on her arm was felt to be unnecessarily gruesome and detracted from the message, because the viewer is shocked by it and dwells on the sadness, rather than the safety message. However Group B felt it was great to show the scar because even worse accidents have happened.

All three groups felt that the video was an excellent way to educate children about farm safety. Group A said it was good to have children telling the stories. Group C thought that there should have been a poster to accompany the video. Group B suggested showing it just before the summer holidays and Groups V suggested repeating it at regular intervals.

Watching it makes you petrified, but you forget. You need a reminder
(25/5/99)

'Keep away from machinery' was what Group A considered to be the best message. Group B and C felt that the important message was that 'the farm is not a playground'. Group C also mentioned the dangers of machinery and the risk of loose clothing as many young people wear baggy tee shirts.

There were a wide range of suggestions for supporting materials including posters and computer aids. The groups shared a general sense that it needed to be frightening and felt that the message Keep Away From Machinery and The Farm Is No A Playground were important core factors to be stressed. The video was not tested directly with 5th and 6th class children.

The importance of visual impact is well illustrated when comparisons are made between the actual content and the viewers' perceptions. The script section on chemicals was classified as entirely safety promoting and few parts as fear inducing, yet the viewers perceived the video as primarily frightening. The missing ingredient from the script in comparison to viewing the video was the very strong imagery. The viewers deemed the use of imagery as strong or very strong in all sections of the video. When asked what was the most salient aspect of the whole video, the viewers mentioned the background music, the constant feeling of fear throughout the video and the description by real people of serious accidents. The most frightening aspects were seen as the chemical accident scene, the young boy falling into the slurry pit and the showing of accident scars.

Focus Group Discussions: Leaflets

In general, there was a high recall (85%) of issues covered in the leaflets women had read in two main areas, electricity and tractor safety. These materials were received in a variety of ways: at the doctors, in the post, from the ESB, at shows and to a lesser extent from Teagasc, the Farmers Journal and on television. The three main organisations that produced the materials were reported as the ESB, IFA and Teagasc. Nearly half felt the leaflets were aimed at adults and just 18% felt they were aimed at young people. The most striking feature of the leaflets was seen as effective pictures. Half of the participants found the leaflets very useful and a further 30% found them useful and helpful. Two thirds were fairly satisfied with the general level of safety on their own farm.

Conclusion

While there was a sense that the video material needed to be hard hitting in view of the seriousness of farm accidents, particularly for children, in health education terms it lacked efficacy elements. This means the message might motivate but there was no practical explanation of what exactly could or should be done to avoid the hazard. There also must be reservations that the content is visually very strong for the target age range. While undoubtedly supported by adults, the effect on children without other support materials would be a concern. In many ways it is more suitable for adults than children. It is likely therefore that it would be a more successful tool if utilised in the context of a particular programme with back-up resources and materials, optimally in the context of existing lifeskills and personal education programmes. The next section, on schools interventions, addresses such an approach.

Interventions with Schools

In two areas, Limerick and Galway, a specific primary school programme on farm safety was devised³⁰. The aim was to evaluate a farm safety intervention in primary school children. Knowledge, beliefs and behaviours related to farm safety were assessed pre and post intervention. 343 pupils (47% males) in two primary schools in Limerick and 3 primary schools in Galway participated. These were mixed sex schools and all classes in the age range 4-12 years participated.

Pupils took part in a single lesson session of 45 minutes in groups of 15-30 per session. The session followed a pre-designed structure for which instructions for the teacher were devised. At the beginning of the lesson children in the junior classes under 8 years were asked to draw hazards they were aware of on a farm. Older children were asked to compile a list of hazards. The session consisted of 3 parts; a brainstorming session on hazards on a farm, a question and answer discussion on hazards and means of coping with them and general class discussion. Following the session the younger children were asked to draw a further picture, this time featuring themselves playing safely. Older children were asked to revise their list with new items for a friend. In addition the 5th and 6th class pupils were asked to discuss a scenario of what three children presented with a 'do not enter' notice on a barn door might do. All children in all classes were given a worksheet to take home, which required the identification of specific hazards on a farm site. Children were encouraged to involve their parents in this exercise. A prize was given for the best compiled worksheet in each class. The worksheet was specifically designed for the study.

A content analysis was undertaken, which essentially means identifying and categorising the items drawn or listed by the children pre and post lesson. The Draw and Write activity is a widely used qualitative research technique as a means of assessing health education impact in children not yet old enough to complete more formal questionnaires and has been used widely previously by the Centre for Health Promotion Studies^{31,32}. A 10% subset of each dataset was independently assessed by a second rater. Inter rater reliability was high, ranging from 88% to 96% for the different items.

Overall there were 147 completed drawings and 196 completed safety lists for assessment. A summary of categories listed and frequency of mention is given in Table 3, 4 and 5 below. At pre intervention younger

girls were more likely to mention livestock and less likely to mention machinery than younger boys. Frequency of mention of open pits or tanks was very low for both boys and girls. There were less notable gender differences at baseline in the safety lists, though mention of chemicals was relatively low. At follow up, as instructed, the majority of children drew safe play situations; these featured mainly play in an open field or near the house. Because the focus was on safe play at follow up there were less hazards recorded by both groups; the priority listing was the same and the younger children were now more likely to mention open pits or tanks. 21 of the 22 older children presented with the 'do not enter' the scenario were likely to venture into the shed; the range of hazards they anticipated once inside was wide, but featured chemicals most frequently.

The worksheet responses, which could be completed with the assistance of parents, had high completion rates. As can be seen from Table 6 there was a wide range of frequency of mention of various items.

Examples (verbatim) of children's statements include the following:

"Don't stant (sic) near cows when they are being milked they may kick you. Don't play in the hay or straw because you might fall into a hole and sufercate (sic)". Girl, 3rd class."

"The worst part to go is on the edge of the slury (sic) pite (sic). If your on your own be sure that you don't go near the slury (sic) tank". Boy, 4th class."

Some hazards were almost universally recognised by all children (e.g. an open gate) some showed intermediate mention (e.g. children near poison) and some had low levels of recognition (e.g. no cab on tractor). In one of the areas, Limerick, a special priority was given to chemical safety literature and this was reflected in the evaluation, in that it received more frequent mention in worksheets from children in that area.

Conclusion

This project demonstrates that a purpose designed lesson on farm safety issues was well received by primary school children of all ages; based on the materials presented by the children they were likely to record and learn from the lesson how to play more safely in a farm environment. It is likely that with modifications to give priority to certain areas, such a

programme could be incorporated into mainstream life-skills and schools health education programmes and would certainly enhance knowledge and skills around the farm.

Table 4: Content of Drawings by junior primary school children pre and post intervention, % of children recording the item is GIVEN.

Category	Pre Boys (%)	Pre Girls (%)	Post Boys (%)	Post Girls (%)
Livestock	64	92	56	43
Machinery	65	39	32	21
Farm buildings	28	23	3	5
Open tanks/pits	6	1	21	12
General Environment	21	25	26	12
Self on farm	32	33	NA	NA
Slips, trips, falls	0	0	10	2
Playing safely	NA	NA	88	88
(those <8years only)				

Table 5: Safety lists recorded by senior primary school children pre and post safety lesson

Category	Pre Boys (%)	Pre Girls (%)	Post Boys (%)	Post Girls (%)
Livestock	93	95	50	59
Machinery	81	76	59	50
Chemicals	30	20	55	54
Electricals	49	43	14	13
Open tanks/pits	66	79	37	40
Slips/trips/falls	37	44	31	19
Manual Handling	2	0	2	0
General Environment	9	8	11	5
Fire	0	0	11	9
Not Applicable	26	22	19	22

Table 6: The number of children who recognised each of the dangers and preventative measures where necessary from the worksheet in Area A and Area B combined.

