‘Exploring the experiences of Irish men and women’s self-efficacy working as agricultural advisors’

A Thesis submitted to University College Dublin in fulfilment of the requirements for the Degree of Masters

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Declaration

I hereby declare that this Master’s minor thesis has not previously been submitted as an exercise for a degree at the National University of Ireland, or any other University. I further declare that all work embodied within this is my own.

Angela Julieanne Ryan

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List of Acronyms

CECRA – Certification for European Consultants in Rural Areas

GSE – General Self-Efficacy

PMDS – Performance Management Development System

Abstract

This explorative research study examined the use of social-cognitive theory as a basis in assessing the generalized perceived self-efficacy as a measure of perceived effectiveness of agricultural advisors working in Teagasc in Ireland. One-hundred and twenty-four agricultural advisors working in dairying, drystock, tillage and soils and the agri-environment participated in an on-line survey with the option to further volunteer for semi-structured interview. This survey assessed perceived general self-efficacy and respondents' self-assessment of their effectiveness as agricultural advisors. Six participants were selected to participate in semi-structured interviews to delve more deeply into their perceptions of what it means to be an effective agricultural advisor and to validate the usefulness of the perceived self-efficacy score.

The study found that Irish agricultural advisors perceive themselves to be highly efficacious as they gain more experience. Male agricultural advisors perceived themselves as slightly more efficacious then their female colleagues. There were some significant differences in general self-efficacy across the factors of agricultural advisory experience, work-life balance and stage in family life-cycle with children. All implications of these differences across these factors are discussed.

Chapter 1 - Introduction

This chapter provides an insight into the background and rationale for the study, presenting the research problem, objectives and research design coupled with the utility. A review of Irish literature revealed a dearth of information pertaining to the perceived self-efficacy and effectiveness of agricultural advisors in Ireland and led to the formulation of this study.

1.1. The Agricultural Advisor

Agricultural extension includes many employees with divergent educational and social backgrounds who work for organizations with distinct goals (Prokopy *et al.,* 2015). Few scholars have comprehensively reviewed how agricultural advisors define effectiveness in their role (Cerf *et al.,* 2011). Agricultural extension effectiveness is dependent on employee motivation. Agricultural advisory services employ a workforce of diverse characteristics and attributes including age, gender, work experience, education level and marital status which are linked with job performance, effectiveness and work-life balance. Well-trained competent extension agents are required to accomplish the role successfully (Ogunlade *et al.,* 2011). The author is a young advisory intern, interested to understand better the career development path of advisors and the factors that affect how effective they are at their role. Other actors in advisory organisations, particularly operational and human resource management are also interested in a better understanding of advisory effectiveness and how management and development supports can be used for greatest effect.

Numerous studies of agricultural extension professionals have defined them as change agents (Rogers, 1995), disseminators of expert knowledge (Burgess *et al.,* 2000) and as facilitators who act to bring together, encourage and empower farmers by assisting them in their learning and development (Bager & Proost, 1997). Increasing recognition in literature acknowledges that extension agents are professionals with expertise, skills, techniques and individual competencies and attributes that can establish the issues, acquire knowledge, learn skills and manage a range of sources and different types of information (Engel, 1990).

1.2. Agricultural Advisory Competencies

Agricultural extension agents who are effective in their role, making informed decisions with the necessary skills needed for adaptation and facilitation can make a significant contribution to agricultural development (Hoffman, 2014; Qamar, 2005). Extension professionals have to be prepared with the knowledge, skills and behaviors to help meet the demands and needs of clients as summarised by Suvedi and Ghimire (2015) in their study of core competencies.

Mulder (2007) contended that competence is the general capability of an individual to perform and solve a problem or task. Seevers *et al.,* (2007) described the term competency as the knowledge, skills, attitudes, attributes and behaviors that contribute to workers' excellence in their respective careers such as agricultural extension officers. Chung and Lo (2008) defined a competency as the knowledge, skills and capacities which individuals should necessitate upon the completion of tasks or meeting deadlines and goals. Draganidis and Mentzas (2006) explain it is a combination of tacit, explicit behaviour and skills which provides one's self with the potential for effectiveness in task performance. Job performance is related to competencies (Heffernan & Flood, 2000; Dhanakumars, 2001). These competencies remain one of the important determinants of performance and effectiveness of agriculture extension agents (Ogunlade *et al.,* 2011). Ali *et al.,* (2009) explained that the four key areas of knowledge, attitude, skills and attributes underpin the development of competencies of agricultural extension agents. However, numerous factors can affect this such as workload, work quality, timing, job effectiveness, knowledge and communication skills, management ability, work discipline, pro-activeness, innovation, in addition to teamwork (Tiraieyari, 2009).

An interesting interpretation of competencies is further delineated by Woodruffe (1991) as having two contrasting aspects to it. Firstly, one aspect is part of the job which an individual can perform and secondly it refers to a person's behaviour which underpins a skilled performance (Woodruffe, 1991). Burgoyne (1988) similarly differentiates that 'being competent' is meeting the job demand and that 'having competencies' possesses the necessary attributes to perform effectively. The term 'professional development' describes learning experiences that build upon an advisor's capacity as a professional, enhancing their ability to respond to local needs, or assisting in meeting long-term goals (University of Kentucky, 2008). McKenzie (1987) determined that on-going professional development is crucial because it can make a significant difference in the performance of an agricultural extension officer. Scheer *et al.,* (2006) recommended ten core competency areas for extension as shown below in Table 1.

Table 1. Core Competencies required by extension workers as defined by Scheer *et al.,* (2006).

1.	Extension knowledge and leadership management
2.	Technology
3.	Communication
4.	Programme planning, implementation and evaluation
5.	Applied research
6.	Pluralism and diversity
7.	Marketing and public relations
8.	Human development learning theories
9.	Risk management
10.	Community development process and diffusion

1.3. Self-efficacy

Self-efficacy is defined as one's belief in their capability to undertake or perform a particular task successfully (Bandura & Walters, 1977). Self-efficacy is a form of self-confidence (Kanter, 2006) or simply, a task-orientated form of self-esteem (Brockner, 1988). Literature proposes that self-efficacy is a key indicator of intentions to pursue a task and how it affects one's perception, motivation and performance of a task (Bandura, 1997; Gist, 1987; Gist & Mitchell, 1992; Sadri, & Robertson, 1993). The more confident an individual is about a task, the more likely they will participate in it. Self-efficacy has powerful effects on learning outcomes, motivation, and performance; because individuals try to learn and perform only those activities they believe they will perform successfully. Self-efficacy affects learning and performance in three ways as demarcated by Bandura (1982):

Firstly, it influences the goals that an individual may set out. For example, individuals with low levels of self-efficacy will set lower standards for themselves in contrast to an individual with high self-efficacy who will set high objectives (Bandura, 1982). This highlights the fact that people not only learn but perform accordingly at levels consistent with their self-efficacy beliefs (Bandura, 1982).

Secondly, it affects learning as well as the effort that people apply to their role. Individuals who are highly efficacious will work harder to achieve good performance of new responsibilities, because they are more confident that their hard work will be rewarded (Bandura, 1982). In contrast, individuals with lower self-efficacy won't make an effort to achieve success of performing new tasks, as they are unsure whether their actions will lead to success (Bandura, 1982).

Thirdly, the persistence, effectiveness and motivation of people who attempt new and difficult tasks are also affected by self-efficacy. Employees with high self-efficacy are confident that they can learn and perform a certain task despite problems which may occur (Bandura, 1982). Workers with low self-efficacy believe they are incapable of learning and performing and tend to struggle if there are any issues (Bandura, 1982). Bandura and Locke (2003) concluded that self-efficacy is a prevailing factor of job performance encompassing effectiveness.