	DANGERS	GIRLS		BOYS		TOTAL
		4 - 7 yrs	8 - 12 yrs	4 - 7 yrs	8 - 12 yrs	
1	Open gate	57 (83%)	88 (99%)	42 (100%)	69 (97%)	261
2	Keys in tractor	56 (81%)	83 (93%)	42 (100%)	59 (83%)	240
3	Child on PTO	15 (22%)	38 (43%)	25 (60%)	24 (34%)	102
4	Child in trailer	31 (45%)	45 (51%)	20 (48%)	28 (39%)	124
5	Child on wall of water tank	57 (83%)	83 (93%)	42 (100%)	56 (79%)	238
6	Children near slurry pit	57 (83%)	86 (97%)	42 (100%)	68 (96%)	253
7	Pitch fork held the wrong way	19 (28%)	42 (47%)	21 (50%)	29 (41%)	111
8	Tractor attachment	28 (41%)	53 (60%)	26 (62%)	37 (52%)	144
9	Buck rake	27 (39%)	54 (61%)	19 (45%)	37 (52%)	137
10	Children near poison	27 (39%)	60 (67%)	26 (62%)	47 (66%)	160
11	Tyre on ground	31 (45%)	57 (64%)	15 (36%)	37 (52%)	140
12	Child opening shed	11 (16%)	54 (61%)	6 (14%)	34 (48%)	105
13	Baby left unattended	10 (14%)	40 (45%)	9 (21%)	27 (38%)	86
14	Ladder left against shed	47 (68%)	82 (92%)	38 (90%)	58 (82%)	225
15	No cab on tractor	3 (4%)	17 (19%)	3 (7%)	15 (21%)	38
	Total N	69	89	42	71	271

Table 7a: Numbers and Characteristics of Participants in Interventions in Galway, Limerick & Laois

Interventions	Location	No. of people	Sex		Age Category			Education			Status		Children
			Male	Female	0-17	18-40	41+	Primary	Secondary	3rd level	Married	Single	Yes
Farm Safety information													
Farmers view (males)	Limerick	7	7	-	-	5	2	-	5	2	7	-	7
Spouses view (females)	Limerick & Galway	13	-	13	-	6	7	2	6	5	12	1	12
Farm Safety-brief													
Primary school children	Limerick & Galway	343											
Family engagement	Limerick & Galway	273	-	-	-	-	-	-	-	-	-	-	273
Farm Safety - Talks													
Safety on Farms	Galway	15	14	1	-	5	9	3	8	4	15	-	15
Safety compliance	Galway	12	12	-	-	2	10	1	8	3	10	2	10
Farm Safety - Workshops													
Set of 3													
Accident prevention	Galway	6	6	-	-	-	6	5	1	-	5	1	5
Hazard recognition													
Safety compliance	Limerick	7	7	-	-	4	3	2	4	-	4	-	4
1 workshop													
Hazard recognition	Laois	10	10	-	-	2	8	3	3	3	5	5	5
Set of two workshops													
Hazard recognition													
Safety compliance													
Small Businesses Workshops													
(Food related) Safety at work	Laois	10	5	5	-	2	8	1	6	6	8	2	-
Food hygiene safety	Laois	10	4	4	-	6	4	1	4	5	6	4	-
Manual handling	Laois	4	-	-	-	-	-	-	-	-	-	-	-
Safety compliance	Laois	6	2	4	-	3	3	2	6	2	4	2	-
(Non-food) safety compliance	Galway	14	6	8	-	5	9	1	9	4	12	2	11
Community Mental Health													
'Mind Matters' Workshop	Limerick	26	4	22	-	7	17	5	12	8	21	5	20
Primary Minds	Limerick	34	14	20	34	-	-	34	-	-	-	-	-
TOTAL (some overlap)		790	253	260	377	47	86	403	72	42	109	24	362

Community Workshop Interventions on Safety Issues

The community education workshops involved significant amounts of organisation time, collaboration and negotiation with farm organisations. Overall, 12 such small group workshops were organised in the 3 counties over the duration of the intervention, representing a wide range of actors and activities. The focus in this part of the intervention was on the development of innovative ways of putting across health and safety messages, examining incentives to participate or not in such programmes and maximising cooperation between motivated and responsible groups. In Limerick, a single farm walk session was organised. In Galway one workshop for Small and Medium Enterprises and 5 workshops for farmers were organised. In Laois 2 workshops for farmers and 4 workshops for SME employees were organised. The sessions, which received particular support from Teagasc, featured an innovative format devised specially for this project of a guided, structured farm walk, with specially designed cards to cue in participants to potential hazards.

There were appreciable difficulties in all areas and for all groups in setting up these sessions, with variable attendance rates. However, as the process evaluation summary shows, participants rated themselves as benefiting from the programmes. In the main the participants were predominantly male, by contrast with the mental health initiatives, where the opposite applied (Table 7a). Participants tended to be married with dependent children, in early middle age.

Conclusions

The most successful feedback was for the farm walks, which provided a practical demonstration of potential hazards and the accompanying cue cards, which could be widely used. It is likely that this kind of educational strategy would be useful for farmers if developed on a systematic basis across the country. However, based on feedback of these sessions, to increase participation rates to levels adequate for health education purposes, some form of incentive to attend would be needed. This is an issue for the Health and Safety Authority. Because so many farm workers are self employed there must be a way of facilitating participation and of providing more widespread training. To date the focus has been mainly on males but women are actively involved in farm work too and are generally more likely to participate in health education campaigns. Since so many women are already involved in agri-businesses formally and informally it might be appropriate to target these more aggressively as well as men.

Process reports

	GALWAY	LAOIS	LIMERICK / FARM WALK
Interventions	A series of 5 workshops and talks for farmers took place on key health and safety issues, farm health, how accidents occur; safe methods of working on farms especially with machinery, electricity and chemicals; child safety; and how to prepare a safety statement. The methods used to actively engage the farmers were farm walks (workshop) with guided demonstrations, case studies, open discussions and expert talks. Teagasc personnel, as credible experts, delivered most of the interventions to the farmers. Health and safety qualified experts were also employed particularly for farm family health, chemical use and safety statement compliance.	Two workshops for farmers took place, the first involved a farm walk, led by the Teagasc development officer and focused on hazards associated with slatted units, machinery, chemicals, animals, electrical appliances, workshops and working alone. Discussion took place on the safer methods for working with these hazards and specific cue cards were devised. The second workshop showed videos of 2 farms (one local) which had been upgraded in terms of safety by Teagasc for demonstration purposes. The video showed the before and after scenarios of electrical safety, manual handling, trip and entrapment hazards, moving animals and ergonomic issues on the farm. Group discussion focused on preparing a safety statement in terms of hazard identification, risk assessment and implementation of control measures.	A farm walk was organised in Limerick to increase awareness of the danger areas on farms, what to do if an accident occurs and how to reduce the risk for the farm family and visitors to the farm. The session was delivered by the Teagasc development officer and also involved a qualified person in the first-aid area. The most common safety activities engaged in by the farmers were use of safety equipment and talking to someone about worries on safety on the farm. However, none of the participating farmers had ever gone to a meeting on safety prior to this farm walk.
Workshop Feedback	Almost all the participants, at both the workshops and talks, enjoyed the sessions and would attend similar events in the future. All felt the sessions encouraged them to think about safety on the farm and found them useful. All the workshop participants found the farm walk very useful, followed by the development of the cue cards and meeting other farmers. In particular, the most useful aspects of the workshop sessions were demonstration of electrical safety, slurry pits, cuts, protection against sprays, manual handling, talk on farm accidents and chemicals. Most strongly agreed that the sessions would help them to identify safety hazards on their farm and half expressed a firm intention to use cue cards. Amongst the farmers who attended the talks the most useful aspects were the health related information, dangers on slurry and how to protect yourself at work, both in terms of health and safety.	The vast majority of farmers enjoyed the two workshops and indicated they would attend similar events again. All the farmers found the sessions useful in getting them to think about safety and in providing useful knowledge and skills. In particular the most useful aspect of the farm walk was actually seeing the hazards on the farm and the subsequent discussions. For the second workshop the most useful aspect was the viewing the video and the discussion on safety regulations. About one third of the farmers found the development of the cue cards very useful whereas the vast majority found the walk around the farm very useful and half found meeting other farmers very useful. The majority strongly agreed after the farm walk and the second workshop that the sessions would help them identify safety hazards on the farm. Two thirds indicated a definite intention to use cue cards.	Feedback from the farm walk showed that three quarters enjoyed the session. The vast majority would attend a similar event in the future, thought the session would encourage them to think about safety and provided useful knowledge and skills. In particular the most useful aspects identified were increasing awareness of risks, seeing a tidy farm, machinery focus (tractor & chainsaw) and the talk before the walk. The format of the session, that is, the walk and the opportunity to meet others was very useful and enjoyable for farmers.
Cue Cards	Evaluation of the cue cards showed that one quarter actually used them on their farm and almost half found them effective in making them aware of safety or in preparing their safety statement. The talk on how to prepare a safety statement was felt to be useful by most in preparing their safety statement. Less than 1 in 10 had a safety statement. However, most intend to prepare a safety statement and three-quarters felt they had the confidence to do so.	Evaluation of the cue cards took place at the end of the last workshop. Not all farmers completed the cue card feedback. Of those farmers who provided feedback all had used the cue cards on their farms. All believed they were effective in increasing awareness of safety issues and most said they were helpful in identifying safety hazards on the farm and in preparing their safety statement. The biggest advantage was seen as a daily reminder to think safely and in alerting other people to hazards. Less than half of the farmers had a safety statement, but indicated their intention to prepare one and most felt confident they were now able to do so.	
Safety Awareness	Farmers were asked their views on safety activities and procedures on their farm. Two-thirds of the farmers stated they knew the procedures to follow in an emergency and nearly all knew what safety clothing to wear around the farm. Almost all were fairly satisfied with their own work habits. Most were fairly satisfied with the information available on safety and health on the farm. When asked to recall specific issues covered in the farm safety leaflets, half were able to do so. Over half the group received the information through the local group meetings organised by Teagasc, some received information through the post with their ESB bill or read it in the Farmers Journal. The HSA and Teagasc were identified as publishers of the material. When asked to indicate level of safety activity, farmers were more likely to read health and safety information than to go to meetings on safety. They were also more likely to use safety equipment than to take short cuts.		