Research indicates that improving self-efficacy can contribute to an individual's improved performance. Efficacious individuals effectively seek information to increase role clarity and performance (Brown *et al.,* 2001), contribute to collective team-working (Pillai & Williams, 2004) and have higher cognitive engagement (Lent *et al.,* 2006; Walker *et al.,* 2006). Research studies reviewing the socio-cognitive theory (Bandura, 2000; Bandura & Locke, 2003) indicate that increased self-efficacy can enhance individual performance (Phillips & Gully, 1997). Efficacious beliefs contribute to effective performance and promote personal wellbeing by encouraging goal setting and commitment, persistent effort, perseverance, resilience and thereby a reduction in stress and depression (Bandura, 2000; Bandura & Locke, 2003).

1.4. Agricultural Extension and Gender

Agricultural extension careers have been traditionally male-dominated, but women have an important role to play also (Khezerloo & Breazeale, 2005). Literature has noted gender differences with self-efficacy in certain domains including the areas of science, technology, engineering, mathematics, and agriculture. Pajares and Miller (1994) found that males have higher self-efficacy than females in academic circumstances across the domains of science, technology, and mathematics. In contrast, Lent *et al.,* (2005) concluded that male and female students of engineering had comparable levels of academic self-efficacy. Johnson and Wardlow (2004) found no significant difference in computer self-efficacy between both genders in an agricultural college.

Performance accomplishments allow people to form appropriate expectations about what they can and cannot do on the basis of experience. Betz and Hackett (1981) posit that sex role stereotypes encourage men to become assertive, active, and instrumental, whereas they urge women to develop emotional expressiveness. Although both genders may show the same performance levels, they may categorise their attributes and capabilities differently (Bandura, 1997). With regard to self-efficacy, many studies have shown that this is lower for women (Beyer, 1990; Sieverding & Koch, 2009; West *et al.,* 2002), but some evidence supports that women have higher self-efficacy (Tsai & Lin, 2004). Furthermore, men and women may differ in their development of self-efficacy (Artistico *et al.,* 2003; Chou, 2001; Chyung, 2007). Those mixed findings indicate that age and gender can affect self-efficacy and training outcomes, but the relationships may be more complex. According to Eden and Zuk (1995) and Judge and Bono (2001), general perceived self-efficacy is a good predictor model of work-related performance and effectiveness. Moreover, general perceived self-efficacy is also linked to job satisfaction (Judge & Bono, 2001). Literature has suggested that there is a positive relationship between both job satisfaction and effectiveness (Harter, *et al.,* 2002; Judge, *et al.,* 2001).

1.5. Work-Life Balance and Self-efficacy

Work-life balance has become an essential part of developing equilibrium between work and an individual's life. It is a person's ability to meet their professional and family commitments, inclusive of individual and social engagements and responsibilities. Greenhaus *et al.,* (2003) disputes that lack of work-life balance often impacts on other parts of personal life besides job performance and effectiveness. Aycan *et al.,* (2007) relates only to the concept of both work and family defining it as fulfilling life's requisites adequately in the three categories of family, work and personal life. Much of the literature proposes that the concept of work-life balance is subjective from one individual to another.

According to Bandura (1989) one's level of self-efficacy can affect individual work-life balance and an individual's work-life balance can be moderated by self-efficacy. People with high self-efficacy may perceive a better balance between work and life, causing them to be more confident in their perceptions of both their job and life in general. The rationale for this is supported by Markman and Baron (2003) showing that adaptive human functioning is motivated, regulated, and directed by general self-efficacy.

According to Bandura and Adams (1977), people acquire information from which they determine their sense of self-efficacy from four potential sources: performance accomplishments, vicarious learning, emotional arousal and verbal persuasion. Each of these four sources (Hackett & Betz, 1981) may in part explain male-female differences in self-efficacy. Schulz and Roßnagel (2010) found that age was the main moderator of self-efficacy for learning competence and training outcomes. Gender is also a potential moderator of the relation between age, education and training (Bausch *et al.,* 2014). A study of computer self-efficacy revealed gender was not a strong predictor of self-efficacy but age differences were (Chu, 2003). However in contrast, a study on gender differences in perceptions and self-efficacy of the usage of online technology were found to be significant (Sherman *et al.,* 2000).

1.6. Context for this Study

This study was conducted with agricultural advisors in Teagasc, the Irish national body providing integrated research, advisory and training services to the agriculture and food industry and rural communities (Teagasc, 2015). Teagasc is a client-based organisation employing approximately 1,200 staff which includes 244 advisors based at 51 locations throughout Ireland providing services to over 43,000 farming families. (Prager & Thomson, 2014).

1.7. Research Design

The focus for this study was to determine the general perceived self-efficacy of the agricultural advisor. A cross-sectional design was employed for data collection at a single point in time to collect both quantitative and quantifiable data pertaining to determining the general perceived self-efficacy of the agricultural advisor and the factors affecting effectiveness in their role in order to determine patterns of association. The cross-sectional design employed the research methodologies of a questionnaire which could ascertain the general self-efficacy of the agricultural advisor and effectiveness in their role. In addition, it would examine whether the factors of gender, age, experience, stage in family life-cycle, work-life balance, continuous professional development or mentoring would impact on their general self-efficacy. The semi-structured interviews would further illicit information pertaining to the research objectives and questions outlined.

1.8. Research Questions

The following questions are answered through the delivery of the study's research objectives:

1. How do male/female agricultural advisors define and measure 'effectivess' in their role?
2. Do the factors of age, stage in family life-cycle and work-life balance affect self-efficacy of male/female agricultural advisors?
3. Does continuous professional development or other professional development supports - mentoring impact on self-efficacy of male/female agricultural advisors?

1.9. Research Objectives

The following are the objectives this research study is designed to answer:

1. To identify how male/female advisors define 'effectiveness' in their agricultural advisory roles.
2. To determine if the factors of age, stage in family life-cycle and work-life balance affect self-efficacy of male/female agricultural advisors.
3. To establish if continuous professional development and other professional development supports - mentoring impact on self-efficacy of female/male advisors.

1.10. Research Methodologies

The research methodologies planned for this study include both qualitative and quantitative approaches which will be utilised to achieve the research aim and objectives delineated. A questionnaire and semi-structured interviews were devised as research method tools for data collection as seen below in Figure 1.