Process reports

	Small Business Enterprises Workshop: Laois	Small Business Enterprises Workshop : Galway
Intervention	A stand-alone workshop (2 hours) took place that focused on 'preparing your safety statement - a practical guide'. An important part of the workshop was the discussion that took place on overcoming practical barriers to safety issues	A series of four workshops took place that focused on safety at work, food and hygiene safety, manual handling and safety statement compliance. Presentation of information, discussion groups, case studies, reflective responses (relate to own business) and demonstrations were used to increase awareness, develop skills and confidence and create a process for safety compliance through cue card development and safety statement procedure.
Workshop Feedback	Most participants enjoyed the workshop and nearly all would attend similar events. Everyone believed the workshop encouraged them to think about safety at work and found it useful in providing useful knowledge and skills. The most useful aspects were creating a greater awareness, the discussions around their own issues and realising the importance of working together (employers and employees). In relation to the format of the session nearly three-quarters regarded the development of cue cards useful and over half found meeting other business people useful. All participants believed the workshop would help them to identify safety hazards in their workplace and half intended to use cue cards.	Feedback from the first workshop indicated that most of the participants enjoyed the session and would attend further sessions. All of them said it encouraged them to think about safety in their business. The vast majority of those who attended said it provided them with useful knowledge and skills. In particular they liked hearing other people's views and enjoyed group work. Meeting other business people was seen as very useful, as was the development of the cue cards. All of the participants indicated they intention to use the cue cards and nine out of ten believed the session would help them to identify safety hazards in their business. Feedback from the second workshop, food hygiene, was similar in relation to enjoyment and its usefulness. Participants found the case studies, information on different types of bacteria and guidelines on food storage most useful. Two-thirds believed the session would help them recognise safety hazards in their own business. Feedback from the third and fourth workshops, manual handling and preparing safety statement, again showed that all found it enjoyable and very useful in providing information and skills. In particular the practical demonstration of lifting exercises was consider the most useful. Again everyone strongly agreed that the session would help in hazard recognition at work.
Cue Cards		As part of the workshop, workers were asked to identify key hazards in their workplace and write out a short a few words or a phrase (Cue) that would act as a reminder for safety at work. Evaluation of the cue cards showed that two-thirds used them in their business and a similar number found they were effective in making them aware of safety at work and would be helpful in preparing their safety statement. The vast majority said the cue cards helped to identify other safety hazards. The biggest advantage of using the cue cards was making or increasing customers' awareness of safety in the workplace as well as making one self aware of other safety hazards. Only a quarter reported having safety statements for their business, with the rest indicating their intention to do so. Just under half felt confident in their ability to prepare their own safety statement.
Safety Awareness		Participants were asked their views (knowledge, satisfaction and practice) on safety activities in relation to their business at the last workshop. Over half stated they knew the procedures to follow in an emergency and a similar number knew what safety clothing to wear. Less than half were satisfied with information available on food safety and most were fairly satisfied with their own safe working habits. Participants were more likely to seek information about safe work procedures from others than they were to read safety information or attend meetings on safety. They also engaged in short cuts when doing work.

Mental Health Promotion Interventions

An intensive series of mental health promotion interventions were undertaken in the Co. Donegal community over an 18-month period. These were planned by the local Steering Group and were carried out in collaboration with a range of local community groups, statutory and voluntary agencies. In the Limerick community a brief intervention also took place, which included a primary school intervention on exploring feelings undertaken by the research team and a community education workshop organised with the local Mental Health Association.

The mental health promotion initiatives undertaken in Donegal as part of this programme are summarised in Table 7B. By contrast with the health and safety initiatives which were developed either in a school or workplace setting, the mental health initiative incorporated a widespread community awareness dimension. There were essentially four types of activity:

- 1) Information and awareness raising,
- 2) Community education workshops,
- 3) Positive mental health programmes e.g. in schools and women's groups
- 4) Media related activities.

All of these activities are described in detail in the process report²⁸. In essence, awareness raising activities included schools initiatives in association with a mental health day. Activities in the community included the development of a directory of services related to mental health, a play on a mental health issue, participation in a Community Health Week which included a Health Fair of local statutory and voluntary support services and number of community workshops. A wide range of community education workshops on different aspects of mental health were initiated with a range of target groups. In the secondary schools a new mental health module was devised and delivered to be incorporated into the Lifeskills education programme. Two different farmer interventions were devised; a workshop on '*Coping with Change*' organised with Teagasc and coverage in the Farmer's Journal; and general literature distribution on mental health at the local farmer's mart with the help of the local Samaritans and GROW representatives.

The aim of this first phase of interventions was to demonstrate the feasibility of implementing a community wide programme based on community participation and partnership principles. This phase also sought to document the process of planning and implementation together with the degree of community engagement and inter-agency collaboration.

Table 7b: Mental Health Promotion Interventions in Donegal

Intervention Type	School Based	General Community	Specific Community Groups		
			Parents	Farmers	Women's Groups
Information & Awareness Raising	1. Mental Health Day • Stands, • Literature 2. Play 3. Directory of Services 4. Community Health Week - Primary Schools events • Art • Poetry • Storytelling	1. Play 2. Directory of Services 3. Project Newsletter 4. Community Health Week - Health Fair • Stands, • Literature • Meeting with service providers	1. Mental Health Day - Parents' Evening 2. Talk - AGM Primary School, Parents' Association.	Literature Distribution at Mart	
			"Coping with Exam" workshop	"Coping with Change"	1. "Parenting Teenagers" 2. Communication 3. "Stress Management" 4. "Knowing and Liking Yourself" Pilot Programmes
Promoting Positive Mental Health Programmes	Lifeskills Mental Health Module, Vocational School two 4th year classes over 7 weeks				
Media	Radio interview with senior cycle students on mental health play	1. Radio Interview School Play 2. Newspaper article on Play 3. Newspaper Ad. on Health Fair		Article on talk, in Farmers Journal	

As may be seen from the Table 8, a wide range of interventions have been implemented in the Donegal community over the eighteen month period, on both a community-wide basis and by targeting specific groups. The feedback from participants, which was predominantly positive, suggests that they found the various interventions to be enjoyable, useful and informative and helped to raise their awareness and understanding of a range of mental health related issues.

Table 8 reveals the age, sex and educational profile of those who participated in the various events. The project, through its school-based programmes, has successfully targeted the under 18 years age group, both male and female. This is an important achievement in view of the project's original objective to target 15-24 year olds. However, the success in engaging 18-25 years olds, in contrast to all other age groups, is quite limited. Accessing the out of school young adult population clearly presents a challenge and further efforts to engage this group, particularly the males, will need to be addressed. Likewise, in relation to adult males, it would appear that group-specific events, such as the farming workshop and parents' evening, were more successful than the more general community-wide workshops and talks. Clearly, in all cases where events were organised through local groups such as the women's groups or farming groups, the project has more effectively engaged with those for whom the event was intended. The extent to which project activities are integrated with local groups and organisations is clearly critical in terms of their longer term sustainability.

The degree of inter-agency collaboration across the range of activities delivered is another mark of the success of the project. This is both in terms of engaging the involvement of local groups and organisations and beginning the task of re-orienting existing services to the needs of rural populations. A wide range of statutory and voluntary agencies across the health and non-health sectors have participated in the delivery of the project interventions. These include the education and farming sectors, community groups such as the women's groups and other members of the umbrella organisation Community-in-Action. As a result of their participation, mental health issues have been put on the agenda of these various organisations. In addition, the local statutory and voluntary services have actively supported the delivery of mental health promotion activities in the local community setting. Indeed, the feedback suggests that the opportunity for networking between these various groups has also been a welcome spin off from the project.

Table 8: Numbers and Characteristics of Participants in Interventions in Donegal

Numbers and Character	Number of		Age Category				Educational Level			
	Participants	Sex	0-17		18-25	26-45	46+	Primary	Secondary	3rd Level
			Male	Female						
INFORMATION AND AWARENESS										
RAISING										
'People like Us' Play	19 (10)	3	16	-	1	6	3	-	5	5
Health Fair	25+	7	18	-	4	6	13	n/a	n/a	n/a
Mental Health Day - pupils	105	42	63	105	n/a	-	-	n/a	n/a	n/a
- teachers	14	5	9	n/a	-	n/a	n/a	9	22	3
- parents	40	15	25	n/a	1	17	16	-	-	-
Storytelling	49+	21	28	49	n/a	-	-	49	-	-
COMMUNITY EDUCATION										
WORKSHOPS										
'Farmers Coping with Change' Evening	18 (13)	9	4	-	1	2	10	3	5	5
'Understanding Depression' talk	6	1	5	-	-	5	1	-	1	4
'Coping with Exams' talk	14	1	13	7	-	5	1	-	6	1
Women's - 'Teenagers in Transition'	14	-	14	n/a	-	12	2	-	12	2
Workshops: 'Communication'	9	-	9	n/a	-	7	2	-	8	-
'Stress Management'	11	-	11	n/a	-	6	4	2	9	-
'Knowing & Liking Yourself'	10	-	10	n/a	-	8	1	1	8	1
MENTAL HEALTH PROMOTION PROGRAMMES										
'Lifeskills' Programme	37	15	22	37	n/a	-	-	ses unknown	17	13
TOTALS (but some overlap)										
	371+	119	247	198	7	74	53	74	89	22
								manual	non-manual	

Impact Evaluation

In order to assess whether the intervention programme was having any impact at community level, both in relation to the issues associated with the specific projects, or in relation to any particular demographic grouping, the follow up survey was undertaken in each of the four communities two years after the original baseline data collection. An identical data collection process was undertaken as at baseline. Again a team of project researchers visited the communities and called at random to selected homes in order to complete the questionnaire. In the follow up survey a one to one interview technique was again employed but the questionnaire was modified slightly in that some sections (on issues for which no intervention was undertaken) were removed from the follow up instrument and extra questions were included on perceptions of the project effectiveness, if any.

In each of the following tables average values for each item assessed are reported, with standard deviation in brackets as appropriate. Most of the questions employed a Likert scaling system, whereby respondents were asked to rate their agreement or disagreement with the statement on a scale between 1 and 5 and hence an average score for that item is recorded in the tables (with standard deviation in brackets).

To test for statistical significance a 4 way or factorial analysis of covariance (ANCOVA) was undertaken. Only significant findings are therefore highlighted on the tables, which should therefore be interpreted relative to the text. The objective of the analysis was to allow for any differences between the communities, taking location (x4), time (x 2), sex (x 2), age (x2) into account. As there was a significant difference between the four communities at pre-intervention in relation to education level, which was also found to significantly influence some expressed attitudes and behaviours, the education factor was entered as a covariate in order to control for these differences, as appropriate. In interpreting the ANCOVA findings, a significant interaction effect for location by time is therefore, taken as indicating the significance of the net changes attributable to programme effects. The main findings will now be reported.

Table 9: Demographic Characteristics of respondents (% in brackets)

	DONEGAL		LAOIS		LIMERICK		GALWAY	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
All	251	264	249	264	252	260	255	263
Sex								
Men	101 (40)	113 (43)	99 (40)	112 (42)	96 (38)	112 (43)	101 (40)	92 (35)
Women	154 (60)	151 (57)	150 (60)	152 (58)	157 (62)	148 (57)	154 (60)	171 (65)
Age								
<40 years	121 (48)	129 (49)	133 (54)	141 (53)	118 (47)	100 (39)	98 (39)	116 (44)
>40 years	130 (52)	135 (51)	115 (46)	125 (47)	133 (53)	157 (61)	155 (61)	145 (56)
Social Class								
SC 1-3	65 (26)	101 (38)	89 (37)	125 (47)	73 (29)	110 (42)	82 (32)	105 (40)
SC 4-6	47 (18)	114 (43)	51 (21)	112 (42)	57 (23)	106 (41)	85 (33)	119 (45)
SC 7*	143 (56)	49 (19)	109 (44)	29 (11)	123 (49)	44 (17)	88 (34)	39 (15)
Highest Level of Education attained								
Primary	88 (35)	84 (32)	52 (21)	46 (17)	58 (23)	71 (27)	97 (38)	64 (24)
Secondary	113 (44)	136 (52)	140 (56)	163 (62)	133 (53)	133 (51)	108 (42)	140 (54)
Third Level	53 (21)	43 (16)	56 (23)	55 (21)	61 (24)	56 (22)	50 (20)	57 (22)

* Residual category; question altered at follow-up (see text)

Table 9 outlines the demographic characteristics of respondents in each community at pre and post intervention stages. The target on each occasion was 250 participants; this was achieved or slightly exceeded in each case. Just under 60% of participants overall were women and around half of respondents were under 40 years of age, with no notable variations across communities. At baseline occupation of woman's partner was not systematically recorded, which was addressed in the follow up, accounting for the apparent class distribution differences between baseline and follow-up. There was a wide educational spread of participants, which did not vary between pre and post follow-up, except in the case of Galway. Only in Donegal was there a slightly lower proportion of those educated to third level at follow-up, which was taken account of in further analyses.

Table 10: Safety Measures: Responses pre and post intervention.

Either Likert Scale Averages with standard deviation in brackets or total numbers with percentage total in brackets.

	DONEGAL		LAOIS		LIMERICK		GALWAY	
	Pre N	Post N	Pre N	Post N	Pre N	Post N	Pre N	Post N
Chemical Safety	255	265	249	266	253	260	257	263
Correct re Symbol N(%)	77 (30)	112 (42)*	88 (35)	137 (52)*	67 (27)	104 (40)*	59 (23)	113 (43)*
Concern about chemicals	2.09 (0.99)	2.43 (1.18)*	1.95 (1.87)	2.05 (1.04)	1.96 (0.88)	2.06 (0.99)	2.02 (0.96)	2.13 (1.12)
Read labels	1.55 (1.08)	1.58 (1.07)	1.54 (1.03)	1.61 (1.09)	1.50 (1.00)	1.62 (1.14)	1.45 (0.93)	1.61 (1.15)
Use protective equipment	1.98 (1.36)	2.14 (1.37)	1.93 (1.32)	1.94 (1.23)	1.72 (1.14)	1.76 (1.23)	1.80 (1.25)	1.98 (1.25)
Store chemicals safely	1.29 (0.80)	1.31 (0.75)	1.28 (0.76)	1.35 (0.73)	1.26 (0.66)	1.27 (0.70)	1.28 (0.73)	1.39 (0.89)
Keep chemicals under lock & key N(%)	61 (26)	44 (17)	65 (27)	50 (20)	43 (19)	55 (24)*	67 (27)	53 (21)
Feel able	2.08 (0.73)	1.89 (0.63)	2.10 (0.80)	2.01 (0.77)	2.04 (0.64)	1.99 (0.71)	1.93 (0.66)	1.90 (0.72)
Feel its easy	2.27 (0.91)	2.12 (0.78)	2.26 (0.82)	2.24 (0.84)	2.20 (0.80)	2.24 (0.79)	2.17 (0.79)	2.10 (0.80)
Agree effective	1.83 (0.76)	1.69 (0.73)	1.79 (0.86)	1.77 (0.87)	1.75 (0.79)	1.64 (0.70)	1.84 (0.86)	1.61 (0.69)*
Machine Safety								
Correct re legal age N(%)	142 (56)	168 (63)	171 (69)	177 (67)	151 (60)	147 (56)	139 (54)	174 (66)*
Concern re children	1.60 (0.79)	1.54 (0.82)	1.58 (0.76)	1.41 (0.73)*	1.59 (0.74)	1.40 (0.67)*	1.45 (0.63)	1.43 (0.76)
Children as passengers	3.77 (1.14)	3.82 (1.23)	4.03 (1.05)	4.04 (1.12)	3.75 (1.23)	3.96 (1.11)	3.87 (1.20)	3.78 (1.28)
Children play with machines	4.35 (0.94)	3.94 (1.24)*	4.21 (1.02)	4.08 (1.03)	4.16 (1.12)	4.47 (0.90)*	4.29 (1.03)	4.36 (1.00)
Children drive	4.36 (1.09)	4.18 (1.18)	4.55 (0.90)	4.52 (0.91)	4.63 (0.94)	4.61 (0.90)	4.56 (0.98)	4.49 (1.07)
Feel able to use	3.09 (1.42)	2.24 (1.16)*	2.63 (1.28)	2.07 (1.10)*	2.65 (1.19)	1.98 (1.05)*	2.39 (1.17)	1.98 (0.91)*
Feel easy to use	3.67 (1.21)	2.82 (1.27)*	3.32 (1.25)	2.25 (1.03)*	3.61 (1.12)	2.38 (1.03)*	3.43 (1.23)	2.23 (0.89)*
Agree effective	1.74 (0.84)	1.65 (0.79)	1.67 (0.77)	1.54 (0.80)	1.64 (0.80)	1.51 (0.70)	1.71 (0.79)	1.43 (0.71)*
Back Care								
No Problems with back N(%)	185 (73)	190 (72)	183 (74)	167 (63)	193 (77)	202 (79)	210 (83)	198 (76)
Personally concerned	2.03 (0.94)	1.72 (0.80)*	1.94 (0.94)	1.61 (0.77)*	1.86 (0.82)	1.58 (0.77)*	1.94 (0.91)	1.63 (1.79)*
Feel able to take care	2.34 (0.88)	2.13 (0.85)*	2.21 (0.79)	2.14 (0.92)	2.11 (0.75)	2.10 (0.80)	2.13 (0.72)	2.04 (0.83)
Feel easy to do so	2.65 (1.00)	2.54 (1.02)	2.57 (0.96)	2.58 (1.05)	2.50 (0.96)	2.52 (1.01)	2.49 (0.93)	2.44 (0.96)
Agree effective	1.96 (0.75)	1.64 (0.67)*	1.86 (0.69)	1.53 (0.62)*	1.71 (0.62)	1.60 (0.60)*	1.77 (0.63)	1.51 (0.60)*

Table 10 documents the responses regarding health and safety in the case of chemical safety, practices in relation to machinery and backcare in each of the four communities.