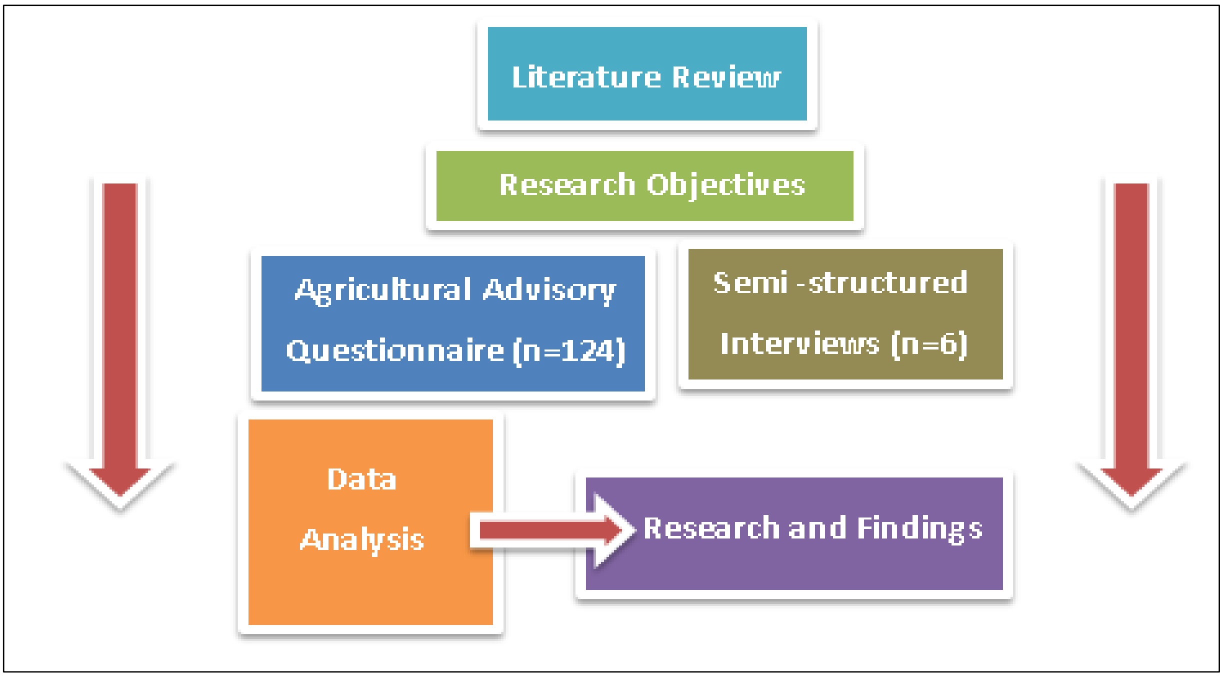

Figure 1. Research design of the study.

1.11. Sampling Population

The overall aim of the sampling process was to secure a valid and reliable unbiased representative sample of both female and male agricultural advisors. A key challenge was to eliminate any potential bias that could arise during the selection process. The sampling population for the purpose of this study consisted of 43 female and 201 male agricultural advisors based at 51 locations throughout Ireland within the Teagasc organisation (Prager & Thomson, 2014). Both female and male advisors participated in the study primarily to achieve balance, comparability and context. The participation of all agricultural advisors within Teagasc was voluntary. The sampling population was initially contacted by electronic mail inviting voluntary participation in the study as illustrated in Appendix 1. Participative inclusion consisted of the completion of an online questionnaire which took approximately ten minutes. Of the 244 agricultural advisors surveyed, 124 responded to the online questionnaire. Upon completion of the questionnaire the participants had the option to consent to partake further in a semi-structured interview. Out of those who completed the survey, 51 respondents agreed to participate further. For the semi-structured interview, six agricultural advisors, three males and females, were chosen to participate based on gender, age, advisory experience and level of education.

1.12. Questionnaire

The survey research tool is the most widely used social science data gathering technique, often taking the form of a questionnaire (Neuman, 2011). A survey elicits respondents' opinions, thoughts, characteristics and behaviours. Surveys are appropriate to learn about self-reported beliefs or behaviours (Neuman, 2011). Self-completed questionnaires are also very efficient in terms of researcher time and effort (Robson, 1993). However, surveys are not just about describing populations, they can be used to discover how one group differs from another, thus a prime purpose of survey data is to make planned comparisons (Sapsford, 1999). Questionnaires are a stable, consistent and uniform measure free of variance. They also reduce bias or errors caused by the presence or attitudes of the interviewer (Sarantakos, 2005). Bryman (2012) suggests that surveys are one of the most commonly used methods in the social sciences to understand society.

An online questionnaire was distributed by electronic mail to all agricultural advisors in Teagasc with an option to volunteer for further participation in a semi-structured interview. A draft copy of the letter of invitation to agricultural advisors to participate in the study is outlined in Appendix 1. This questionnaire was sent electronically using electronic mail to 244 participants with link access to Google Forms. The expected response rate of this questionnaire was predicted to be around forty per cent. A response rate of 51% (n=124) was obtained with 41% (n=51) voluntarily agreeing to participate further in the study in a semi-structured interview.

1.13. Interviews

Interviewing is a primary mode of data collection applied frequently in social research (Becker *et al.,* 2012). Social science research projects rely on the interview research method as a valuable source of data (Flick, 2009). This method is usually conducted with one individual at a time (Seymour *et al.,* 1995). Interviewing a person verbally face-to-face is a common source of data collection (Sarantakos, 2012). Qualitative researchers find this method very effective to generate data that is both rich and insightful (Becker *et al.,* 2012). The type of interview method chosen depends on the objectives of the research, resources available, research standards and type of information sought (Sarantakos, 2005). The flexibility of the interview research method makes it appealing compared to other forms of social research (Bryman, 2012).

There are three main types of interview discussed throughout the literature. These are structured, unstructured and semi-structured interviews. The different types of interviews have distinctive styles of questions available for use, which depend on the specific circumstances surrounding the interview (Leech, 2002). In an open or semi-structured interview, the participants' thoughts and opinions are more likely to be expressed in comparison to a closed-interview (Flick, 2009).

Through the interviewing process, a person's feelings, thoughts and intentions, how they have organised the world and the meanings they associate with what occurs in their world can be observed (Patton, 2002). Therefore, this method allows the interviewer to enter into another person's perspective (Patton, 2002). Despite the positive aspects of data collection, using this research method can be challenging. This research tool requires good communication, listening, organisational and social skills. Noteworthy, limiting factors using this research method include arranging, conducting and transcribing interviews (Becker *et al.,* 2012). Noteworthy, the Hawthorne effect is defined as a type of reactivity in which people alter an aspect of their behaviour or actions in response to their awareness of being observed (Landsberger, 1958). This bias as a study carried out by Landsberger (1958) found, showed that people can have a predisposition to please the researcher, which can often lead to inaccurate results. Researchers must consider this effect when preparing semi-structured interviews, collecting information, transcribing, writing and reporting research findings and results.

Interviews differ according to their specified purpose, the role of the interviewer, sample size and presentation (Longhurst, 2003). Researchers implement semi-structured and unstructured interviews to try and elicit a respondent's thoughts, attitudes, and experiences (Becker *et al.,* 2012). The number of interviews conducted in social studies varies and depends on resources available. Most qualitative studies involving this research method will interview between twenty to thirty individuals (Flanagan & Hancock, 2010). Ideally, data collection should continue until saturation is reached. Saturation is the point where no new information is generated from the data collection (Morse, 1995). This qualitative approach permits an in-depth analysis of a person's feelings, thoughts and intentions of their self-efficacy as an agricultural advisor, crucially how they define success in their role and draw upon how they have managed their work-life balance.

1.14. Semi-structured Interviews

The semi-structured interview is where an interviewer attempts to elicit information from a participant through asking questions (Smith, 1995). Semi-structured interviews offer participants the chance to explore issues they feel are important (Longhurst, 2003). In a semi-structured interview, the interviewer uses an interview guide and can make changes to this guide, depending on how the interview is progressing and developing (Becker *et al.,* 2012). Semi-structured interviews have been used to collect data in a diverse range of topics (Longhurst, 2003).

Semi-structured interviews have previously been described as both 'soft' and 'informal' (Longhurst, 2003). As a result, this type of interview is well suited for interviewing male and female advisors to explore self-efficacy. Semi-structured interviewing allows the interviewer to express a greater interest in the interviewee's point of view when compared to a structured interview (Bryman, 2012). A key advantage of using semi-structured interviews is that it permits the participant to speak openly. The interviewer can freely ask the respondent to comment on relevant topics whenever it is deemed necessary (Sarantakos, 2005). This form of interviewing is much more flexible and less restrictive when compared to a structured interview. In addition, informal conversation permits the participant to reply in their own words instead of giving a simple yes or no answer (Longhurst, 2003).

An interview guide is a simple framework to help structure an interview by compiling a list of questions as well as topics or themes that need to be covered during the course of the interview (Cohen & Crabtree, 2006; Ritchie *et al.,* 2013). An interview guide was developed in order to assist the interviewer in safeguarding all relevant themes in the questions posed during the interview. The semi-structured interview guide as seen in the Appendix 5 includes the main themes and sub-themes.