Chemical safety

In each of the four communities the proportion identifying the skull and cross bones as the correct symbol of hazard in relation to chemicals, improved significantly over time. Only in Donegal, where no safety intervention took place, was concern about chemicals (1 = very concerned) as a hazard higher at follow up. There was no significant change in practices (1 = always, 5 = never) in relation to reading labels, safe storage or use of protective equipment. Belief in personal effectiveness in dealing with chemicals shifted significantly in Galway but not elsewhere. When asked to describe how they actually stored chemicals, those in Limerick reported a significant increase, from pre to post intervention, in the percent of those who store chemicals under lock and key, while the other communities showed a decrease. Education level, as covariate, was an important issue in chemical safety, in that the higher the educational level the greater the concern about using chemicals and perceived effectiveness of safety measures in preventing accidents and the greater the likelihood of reading labels, using protective equipment and storing chemicals safely. There were some significant interactions by time, sex and age. From pre to post intervention, there was a significant ($p < .05$) decrease in the level of concern about personally using chemicals among females (mean 2.45, se .08) and males (mean 2.31, se .09) in Donegal and males in Galway (mean 2.40, se .11). Perceived confidence in use and proper storage of chemicals showed a significant time by sex and age interaction ($F = 4.09$, $p < .05$). This indicated that at post test females over 40 years (mean 1.86, se .04) and males under 40 years (mean 1.99, se .05) increased their confidence in their ability to use and store chemicals properly. A significant time by age effect was also evident for perceived effectiveness ($F = 4.82$, $p < .05$). At post intervention, those under 40 years had a greater belief in the effectiveness of safety measures in preventing accidents. There were significant ($p < .05$) differences in location and age in that those over 40 years in Galway and Limerick were more likely to regularly read labels and store chemicals safely and the older age group in Limerick were also more likely to use protective equipment.

Machinery

The majority of respondents were correct about the legal age for driving a tractor, though this number increased significantly in Galway at follow-up. Concern about children and farm machinery was relatively high in all communities and had increased significantly to levels found in Galway in both Laois and Limerick at follow up, though not appreciably changed in Donegal. Participants were generally reluctant to allow children to travel on, or play around farm machinery. At post intervention, Donegal participants were more likely (1=always, 5=never) to allow children to play around farm machinery and Limerick the least likely, while Galway and Laois remained stable. Allowing children drive tractors was more likely to occur in Donegal, although there was no time effect.

There was some evidence of a programme effect in relation to machine safety for children. A programme effect, location by time by sex interaction ($F=4.14$, $p<.01$), was evident in relation to level of concern. At post test, males from Donegal and females from Laois and Limerick were significantly more concerned about children being around farm machinery. A programme effect was also found in relation to perceived confidence ($F=2.60$, $p=.05$). A complex interaction (location, time, sex, age) suggested that at post intervention there was an increase in perceived confidence among males, especially those over 40 years and in older women in Laois and Limerick in their ability to use farm machine safely. However, males under 40 years from Donegal continued to be much less confident than other male groups or the two female groups, in their ability to use farm machinery, where no farm safety intervention took place. A significant interaction (location, sex and age) in level of difficulty also indicated that young males from Donegal (mean 3.18, se .19) perceived greater difficulty in using farm machine safely while older females from Laois (mean 2.34, se .25) found it much easier. In relation to the practice of allowing children travel as passengers on farm machinery, there was no significant change, from pre to post. A programme effect was evident in the practice of children playing around machinery.

Back care

No specific intervention related to back care took place, although manual handling was briefly covered as part of workplace safety for small-scale enterprises in Laois and Galway. However, personal concern about backcare had arisen in all communities as had agreement that prevention was effective. Significant interactions ($p<.05$), location, time, sex/age,

were reported in relation to levels of concern, perceived confidence and effectiveness and the level of back problems. At the post intervention period, there was a significant increase in the level of concern about taking care of the back for those under 40 in Limerick and Laois and those over 40 in Galway. There was also a significant increase in the belief that taking care of the back does prevent back problems in Laois and among females in Galway and males in Donegal. At post intervention there was a significant increase in the extent of back problems reported among males in Galway and females in Laois and Donegal.

Health Behaviours

No formal programmes in relation to personal lifestyle were initiated as part of the project as these were not given priority in the community assessment, but it is notable there were time, location and sex related differences. Individuals were asked how often they engage in activities conducive to good health such as exercise, rest, fresh air, protection from cold, good food and a positive overall attitude to life. Overall, Limerick people were the most likely to rank these activities conducive to health and females from Donegal were the least likely. An interactive effect for location, time and sex were evident in relation to fresh air, good food and a positive attitude. The analyses suggest that at the post intervention period females from Donegal and males from Laois were less likely to get enough fresh air, eat well or have a positive attitude to life. Rates of smoking in the four communities were in keeping with the findings of the recent SLÁN national health and lifestyle survey³⁵; taking account of age and social class, rural people are less likely on average than urban people to smoke. Rates of smoking remained stable during the two-year period of the project. There was a significant decrease in the reported number of alcohol drinks consumed at the follow up survey period for both males and females, which most likely reflected a slight change in the phrasing of the question to make it more explicit.

Quality of life

Perceived influences on general health and wellbeing and quality of life were examined. A general measure of quality of life (1=as bad as it could be, 10=as good) indicated that the Donegal community reported a lower quality of life rating at follow-up. Six measures were used to determine how different aspects of life are perceived in relation to health; opportunities to change, money, general services, and health services (1=very satisfied). Taking all six measures of life satisfaction together,

Table 11(a): Reported attitudes and behaviours in relation to health - Pre and Post intervention

Likert Scale Averages with standard deviation in brackets

	DONEGAL			LAOIS			LIMERICK			GALWAY		
	Pre	Post	N	Pre	Post	N	Pre	Post	N	Pre	Post	N
	253	265	265	249	265	265	265	265	265	265	265	263
Positive Influences on Health:												
Exercise	2.59 (1.46)	2.82 (1.55)		2.54 (1.44)	2.43 (1.37)		2.29 (1.21)	2.30 (1.34)		2.41 (1.24)	2.40 (1.39)	
Rest	2.28 (1.24)	2.56 (1.25)*		2.45 (1.32)	2.48 (1.29)		2.20 (1.17)	2.07 (1.09)		2.13 (0.99)	2.32 (1.14)	
Fresh Air	1.67 (0.92)	1.92 (1.09)*		1.69 (0.92)	1.76 (0.96)		1.61 (0.94)	1.63 (0.94)		1.63 (0.81)	1.72 (0.95)	
Protect cold	1.81 (1.15)	1.91 (1.20)		1.81 (1.14)	1.67 (0.99)		1.64 (1.05)	1.58 (0.83)		1.78 (0.03)	1.70 (0.99)	
Eat good food	2.16 (1.25)	2.21 (1.19)		1.96 (1.16)	2.03 (1.17)		1.70 (0.89)	1.80 (1.04)		1.85 (0.91)	1.87 (1.03)	
Positive attitude overall	1.69 (0.79)	1.86 (0.88)*		1.69 (0.76)	1.76 (0.77)		1.77 (0.83)	1.71 (0.78)		1.74 (0.78)	1.73 (0.79)	
Reported Behaviours:												
Current Smoker %(N)	23 (59)	28 (74)		32 (80)	30 (79)		20 (51)	24 (63)		27 (69)	26 (68)	
Ex Smoker %(N)	14 (36)	16 (43)		14 (35)	13 (35)		23 (59)	17 (43)		22 (56)	16 (42)	
Non Smoker %(N)	62 (157)	56 (146)		53 (132)	57 (152)		57 (143)	59 (159)		51 (132)	58 (153)	
Drink most days	1.84 (1.32)	1.87 (1.36)		2.09 (1.36)	1.99 (1.36)		2.10 (1.34)	1.99 (1.39)		1.84 (1.13)	1.92 (1.33)	
Number of Drinks	6 (5)	5* (4)		6 (5)	5 (4)*		6 (4)	4* (3)		6 (5)	5* (4)	

* Denotes significant in 4-way analysis

there was a significant interaction (time and sex; $F=5.80$, $p<.01$). At the follow up survey the Donegal community was significantly less satisfied with life generally and in particular with health, opportunities for change, money and services both general and health services. Across all communities those under 40 were also less satisfied. At the post intervention period males were more satisfied and females less satisfied. In relation to health services, at the post test period, Laois was the community least satisfied with their health services. For general services available in rural areas such as shops, fire and Garda protection, those under 40 years from Donegal were the least satisfied. Education had an important influence on services, in that the higher the education level the lower the satisfaction ($p<.01$) with both general and health services. A time effect interacting with sex was also observed in relation to work that showed at the follow up survey males were more satisfied with the work they do than were females. The sense of financial security also changed over time which showed that males and females over 40 years were more satisfied.