Flexibility within the structure of the interview guide allows for better communication and open-ended conversation with the respondents (Ritchie *et al.,* 2013). This was evident from the semi-structured interviews guide structure which followed a themed format.

The semi-structured interview guide as illustrated in Appendix 5 includes the main research objectives, questions and themes with follow-up questions and sub-themes. This helped to structure the interviews to become highly focussed between questions as it permits flexibility within the structure of the interview which will assist the participants (Ritchie *et al.,* 2013). Noteworthy, this technique can be very time-consuming when transcribing data for a study (Ritchie *et al.,* 2013).

The format of the semi-structured interview was the most appropriate to achieve the objectives of this study and for ease of data collection. From the survey, 41% (n=51) of respondents agreed to participate further and from this six participants were selected for semi-structured interview. Three male and three female agricultural advisors at different stages in their career as agricultural advisors were selected. Pilot interviews were completed in advance to highlight any potential issues that may arise in relation to the interview techniques being used by the researcher and to ameliorate high quality data for analysis. The pilot interviews helped to modify the interview guide to make the real interviews as informal as possible.

The semi-structured themes and questions were established and highlighted from the literature review and incorporated into the interview guide. Key themes included the agricultural advisory role, career stage and work-life balance which were incorporated into the questions in the interview guide. These key themes underpinned key findings that would answer the research questions. Each interview lasted approximately thirty minutes in duration. This research project was carried out by a 'lone' researcher which ensured the varying style of interviewing was minimised (Bryman, 2012).

1.15. Ethical considerations

Two important ethical considerations relating to this research study pertained to anonymity and confidentiality. Respondents must be assured of the protection of the sensitive information they provided (Atkinson & Flint, 2001). For confidentiality reasons, interview participants were assured that any of the interview data collected would be coded so that transcriptions could not be traced back to the participants. Interviewees were also informed that all interview recordings would be kept until shortly after the research concluded and then subsequently removed to safeguard anonymity.

1.16. Recording and transcription of semi-structured interviews

For effective analysis, it was necessary to record the six semi-structured interviews. The use of recording equipment is essential, however, permission must be sought first from the respondent (Sarantakos, 2005). Participants were asked to sign a declaration form which stated their awareness of being recorded and that the recording would be kept by the researcher for a short period and then deleted. This is in line with UCD research ethics code of conduct (UCD, 2010).

Semi-structured interviews must be available in written form for scientific analysis, and therefore must be transcribed (Schmidt, 2004). Each of the six interviews conducted were transcribed and categorised by code and by theme to help analyse the data with background details on each participant itemised.

1.17. Utility of this study

This research study sets out to better understand the career development path of advisors and the factors that affect how effective they are at their jobs. This is beneficial not just for the advisor but also for Teagasc management and Human resources who provide development supports to staff. The implications of the study for organisational development will identify the skills, knowledge and abilities that agricultural advisors perceive to be important characteristics and competencies that they believe make them effective in their role. This will help to develop these competencies further through education and training to achieve future success in agricultural extension knowledge transfer.

Chapter 2 – Literature Review

A literature review comprises of a secondary analysis of existing published literature (Sarantakos, 2005). An effective literature review reinforces the researcher's credibility showing expertise in a certain area (Bryman, 2012). The literature review for this study includes themes most relevant to the research aims and objectives and subsequently influenced the chosen methodologies for this project. Topics covered were based around the social cognitive theory which underpins self-efficacy and how gender, age, experience, work-life balance, continuous professional development and other development supports namely mentoring affect self-efficacy of the agricultural advisor.

2.1. The Social Cognitive Theory

The social cognitive theory explains psychosocial functioning in terms of triadic reciprocal causation (Bandura, 1986). According to Bandura (1986) in this transactional view of self and society, personal factors in the form of cognitive, affective, and biological events, behavioural patterns, and environmental events all operate as interacting determinants that influence each other bi-directionally as shown in Figure 2 below.

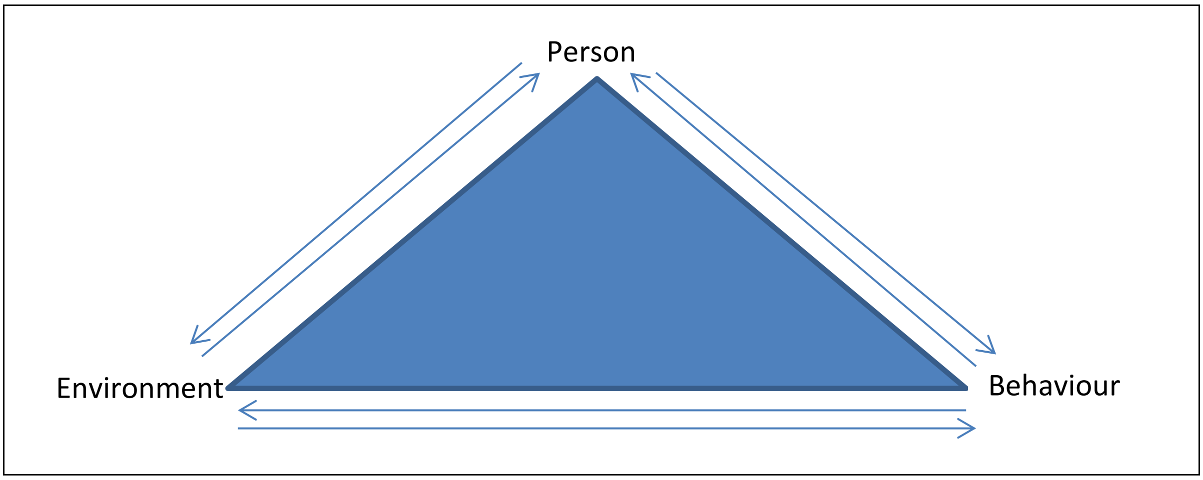

Figure 2. Adaption of the interaction of all determinants of self-efficacy (Bandura, 1986).

The social cognitive theory elucidates the typical behaviour within an organizational setting in terms of the shared relationship between the person, environment and behaviour (Bandura, 1986). As highlighted in Figure 1, as these shared influences are within the organizational setting, people can be both products and producers of their motivation, environment setting, and behaviours (Bandura, 1986). Within the social cognitive theory, the trilateral effects among the person, environment, and behaviour do not always indicate balance in the strength of the reciprocal effects (Bandura, 1986). Crucially, it is imperative to understand that the effects exerted by one, two or all three interrelating factors on motivational behaviour will vary subject to the different tasks, people and environments (Bandura, 1986).

2.2. Self-efficacy

Over the past twenty years, self-efficacy has become one of the most widely studied variables in the organisational sciences (Scherbaum *et al.,* 2006). Extensive research proposes that self-efficacy is a key indicator of intent to undertake a task or role. It also influences an individual's ability, thoughts and feelings during an activity (Bandura, 1997; Gist, 1987; Gist & Mitchell, 1992; Sadri, & Robertson, 1993). The more confident an individual is that they can carry out the task successfully the higher the prospect of better participation in the activity (Bandura, 1997).

2.3. Dimensions of Self-efficacy

Individual performance in organisations is affected by three dimensions of self-efficacy as shown in Table 2 (Bandura, 1997). The first dimension of self-efficacy is magnitude which denotes an individual's belief in their capability of success and completion associated with task-related difficulty and complexity (Bandura, 1997). Secondly, strength is the next dimension associated with self-efficacy which refers to the confidence and perseverance an individual shows despite the challenging or difficult nature of the task (Bandura, 1997). Thirdly, generality is the third dimension of self-efficacy where some experiences may affect self-efficacy values across domain related situations and tasks or just one specific activity (Bandura, 1997).