Social Network

Social network was measured by the level of concern across five key indicators, including lack of close neighbours, limited opportunities to meet others, distance from health services limited, shopping opportunities and each of public services (5=very concerned). The overall combined social network score showed a time by location interaction ($F= 5.78$, $p<.001$) which indicated that at the follow up survey period Limerick people continued to be more concerned than other communities about their social network. Age was also a factor, in that all those under 40 years were more concerned with all issues. In almost all of these measures there were significant location by time interactions. Concern for lack of close neighbours and limited opportunities to meet others had decreased at post test in Galway and was similar to Donegal, however concern continued to be higher in the Laois and Limerick communities. At post test Laois participants had increased concern and Galway decreased concern regarding the distance from the hospital, although Galway and Limerick continued to have higher concern than other communities. In relation to public services such as post office, fire and gardaí protection, concern had increased in Laois but decreased in the other three communities.

Table 11(b): Self-rated Quality of Life and Social Services as perceived in each of the four communities

Likert Scale Averages with standard deviation in brackets

	DONEGAL		LAOIS		LIMERICK		GALWAY	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Satisfaction ratings								
General	7.81 (1.80)	7.36 (1.83)*	7.56 (1.82)	7.65 (1.71)	7.83 (1.64)	7.88 (1.74)	7.89 (1.64)	7.93 (1.74)
Health	2.35 (0.83)	2.43 (0.88)*	2.27 (0.82)	2.21 (0.80)	2.08 (0.70)	2.15 (0.78)	2.16 (0.74)	2.16 (0.73)
Change	2.79 (0.93)	2.72 (0.91)*	2.75 (0.85)	2.58 (0.87)*	2.62 (0.82)	2.49 (0.79)	2.64 (0.83)	2.55 (0.86)
Work	2.07 (0.82)	2.10 (0.75)	1.98 (0.78)	2.02 (0.78)	1.98 (0.73)	2.00 (0.67)	1.93 (0.69)	2.01 (0.09)
Money	2.63 (1.07)	2.38 (0.87)*	2.45 (0.87)	2.42 (0.93)	2.32 (0.83)	2.17 (0.74)*	2.33 (0.86)	2.29 (0.79)
Services	2.48 (1.10)	2.34 (1.01)	2.16 (0.90)	2.20 (0.93)	2.29 (0.93)	2.15 (0.89)	2.18 (1.02)	2.21 (0.94)
Health service	2.16 (0.82)	2.16 (0.88)	2.22 (0.84)	2.39 (1.02)*	2.30 (0.93)	2.18 (0.86)	1.94 (0.77)	2.11 (0.85)*
Barriers								
Lack of close neighbours	1.91 (1.11)	1.81 (0.86)	2.08 (1.18)	2.09 (1.05)	2.13 (1.15)	2.06 (1.12)	2.25 (1.16)	1.85 (0.99)*
Limit to meeting others	2.04 (1.10)	1.96 (0.90)	2.12 (1.09)	2.22 (1.03)	2.24 (1.11)	2.21 (1.13)	2.35 (1.13)	1.97 (0.93)*
Distance doctor/hospital	2.15 (1.11)	2.13 (1.05)	1.95 (0.95)	2.17 (1.06)*	2.69 (1.30)	2.56 (1.17)	2.60 (1.23)	2.45 (1.22)*
Distance shopping	1.81 (0.90)	1.89 (0.86)	1.85 (0.86)	1.95 (0.91)	1.96 (0.96)	2.02 (0.94)	1.92 (0.94)	1.92 (0.96)
Lack of public services	2.64 (1.31)	2.34 (1.10)*	2.07 (1.04)	2.27 (1.08)*	2.67 (1.25)	2.45 (1.11)*	2.56 (1.19)	2.41 (1.21)*

* Denotes statistically significant in 4-way analysis

Interpretation of Findings

These findings, though on self reported information, are likely to present a reasonable reflection of present practice for several reasons. First there was little noticeable variation according to community at baseline, suggesting both a representative sample and a reasonable instrument of measurement. Overall, there were signs of a shift in attitude over time and some changes in knowledge in some factors, which could be consistent with the increased profile given to agricultural safety by the Health and Safety Authority in the period spanning the intervention stage of our project. It was unlikely that major shifts would have been seen to occur in the relatively short time span of the project but it is notable that the community that showed least change overall was Donegal, where no intervention occurred and that which showed most change was Galway, where most work took place. In particular, this was the only community where belief in the effectiveness of intervention changed positively for all three safety issues.

An improvement in awareness, confidence and practices relating to machine safety for children provides reasonable evidence of a programme effect. Confidence increased amongst males, especially those over 40 years, which reflects the target group and participants in the farm safety intervention programmes. The rural communities (Galway, Laois and Limerick) where farm safety interventions took place were less likely to allow children play around machinery or drive tractors than in Donegal the reference community. In addition, awareness of the legal age for driving tractors has increased in the community that had the most intensive programme, Galway. These positive changes over the course of the programme are encouraging given that the farm safety initiatives did have a strong focus on machine safety and directly targeted farmers and their families rather than the whole community. The impact of the farm safety school initiative with primary school children in Galway and Limerick, although not directly evaluated in the community survey of adults only, may also have contributed to the reported improvements around machine safety through the initiative of involving families, by means of the take home worksheets and quiz.

Mental Health Promotion Intervention

The key intermediate objectives of the mental health promotion interventions were to increase awareness of mental health issues such as depression and suicide at a community level and to increase understanding of available sources of support and professional help. The means of the following scaled attitudinal items were computed and analysed across the four communities:

- i) Levels of concern about suicide, depression and access to services
- ii) Attitudes to help-seeking from a range of professional help sources
- iii) Perceived confidence in offering advice to suicidal and depressed persons
- iv) Perceived effectiveness of professional services.

Table 12 shows the means and standard deviations for each variable at pre and post intervention level.

Levels of Concern

Levels of concern included concern in relation to suicide, depression and access to mental health services (1 = not at all concerned; 5 = very concerned). A significant programme effect interacting with sex and age was found in relation to levels of concern about suicide ($F = 2.98, p < .05$). Investigation of the data reveals that there was a significant increase in concern levels about suicide from pre to post -intervention among the under 40 year old males in Donegal. The mean levels of concern at pre-intervention for under 40 males in Donegal was 3.19 ($se = .15$) moving to an overall mean of 3.52 ($se = .14$) at post. Concern levels in the other communities showed a tendency to drop rather than rise, apart from under 40 females in Laois who also showed an increase from pre to post.

Likewise in relation to concern about depression, a significant location x time x sex x age effect ($F = 3.13, p < .05$) showed that under 40 males in Donegal showed a significant increase in concern levels from pre (mean = 2.78, $se = .16$) to post intervention (mean = 3.47, $se = .14$). The trend in the other communities was for concern levels to drop from pre to post apart from females in Laois who again showed an increase.