Table 2. Self-efficacy dimensions (Bandura, 1997).

1. Magnitude	2. Strength	3. Generality
This is the level of difficulty and adversity associated with a task or activity an individual thinks they can achieve. For successful task-related achievement, levels of difficulty and adversity determine performance outcome success or failure.	*The level of efficaciousness or confidence an individual exudes will determine performance outcome. The higher the level of self-efficacy the greater the possibility of a successful outcome influenced by the magnitude of self-efficacy.*	*Across domain-related tasks or situations, self-efficacy is generalised, as other experiences may influence it.*

2.4. Sources of Self-efficacy

Since self-efficacy can have influential impressions on organizations, it is important to identify its antecedents. Bandura (1997) has identified four primary sources of self-efficacy which include enactive mastery experience, vicarious learning, verbal persuasion, and emotional cues. As shown in Figure 3, the main categories of experiences or sources of information that determine self-efficacy beliefs are outlined. Although all of these sources may affect self-efficacy expectations, the impact will be determined by how it is cognitively processed (Bandura, 1997). Therefore, self-efficacy expectations materialise from different perceptions of personal and situational factors, rather than that of an "objective" realism (Bandura, 1997).

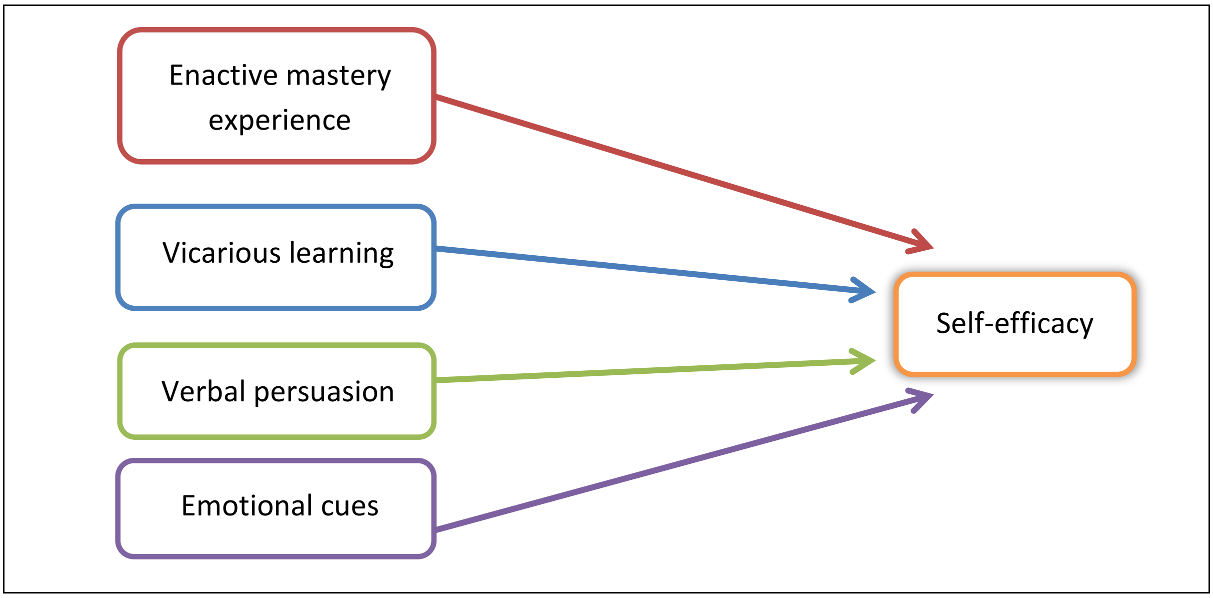

Figure 3. Antecedents that determine self-efficacy beliefs (Bandura, 1997).

2.5. Enactive Mastery Experience

Research has indicated that success from past performance provides the strongest adaption for further development of self-efficacy beliefs (Bandura, 1997). This is because this antecedent of self-efficacy is the only provider of direct performance information for the creation of established and definitive efficacy beliefs (Bandura, 1997). Changes in self-efficacy will not necessarily occur as a result of performance accomplishment (Bandura, 1997). Self-efficacy formation is determined by how individuals psychologically process information from previous performances (Bandura, 1997). Individual performance doesn't influence self-efficacy but rather what the person thinks of the subsequent diagnostic information ensuing from that performance (Bandura, 1997). As a result, that performance achievement can create diverging changes in self-efficacy levels (Stajkovic, & Luthans, 2003).

2.6. Vicarious Learning

Self-efficacy valuations are shaped by the second source which is vicarious learning. This occurs in the working environment when observing other competent people perform a similar task (Stajkovic, & Luthans, 2003). The stronger the apparent resemblance between the emulation and observer in relation to personal attributes applicable to the task performance, the stronger the impact on the observer's self-efficacy, learning and motivation (Bandura, 1997). Employees may ask their colleagues or mentors for knowledge of the problem or task or strategies effective for successful completion and enhanced performance (Stajkovic, & Luthans, 2003). Learning from emulated achievements is especially important when workers have no prior experience upon which to base their valuation of self-efficacy (Stajkovic, & Luthans, 2003). Vicarious learning can be practically used as a training method to enhance people's self-efficacy (Bandura, 1997). Mastering an emulated performance in terms of skills and task-effective strategies enhances a person's beliefs about their capabilities to successfully execute the role for the future (Stajkovic, & Luthans, 2003). In essence, the training provides an enacted mastery experience, which positively influences subsequent self-efficacy (Bandura, 1997).

2.7. Verbal Persuasion

The third antecedent is verbal persuasion. Strengthening self-efficacy can be achieved through verbal persuasion by seeking advice from another trusted party such as a colleague at work (Bandura, 1997). By using verbal persuasion, an individual can be encouraged to use their own capabilities to become proficient with tasks, making an effort and sustain the momentum without harbouring self-doubts and dwelling on negative personal imperfections when issues occur (Lunenburg, 2011). This can often lead people to succeed promoting the honing of skills and a strong sense of efficacy (Stajkovic, & Luthans, 2003). Instilling confidence and positivity in self-efficacy by social persuasion is harder to achieve than to undermine it (Bandura, 1997). An increase in a sense of self-efficacy quickly dissipates when outcomes yield disappointing results despite sufficient efforts executed often leading to the future avoidance of difficult tasks (Bandura, 1997). Highly efficacious people will communicate positive appraisals (Bandura, 1997). They encourage positivity and help build people's confidence in their capabilities (Bandura, 1997). They do so by structuring situations for successful outcomes and avoid setting up people in situations where failure is likely (Bandura, 1997). Success is measured by self-improvement rather than successes over others. However, for this approach of increasing self-efficacy to work, people often need to have some reason to believe that they can develop the ability to accomplish the task (Bandura, 1997). Having faith in another individual's ability is particularly relevant where they have performance issues and questioning their personal efficaciousness levels (Bandura, 1997).

2.8. Emotional Cues

The fourth main antecedent of self-efficacy is the state of emotional cues. This source of efficacy information is highly significant as people are inclined to perceive emotional cues as signs of vulnerability or disruption (Lunenburg, 2011). High levels of job-stress are inclined to hinder performance (Lunenburg, 2011). People may feel more highly efficacious following successful outcomes when they are not tired or emotionally exhausted (Lunenburg, 2011). However, those predisposed to physical or emotional interruptions varies personally (Bandura, 1997). If too many people participate in a specific task, they tend not to pay attention to aversive interferences (Locke & Latham, 2002). However, self-directed rather than task-orientated awareness often triggers emotional distress (Bandura, 1997). People with established high self-efficacy beliefs may view emotional cues as an energizing factor whereas people with poor efficacy tend to view it as a hindrance (Locke & Latham, 2002). Furthermore, emotional exhaustion or physical illness can be distressing to personal self-efficacy (Locke & Latham, 2002).