Levels of concern about access to mental health services did not show a significant programme effect. However, a number of demographic effects were significant. The sex by age interaction effect ($F = 3.87, p < .05$)

Table 12: Mental Health: Differences in Mean (SD) responses to attitudinal items by Community pre and post intervention

Attitude Variables	DONEGAL		GALWAY		LIMERICK		LAOIS	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Level of concern (5=very concerned)								
Suicide	3.78(1.09)	3.75 (1.06)	4.02 (.86)	3.81 (1.03)*	3.98 (.95)	3.93 (.99)	3.68 (1.04)	3.77 (1.06)
Depression	3.55 (1.10)	3.61 (1.11)	3.75 (.87)	3.77 (.98)	3.83 (.97)	3.78 (.99)	3.61 (1.05)	3.73 (1.06)
Access to services	3.22 (1.21)	3.19 (1.17)	3.13 (1.01)	3.19 (1.14)	3.59 (1.04)	3.47 (1.13)	3.26 (1.06)	3.41 (1.13)
Attitudes to Help Seeking (5=strongly disagree)								
GP	2.26 (1.08)	2.08 (1.02)*	2.07 (1.00)	1.99 (1.03)	2.27 (1.05)	2.10 (1.01)*	2.39(1.14)	2.14(1.06)*
Psychiatrist	2.56 (1.11)	2.61 (1.16)	2.53 (1.03)	2.52 (1.11)	2.61 (1.16)	2.58 (1.08)	2.75 (1.19)	2.61 (1.16)
Psychologist	2.61 (1.12)	2.68 (1.08)	2.47 (.96)	2.61 (1.04)	2.65 (1.09)	2.60 (1.03)	2.73 (1.10)	2.57 (1.12)
Samaritans	2.80 (1.16)	2.76 (1.14)	2.86 (1.09)	2.99 (1.10)	2.89 (1.13)	2.88 (1.05)	3.04 (1.11)	3.10 (1.15)
Perceived Confidence in offering advice (5=very difficult)								
Depressed person	3.27 (1.15)	3.30 (1.10)	3.37 (1.11)	3.21 (1.11)	3.48 (1.11)	3.32 (1.05)	3.15 (1.10)	3.35 (1.04)*
Suicidal person	3.95 (1.10)	3.78 (1.09)	3.87 (1.06)	3.93 (1.06)	4.06 (.99)	3.92 (1.02)	3.90 (1.07)	4.03 (.97)
Perceived Effectiveness of Professional Help (1=very effective)								
GP	2.45 (1.09)	2.39 (.95)	2.35 (.99)	2.30 (.96)	2.55 (.98)	2.41 (.96)	2.71 (1.03)	2.45 (.96)*
Psychiatrist	2.17 (.90)	2.26 (.91)	2.20 (.88)	2.14 (.86)	2.19 (.86)	2.23 (.90)	2.33 (1.02)	2.18 (.88)

* sig. difference from Pre to Post

suggests that under 40 males were significantly less concerned in comparison to under 40 females.

Attitudes to Help-Seeking

Attitudes to help-seeking explored having no hesitation in consulting the GP, psychiatrist, psychologist and the Samaritans (1= strongly agree; 5 = strongly disagree). No significant programme effect was found in relation to attitudes to consulting any of the four listed services. However, a main effect for time emerged in relation to consulting the GP ($F = 13.56$, $p < .001$) suggesting that over the two years general attitudes across all four communities had improved. As had been evident at pre-intervention level, significant age x sex effects emerged in relation to the GP ($F = 9.53$, $p < .01$), the psychiatrist ($F = 7.63$, $p < .01$), and the psychologist ($F = 12.64$, $p < .001$) indicating that males under 40 years were significantly more likely to hesitate in consulting all three help sources. An age x sex x time interaction effect in relation to the Samaritans ($F = 4.92$, $p < .05$) suggests that there was a drop in willingness to consult the Samaritans from pre to post for the under 40 age males across all communities.

Perceived Confidence in Offering Advice

Two variables were included, perceived confidence in offering advice to someone who was depressed and to someone who was suicidal (1= very easy; 5 = very difficult). A clear programme effect, location x time interaction ($F = 3.15$, $p < .05$), was in evidence in relation to offering advice to a suicidal person. In the Donegal community a significant change in perceived confidence from pre (overall mean = 3.95, $se = .08$) to post levels (overall mean = 3.74, $se = .07$) was shown. Likewise, in Limerick a similar though smaller increase was in evidence from pre (mean = 4.09, $se = .07$) to post-intervention (mean = 3.96, $se = .07$). In the other two communities the overall trend was a decrease in perceived confidence from pre to post. A significant main effect for age ($F = 39.45$, $p < .001$) also emerged suggesting that the under 40 age group generally found it more difficult to offer advice to someone who is suicidal than the older age group.

With regard to offering advice to someone with depression, no significant programme effects were found. A location main effect emerged ($F = 2.79$, $p < .05$) suggesting that the Limerick sample reported the highest levels of perceived difficulty. Socio-demographic effects were also found in that a time x sex x age effect ($F = 8.03$, $p < .01$) showed that over time

Table 13: Mental Health: Awareness & willingness to confide in others - Difference in percentage response frequencies by community at pre & post intervention

Attitude Variables	DONEGAL		GALWAY		LIMERICK		LAOIS	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Knowledge of increasing rates of suicide	85.4%	86.8%	95.2%	90.7%*	86.7%	94.2%*	87.3%	88.7%
Worried about becoming depressed	13.9%	16.3%	9.8%	15.9%	14.3%	14.7%	13.8%	10.9%
Advice to someone suffering from depression								
‘Pull yourself together’	13.0%	10.3%*	9.1%	6.8%	9.2%	10.1%	12.1%	9.8%
Talk to someone close	27.2%	30.2%	33.1%	35.4%	34.8%	34.1%	40.9%	35.5%
Contact GP	35.0%	46.9%	38.6%	46.0%	33.2%	40.3%	26.7%	36.2%
Contact Psychiatrist	9.1%	4.6%	13.0%	7.6%	13.2%	9.7%	12.1%	12.5%
Contact Priest	9.8%	2.7%	0.8%	0.8%	2.0%	1.2%	2.4%	2.3%
Contact Samaritans	5.9%	5.3%	5.5%	3.4%	7.6%	4.7%	5.7%	3.8%
Disclose to family members	54.4%	50.4%	49.8%	54.2%	53.4%	43.6%*	58.4%	54.1%
Disclose to others outside the family in the last month	48.2%	45.8%	45.8%	39.4%	46.2%	44.0%	51.2%	50.2%
Someone close getting treatment								
Keep hidden	12.4%	12.9%	9.5%	8.9%	13.5%	19.3	8.6%	9.1%
Talk to friends	41.4%	39.5%	42.3%	46.7%	39.2%	34%	40.0%	46%
Talk openly	22.1%	27.8%	28.1%	31.7%	26.9%	27.8	33.1%	28.3%
Don't know	24.1%	19.8%	20.2%	12.7%	20.4%	18.9%	18.4%	16.6%

the pre-intervention level gap in perceived confidence between males and females in the under 40 age group narrowed significantly at post-intervention.

Perceived Effectiveness of Services

The perceived effectiveness of visiting the GP and the psychiatrist for depression was included under this heading (1= very effective; 5= waste of time). A number of complex interaction effects emerged which do not clearly point to significant programme effects in the intervention communities. These include a significant location x time x age effect for perceived effectiveness of the psychiatrist ($F = 2.70, p < .05$) pointing to increased perceptions of effectiveness from pre to post for under 40 males in Limerick. No such effect was in evidence in the Donegal community. A significant location x time x sex interaction effect was found in relation to the GP ($F = 2.83, p < .05$) and the psychiatrist ($F = 2.63, p < .05$). These effects generally indicate that there were significant increases from pre to post in perceived effectiveness of both help sources for females in Limerick. This effect, however, was also in evidence for males in Laois, despite the fact that no programme intervention took place, at least not under the auspices of this project. Confirming baseline findings, an overall main effect for age ($F = 17.49, p < .001$) was found in relation to the GP. This suggests that across all the community settings at pre and post, the under 40 age group (mean = 2.55, se = .99) were less likely than the over 40's (mean = 2.36, se = .99) to perceive visiting the GP for depression as being effective.

Programme Penetration

In the post intervention survey a number of questions were asked concerning programme penetration. These covered awareness of different programme events that had occurred over the previous 18 months. The levels of awareness of the various mental health promotion events in the Donegal community ranged from 16% to 27% of those interviewed in the repeat survey and were significantly higher than that reported in the other communities. Reported levels of participation in intervention programmes among the repeat survey sample were quite low. However, this does not rule out the possibility that other family household members did participate e.g. in the school or community programmes. What we may be witnessing here is a programme ripple effect in that those who participated in the intervention programmes may be influencing attitudes within their family or indeed within their immediate community. It is also

likely that media coverage of events may be having a wider influence beyond direct programme participation.

Interpretation of Findings

In summary what these results indicate is a number of clear programme effects concerning the mental health promotion intervention. These include increased confidence in offering advice to someone who is suicidal for both the Donegal and Limerick samples. Clearly the distribution of information and general awareness raising in both these communities has contributed to this effect. The increases in levels of concern about suicide and depression for under 40 males in Donegal is very encouraging as these were one of the key target groups identified from the needs assessment data as having lower levels of concern. Although the under 40 males did not have high participation rates in the intervention programmes, it is plausible that the ripple effect of the project through family, local networks and media coverage may be responsible for this effect. The baseline needs assessment survey did point to the fact that the family was one of the most important influences on people's beliefs about mental health matters and that word of mouth is an effective communication technique in this rural setting. Given the range of programmes delivered across the school and farming sectors, local women's groups and general community, the project activities are likely to have reached at least one member of most households in the area. This element of programme reach is quite difficult to determine or indeed to prove. However, it is plausible that the secondary and more covert impacts of the interventions may be contributing to the attitude changes observed across the different community groups. The changes in Laois are also of interest and one can only surmise that they may be attributable to other local interventions not known to or under the control of this project.

Regarding perceived effectiveness of help sources, few programme effects were found for the Donegal community. However, a number of effects were in evidence for females in Limerick. The brief intervention in Limerick took place relatively close to the repeat survey and was attended mainly by women, hence what these findings may represent is the relatively recent impact of the intervention.

Overall, the findings are important in terms of signalling a shift in attitudes at a community level in the intervention locations. This is noteworthy in view of the relatively brief intervention period and the

presence of social stigma concerning the topic being addressed. The findings in Donegal suggest that with a more sustained programme it is possible to maintain and further enhance changes in community attitudes. While the findings from the Limerick community are more likely to be attributable to short term effects at this stage, with a more intensive programme of intervention it should also be possible to sustain and boost these effects over a longer time period. Such a development could provide a model of community mental health promotion, which could be implemented on a wider national level.

Conclusions and Recommendations

There are a number of issues to be addressed in relation to this project which are relevant to its applicability to other areas.

- *Were key players or agencies in the communities motivated by the project?*

Community intervention projects have evolved considerably in methodological terms in recent years. One type of project adopts an epidemiological or experimental paradigm and is therefore highly outcome driven. Another model is of capacity building and community participation and employs indicators of personal and community development to evaluate its success. This project contains both top down and bottom up elements and its impact in the short or longer term relates to these factors. First, some of the project objectives were top down in that the health and safety needs of the small enterprises and of the agri-sector are widely regarded by responsible agencies and representative organisations as being important. Further, the issues of mental health and wellbeing have received considerable focus in Ireland in recent years. The top down component also contained, deliberately, an element of random community selection as we wished to see whether communities not self-selected could be motivated to participate by building on existing networks and goodwill. The assessment process for this project was painstaking and consultative at several levels. It involved two years of work both at a national level and in the targeted DEDs selected before any individual interventions were initiated. Indeed, some issues, not highlighted as a priority in the communities, were not pursued at intervention stage for this reason, particularly more general lifestyle programmes. At a community level local concerns were incorporated into the consultation process, even if they were not part of the national agenda or were not formally highlighted in the needs assessment. The mental health interventions adopted a county-based approach, viewing mental health as an integral part of community life, embedded within the social, economic and cultural environments in which people live their lives. The principles of consultation, participation and sustainability were therefore considered critical in the development of this aspect of the project.

Overall, there was evidence of motivation and interest in all four communities. As a general rule, where the existing community infrastructure was in place the key players responded best to the initiative. All the communities agreed in principle to participate,

otherwise the project could not have progressed, but there was reluctance in three areas to establish an ad hoc group to oversee the project. Local levels of awareness about the initiative were relatively low outside the direct network of the project. Communities at a lower stage of preparation, in keeping with innovation-diffusion theory, were less likely to participate and the best chance of further development was where there was an existing sympathy with the motivation of the project.

- *Were the individual interventions designed and delivered based on the needs assessment?*

The answer to this is undoubtedly yes in that all interventions in individual settings were streamlined for the purpose. The process accounts document in detail how those programmes were arrived at and implemented. All the individual interventions were devised to meet the expressed need. Indeed, it is a hallmark of this project that in all four communities and in each setting, schools, workplace or community level, targeted programmes were delivered.

- *What were the range and scale of the interventions in each community over the time period?*

These were summarised and described in detail earlier in the report. In all communities there was an interaction with the relevant statutory, voluntary and community groups. During the intervention stage a great deal of work went into devising and implementing programmes with schools and various kinds of community workshops. It is clear that the health and safety interventions for farmers and SMEs were a challenge for a variety of mainly logistical reasons. Those who participated gained knowledge and expressed support for the experience, but participation rates among adult farmers were poor. What does and does not motivate farmers based on these findings? One to one sessions on site and helpful aids like cue cards are clearly highly useful in our experience. This approach is in keeping with mainstream health education practice and could be more widely implemented in a standardised way by responsible agencies. There are attitudinal issues to be addressed, which emerge from all stages of the detailed quantitative and qualitative needs assessment process. For instance, an education campaign that convinces farmers that the safety statement is an aid, not an obstacle, needs to be undertaken at a national level. Serious consideration should be given to monetary support to attend training sessions.

The school environment, both on basic safety and also mental wellbeing initiatives is an appropriate setting and the materials evaluated could be more widely used. Evidence of parental involvement and hence wider community impact, is documented in this project. Farm safety education should be incorporated into a purpose designed lifeskills module that offers children a constructive means of assimilating the message and the focus in primary schools where the write and draw evaluation demonstrated effectiveness, should be continued. This is the approach being taken also with the mental health initiatives.

- *Was there any evidence of sustainability?*

In one of the communities, Donegal, there is clearly a gain in that the mental health initiative continues in the region as a whole, there is now a clear cross border dimension as well and a number of the exemplar projects have been incorporated into service provision³³. This is outlined in detail in the process report. In each of the other three communities there is potential for the projects to be continued but that will take local will and support. The cue card initiative and the schools programmes all have the potential to be developed further at a national level if the materials are streamlined and published in a high quality format. The character of the intervention in Donegal differed, in that it had a more specific community dimension, whereas the safety initiatives were more focused on settings like school and workplace. Cross sectoral partnerships in the health and safety area, which work well at a national level, need to be replicated at regional and community level. For instance the health and safety inspectorate, the health promotion departments of the health boards and the local education authorities could work more closely around initiatives in the settings we identified, spearheaded by national flagship weeks to raise awareness around the issues.

- *Any evidence of change in community profiles over time?*

It was recognised at design stage that there were limitations to what could be achieved by the project for several reasons. These include the limited time-scale of two years between surveys, the relatively modest resources available, (so that for instance no commercial rates of spending were possible on media education), and by the nature of the individual initiatives, which were targeted at small groups, because of the context in which the project was devised. The results of the impact evaluations are very encouraging given these limitations. As might be expected, given the increased awareness of safety and wellbeing issues nationally, there

were signs of increased knowledge for selected variables in all four areas. These secular trends are as might be expected. There was additional evidence of some intervention-related changes to the health and safety initiatives, which are causally related to the project. Likewise, the findings from the mental health promotion interventions are encouraging in signalling a shift in community attitudes which could be maintained and further enhanced with more sustained programmes. Signs that demographic characteristics, identified at baseline, such as age, education and gender, are important determinants of attitudes and behaviours, will require further analysis.

- *Is there evidence of value for money invested in the project?*

Yes, for three different reasons: First, the project was highly novel. It provides reliable attitudinal data for the first time in a representative sample of rural Irish people from which both qualitative and quantitative targets might be drawn up. In international terms, despite the importance of agribusiness and the scale of the SME sector, very few systematic interventions are in progress in this setting. Second, the process and impact evaluations confirm that infra-structural investment is needed, rather than cosmetic awareness raising campaigns that in and of themselves achieve little without the investment to reach, teach and sustain the projects. Third, it provides materials for use in several different settings, particularly schools and farms, that could be useful in other areas and should be reproduced more widely.

Recommendations

1. This project presents a detailed demographic profile of workers employed in the Agri-sector in Ireland. It is clear from this project that education and support programmes should be directed at women as well as men who are involved in the farm sector and also towards the parents of children on farms. The Health and Safety Authority and the Health Promotion Unit should give concerted attention to a joint family based initiative.
2. An incentive scheme should be established which rewards farmers significantly if they comply with farm safety requirements. A national safety accreditation scheme which involves a cue card and farm walk programme would be part of this, organised in conjunction with the farm safety organisations and other training programmes.

3. The Health and Safety Authority should collaborate with the Health Promotion Unit and the Department of Education to put in place a farm safety lifeskills education module, as part of the Health Promoting Schools initiative or in the ordinary primary school and second level transition year programmes. This would include a safety information pack and teacher training on the issue. In terms of implementing more structured mental health promotion programmes, the schools programme emerges as promising. This programme was well received by both pupils and teachers and resulted in significant changes in students' attitudes and behavioural intentions. There is an opportunity to develop this work further in order to establish the efficacy and effectiveness of a structured module, which could be employed by other schools delivering the Lifeskills programme.
4. The project has demonstrated the feasibility of implementing a community-based model of mental health promotion. There are few reported examples of such initiatives in the literature. The level of interest and support from local community groups and participating agencies is encouraging. Critical to maintaining this has been the development of the Steering Group as a working structure locally, thereby engendering local participation. The impact of the interventions at this stage suggests that such programmes are capable of positively influencing attitudes at the wider community level.
5. The Mental Health project is now entering the stages of programme maintenance and consolidation. The aim at this stage is to build on the successes of the project to date and to highlight the challenges for its future development and consolidation. Critical to this phase of the work will be developing the project's future based on the existing data from the process and intervention evaluations. This will include critically reviewing the extent to which project objectives are being achieved, revising future plans accordingly and consolidating existing structures and partnerships that are working well. In this respect a number of key challenges and opportunities can be identified from the present report.

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