Self-efficacy is highly important in areas such as organizational management and human resources (Gist, 1987; Gist & Mitchell, 1992; Stajkovic & Luthans, 1998). Self-efficacy is related to adaptability and learning in work-related performance as shown by Gist and Mitchell (1992).

2.9. Generalised Self-Efficacy

Self-efficacy theory in literature principally is based on context-specific situations. Some scholars (Eden & Zuk, 1995; Judge & Bono, 2001; Judge *et al.,* 2003; Sherer *et al.,* 1982) have theorized and have proposed new conclusions to form a generalized self-efficacy scale. Researchers have conceptualised general self-efficacy as a person's previous success or failure of an experience resulting in a generalised set of beliefs that will affect their prospect of accomplishment across varied challenging circumstances going forward (Luthans *et al.,* 2006). Eden and Zuk (1995) demarcated general self-efficacy as a person's estimate of their aptitude to effect performances in various circumstances. Sherer *et al.,* (1982) suggested that people who have successes from previous experiences will have more optimistic and higher general self-efficacy in situations in comparison to individuals who have experienced little success. Judge and Bono (2001) stated that general self-efficacy epitomizes a high level of confidence in a person's capability across a wide context reflecting a strong sense of self-confidence effectively managing challenging circumstances.

General self-efficacy affects an individual's choices, determination, persistence and strength dealing with problems, hardship, failures and the traits of one's judgements, which can be a help or hindrance (Judge *et al.,* 2003; Wood & Bandura, 1989). Sherer *et al.,* (1982) signified that this type of self-efficacy is composed of three parts which are ingenuity, exertion and determination. Collectively, they help to establish how much energy individuals will exert on task, level of determination in the face of obstacles, and strength dealing with adverse situations (Sherer *et al.,* 2001). It has a dominant impact on work-related performance, learning and motivation as individuals learn to execute activities that they think they will complete successfully. It affects these factors in three ways as delineated by Bandura (1982) below in Table 3.

Table 3. Learning, performance and motivation are influenced by general self-efficacy in three ways (Bandura, 1982).

1. *An individual's chosen goals are influenced by general self-efficacy* - People with poor levels of general self-efficacy will set moderately low objectives for themselves whereas the opposite effect will occur where people are highly efficacious who will set higher goals. People will learn and execute tasks accordingly consistent to their levels of general self-efficacy.
2. *An individual's learning experience and efforts employed in an activity is influenced by general self-efficacy* - Efforts exerted on a task depend on general self-efficacy levels of confidence in their capability and whether they will have succeed or fail at a task.
3. *The persistence an individual exerts when they attempt challenging activities is influenced by general self-efficacy* - Self-efficacy levels can influence efforts and persistence in the face of challenging tasks when issues may arise. A highly efficacious person will deal with the conflict whereas the opposite will occur for a person with low general self-efficacy who will persist in avoiding conflict or problems that they may face to succeed. General self-efficacy is a powerful determining factor of task performance and effectiveness.

In recent years, literature has focused on more domain-specific self-efficacy rather than on general self-efficacy. In recent years more extensive research has been carried out reviewing the influence general self-efficacy has on organizational, work and personal effectiveness (Bandura, 2004). Although research has resulted in predicting performance and effectiveness (Lent *et al.,* 2005), there remains a cogent need to study generalized perceived self-efficacy in agricultural extension.

2.10. Gender

Numerous studies have highlighted gender differences in certain domains moderating general self-efficacy across many sectors including agriculture. Interestingly, women working have traditionally been underrepresented within this sector. Women were viewed primarily in their reproductive role and far less often in their productive role of agricultural advisory and other services which are still largely provided by men (FAO, 2009). Today, there is gathering momentum to support the concept of encouraging young women to enter non-traditional fields such as agriculture (Foster & Seevers, 2003).

Interestingly, Pankow (1995) determined that females have a more external locus of control and lower self-efficacy in comparison to males. However, Jenks (2004) found no association between gender and self-efficacy at all. In contrast, males were found to be more efficacious than females in academic achievement in science, technology, and math according to Pajares and Miller (1994). Interestingly, Bandura (1995) supported the key findings that women are not as self-efficacious in the domains of science, mathematics, engineering and technology by denoting that women are not selecting these professions which are male-dominated professions. Bandura (1995) recognised that females' technical and numerical abilities, as well as their career aspirations, are shaped profoundly by family and cultural domains. Schwarzer and Born (1997) examined mean differences in the general perceived self-efficacy scores of college students from thirteen different nationalities and discovered a significant gender difference as well as culture. Gender and culture effected how they perceived their capabilities to be successful in general (Schwarzer & Born, 1997). Overt and subtle practices revealed a prevalent lack of confidence in women's ability and their lower self-efficacy (Martin & Barnard, 2013). Michie and Nelson (2006) found that women showed less self-efficacy in the male-dominated information technology sector. Gender has clearly a distinctive relationship with self-efficacy. Most notably, within male-dominated professions, women tend to have lower levels of perceived general self-efficacy.

2.11. Age and Experience

Bandura (1995) emphasises that age does not correlate necessarily with a person's level of self-efficacy, but rather that it differs depending on how they effectively manage and organise their life. A study carried out by Jenks (2004) on how age effects perceived levels of general self-efficacy revealed that age had no significant relationship with levels of general self-efficacy. Bandura (1995) explained that age doesn't have a role to play in general self-efficacy, although it is an determinant where there are notable changes in self-efficacy over a person's life based on the life stage and how situations are managed throughout the periods. For example, young adults starting out in life is a notably transitional period where they learn to cope with a career, relationships and family (Tweed, 2013). An individual's perceived self-efficacy up until that period defines how they'll develop their self-management, communication coupled with interpersonal competencies required for a role in their professional careers (Tweed, 2013). A gradual transition into parenthood of a young person obliges them to meet the challenges of raising their family and managing co-dependent relations within the social and family domain (Tweed, 2013). The middle years bring a life period where people settle into established routines and stabilize their self-efficacy beliefs (Tweed, 2013). However, this stability may be shaky because life does not remain static (Tweed, 2013). As people age, their level of self-efficacy may decrease as they observe a decline in memory performance for example (Bandura, 1995). At more advanced stages of life, some life-altering changes occur such as retirement or re-movement or deaths of family and friends can happen (Bandura, 1995). A person's ability to manage and cope with these problems and still maintain confidence in their own ability influences their general self-efficacy as each period in life has another series of challenges (Bandura, 1994). During these periods, success and failure will affect an individual's self-efficacy causing a rise or diminution simultaneously (Bandura, 1994). Therefore, age doesn't influence self-efficacy levels, but rather that certain life stages correlate with certain age periods presenting variations in self-efficacy steadily (Bandura, 1994). Dewey (1938) conducted research that showed that as people age, they see all new ideas and information through a lens relating to their own personal experience. As a result, they employ these same personal experiences to interpret new information (Dewey, 1938). As people age, these experiences begin to increase (Dewey, 1938). Experiences as well as active involvement, relevance, and a sense of purpose build new understandings by creating a link between new information and knowledge previously acquired which are fundamental features of an effective learning environment (Dewey, 1938).

Experience is a gradual, age-related learning process composed of several levels of differentiated skills and acquired knowledge developing into competencies (Kim *et al.,* 2011). Kim *et al.,* (2011) postulated that the characteristics of professionals are assimilated through experience attained overtime. Furthermore as posited by Chang and Chi (2007) the influence of elevated practical work experience is of fundamental significance (Chang & Chi, 2007). A minimum level of experience equating to ten years of work experience application of an individual is required to obtain skilled expert prominence in any profession (Chang & Chi, 2007). Additionally, organizational positioning may be altered by particular behaviours.

Most obviously, these behaviours are the behavioural and personal skills observed by staff in the work environment (Baltes & Carstensen, 1991). They are personal and behavioural characteristics overtime which become repeatable and probable. Baltes and Carstensen (1991) suggest that the identity of an individual is a multidimensional combination of personal attributes and values coupled with life-long gained knowledge, experiences coupled with individual perceptions. Weymes (2003) highlighted that life is most purposeful for an individual in relationship-building and maintenance. Relationships justify a person's need to themselves and relate to others. Therefore, as postulated by Baumeister and Leary (1995) they are critically intrinsic to the development of an individual's sense of themselves. Age and experience have a dual role to play in moderating levels of general self-efficacy of the individual.

2.12. Work-life balance, Stage in Family Life-cycle and Eldercare

Greenhaus (2002) describes work-life balance as an effective functioning balance of both professional and personal life with minimum conflict between them. Lakshmi and Gopinath (2013) categorised work–life balance from three different outlooks. Firstly, that appropriate time allocation is dedicated to home and work responsibilities (Lakshmi & Gopinath, 2013). Secondly, the ideology of 'involvement balance' refers to showing a high level of commitment to professional, household or other duties (Lakshmi & Gopinath, 2013). The third concept of 'satisfaction balance' indicates the level of satisfaction with an individual's job in comparison to other responsibilities (Lakshmi & Gopinath, 2013). Work-life balance is not an equal allocation of time among work, family and personal demands (Delecta, 2011). Additional working hours subtract from time at home, while high work intensity and pressure can result in fatigue, anxiety and physiological effects that can affect the quality and balance of personal and family life at home (White *et al.,* 2003). The determinants that influence and relate to work-life balance include individual, family work and social environment.

Important factors such as marriage, child-rearing and elder care at home cause work-life imbalance because they encompass significant extra family duties (Delecta, 2011). Those who have caring duties for their children or elderly can affect their professional career because of shorter working hours, causing extra stress (Lowe, 2005). In comparison, people without these responsibilities will generally experience fewer problems with work-life balance (Lowe, 2005). The professional working environment can have a severe impact on work-life balance. This is even more so than the family environment. Balancing both work and personal life domains is difficult as both have significant demands that can be an issue for people earning a salary, regardless of family obligations (Dex & Scheibl, 2001; Fu & Shaffer, 2001; Rotondo *et al.,* 2003). People not married (Waumsley *et al.,* 2010) or without children within a family circumstance (Association of Graduate Recruiters, 2008) can also have a deprived work-life balance.

Many efforts have been employed to increase organizational efficiency (McCarthy *et al.,* 2010). Work-life balance from an organisational efficiency perspective is defined as programmes focussed at enhancing a person's experience in a work, social and personal setting (McCarthy *et al.,* 2010). Work-life balance organizational practices are programmes presented by a workplace to help with the balance of both domains (Cascio, 2000). Examples of these programmes include temporal arrangements that allow employees to reduce the number of hours they work or job-sharing and flexible working arrangements such as flexi-time where employees choose a start and finish time which matches their personal needs but work certain core hours (McCarthy *et al.,* 2010). Other work–life balance supports suggested range from counselling, to assistance schemes, time and stress-management training and childcare facilities to childcare financial support (Grady *et al.,* 2008; McCarthy, 2004). Fundamentally, work–life balance plans are put forward by organizations to help staff to balance their work and personal life more effectively (Grady *et al.,* 2008; McCarthy, 2004).

Highly efficacious individuals are more likely to seek out new prospects and experience success as they learn new skills and develop perspectives and gain confidence (Wayne *et al.,* 2006). Therefore, higher levels of general self-efficacy experienced by individuals will lead to greater balance and management of their work, family and personal life and thus enhance well-being (Wayne *et al.,* 2006). The results of a study by Raghuram *et al.,* (2003) concluded that individuals who are highly efficacious are more likely to be able to employ strategies to meet the challenges associated with the distribution of work across time and space and thereby achieve a better work-life balance. Personality attributes and strategies that enable and enhance well-being and adjustment in life are also part of the definition when referring to good psychological functioning (Caspi *et al.,* 2005; DeNeve & Cooper, 1998) and importantly one of these key indicators of psychological functioning is general self-efficacy (Judge *et al.,* 1997). Work-life balance has a major role in moderating self-efficacy levels.

2.13. Continuous Professional Development

Continuous professional development is frequently used in literature (Komives & Woodard, 1996) to summarise the terms used interchangeably such as in-service or staff development, in-service training and staff training. Truitt (1969) demarcated in-service development as undertakings used to involve an employee to hone their competencies, skills, and knowledge that will allow them to become more effective as an extension agent. Beeler (1977) acknowledged that staff development refers to in-service or staff training, intended to improve the techniques, learning, skills, and knowledge of people to empower them to deliver improved extension services to their clients. Professional development refers to the wide range of learning that builds an extension agent's ability to improve their capacity to assist their clientele's needs, or help them to meet long-term career goals (University of Kentucky, 2008). In addition, professional development is a continuous learning curve which can be intended to keep extension workers up-to-date in their area of expertise and help to predict the needs of their organization and clientele going forward (Sims, 1998). Another view shared by Mincemoyer and Kelsey (1999) suggested that extension workers who continuously undertake professional development in a structured environment helps them to build their competence. If agricultural extension agents are to improve their effectiveness in their role, they must receive continuous professional development through initiatives such as in-service training. Onazi (1984) recognized key areas of further professional development for extension workers which included technical knowledge, organisation, communication, programme-planning and personal development. Thus, extension agents need to continuously develop their competencies to be effective in their jobs as change agents (Kutilek *et al.,* 2002; Watermolen, *et al.,* 2009). Stone and Bieber (1997) explained that competency development places emphases on domains where a person can demonstrate excellent performance and link them to their organization's strategic pathway.

Professional development initiatives for extension workers to function optimally if prospects for acquiring competencies are provided through formal education, conferences, workshops, in service trainings as well as collaboration among professionals as delineated by several authors (Merriam, *et al.,* 2007; Seevers *et al.,* 2007). Professional development is a knowledge-sharing process, as it gives extension workers an opportunity to identify the knowledge, skills, and behaviours of the skills and functions that are no longer effective (Ho & Huang, 2009). Knowledge-sharing represents individuals' willingness to assist and engage with fellow colleagues to help the development of new skills or learning (Kuo & Young, 2008; Lin, 2007; Raban & Rafaeli, 2007). The process of knowledge-sharing is considered to contribute significantly to organizational effectiveness (Hoegl *et al.,* 2003; Komlodi, 2004). Knowledge-sharing can make a substantial contribution in the development of competencies, knowledge and skills. This is in addition to the establishment of a sharing network where employees can share and utilize their knowledge in problem-solving conditions (Beers, *et al.,* 2005), leading to increased job performance and effectiveness (Macneil, 2001). As explained by Yang (2007), the incomplete transfer of knowledge causes knowledge devaluation resulting in job ineffectiveness (Argote, 1999). Professional development encompassing in-service training and further education have mutual benefits for an individual that can enhance their ability to accomplish success and ultimately general perceived self-efficacy.

2.14. Other Professional Development Supports - Mentoring

An individual's level of perceived general self-efficacy may have an important influence on mentoring (Noe, 1988). Individuals with perceived higher levels of self-efficacy may apply substantial efforts to attain benefits from mentoring relationships (Noe, 1988). The additional benefits of mentoring relationships have been continuously highlighted in the literature for years (Levinson *et al.,* 1978; Roche, 1979). With regard to the social learning theory, observational learning may be used to acquire behavioural skills, develop patterns and reinforce prospects concerning the capacity to complete tasks efficaciously (Bandura, 1977). Certain elements of the social learning theory such as modelling and vicarious strengthening have been assimilated into training programs reflecting good behavioural patterns and modelling, which have been successfully used for employees' interpersonal skills (Decker & Nathan, 1985). It also enhances the learner's confidence, competence and job effectiveness (Decker & Nathan, 1985). The effectiveness of this for honing job-orientated interpersonal and communication skills has inspired renewed interest in using mentoring relationships to fulfil employees' needs (Levinson *et al.,* 1978; Zey, 1984; Kram, 1985). A mentor is generally defined as an experienced person who essentially acts as a role model (Noe, 1988). A mentor usually provides direction, constructive feedback, assistance and support to the younger person regarding their professional career aspirations and development (Noe, 1988). Overall, nearly all mentorships are categorically informal relationships (Phillips-Jones, 1983). Within these relationships, consultations between both the mentor and learner usually not only related to career issues, but to more detailed communication of personal interests and values (Phillips-Jones, 1983). Numerous organizations have formalized mentoring relations sequentially to exploit the possible developmental aspects for their employees (Noe, 1988). In this format, formal mentoring structures give individuals an assigned mentor (Noe, 1988). Interestingly, some scholars have cautioned against formalised mentoring structures as they may not be as valuable as mentoring relationships that can develop informally (Klauss, 1981; Kram, 1985). This is due mainly to personality clashes, supervisor perception of their ability to influence the learner being affected by the presence of the mentor coupled with commitment of both parties to the relationship if not founded on informal initiative (Noe, 1988). Ultimately, mentorship has novel benefits for the learner to gain experience which can moderate the perceived general self-efficacy of an individual.

2.15. Conclusion

In conclusion, the focus for this study was to determine the general perceived self-efficacy of the agricultural advisor whilst also examining whether the factors of gender, age, experience, stage in family life-cycle, work-life balance, and continuous professional development namely mentoring would impact on their general self-efficacy. This literature review set out to establish the basis of developing a better understanding of the social cognitive theory and how it underpinned the general self-efficacy theory. Self-efficacy as a construct is influenced by many determinants which may have more influence than others on the perceived general self-efficacy of the agricultural advisor.

The factors that influence how effective agricultural advisors are at their jobs will identify the skills, knowledge and abilities that agricultural advisors perceive to be important characteristics and attributes that they believe make them effective in their role. This will ultimately help to develop these competencies further through professional development to achieve success in Irish agricultural extension knowledge transfer going forward.

Chapter 3 – Research Findings and Analysis

This chapter consists of three sections which present the findings and analysis of this study. Firstly, Section A presents the main findings from the online questionnaire sent to 244 Teagasc agricultural advisors in Ireland. Secondly, Section B reports the findings of the semi-structured interviews conducted with three male and three female Teagasc agricultural advisors in Ireland. Finally, Section C analyses the research findings as part of the discussion from the study.

3.1. Section A - Questionnaire

This section presents the research findings from the study's questionnaire. It provides an introduction to the questionnaire followed by an outline of the Teagasc agricultural advisor characteristics. This is followed by the presentation of the study findings relating to the research objectives.

3.1.1. Introduction

A questionnaire was issued to 244 Teagasc agricultural advisors, of which 124 responded equivalent to 51% overall. The self-efficacy of the agricultural advisor questionnaire as shown in Appendix 1 was distributed using Google Forms. In June 2017, an invitation was issued via email to 244 Teagasc agricultural advisors in Ireland to complete the survey. A total of 124 (51% response rate) Teagasc agricultural advisors responded to the questionnaire. The questionnaire followed a specific format and included five key areas: agricultural advisory profile, stage of career, advisory role self-efficacy, general self-efficacy and work-life balance.

3.1.2. Survey Profile of Teagasc Agricultural Advisors

The first part of the questionnaire collated information by profiling the Teagasc agricultural advisors. This focuses on part of objective one of the study which is to define effectiveness in their agricultural advisory role.

Table 4 below presents the profiled characteristics of the respondents in the questionnaire. Only 22% of the respondents were female. Interestingly, this correlates accordingly as a fair representative of the overall population sample as females make up 16% of the Teagasc advisory service from 2010 to 2016 as shown in Figure 4 (Teagasc, 2016).

Table 4. Agricultural Advisor Characteristics (n=124).

	Sample (%)	No. of Respondents (n=124)
Gender		
Male	78.2	97
Female	21.8	27
Age		
<29	13.7	17
30-49	66.1	82
>50	20.2	25
Education		
Third Level Degree	46.0	57
Masters/PhD Degree	54.0	67
Main Agricultural Enterprises Advised in		
Dairy	41.9	52
Drystock	51.6	64
Tillage	4.0	5
Soils & Agri-Environment	2.4	3
Agricultural Advisory Experience		
0-5 years	19.4	24
6-20 years	48.4	60
>20 years	32.3	40

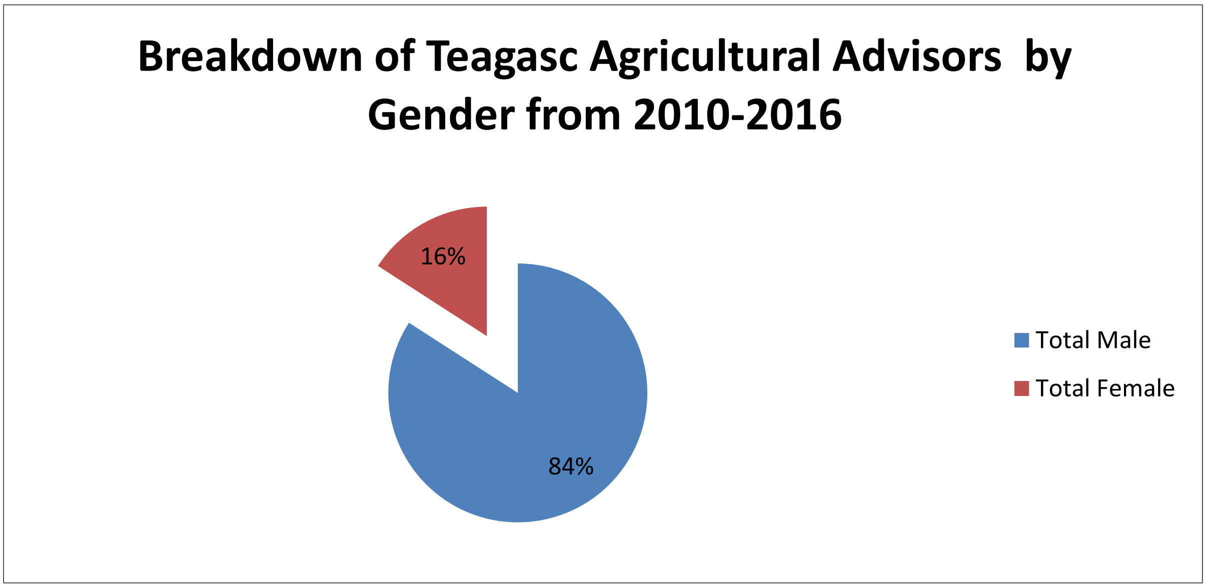

Figure 4. Breakdown of males and females working as Teagasc agricultural advisors from the period of 2010-2016 (Teagasc, 2016).

The majority of agricultural advisors (66.1%) are in between the age range of 30-49. This is broadly in line with Teagasc's gender by age profile carried out in recent years looking at the number of agricultural advisors in the organisation as highlighted in Figure 5. In terms of education, 54% of respondents have either a Masters or PhD degree while 46% held a third-level degree.

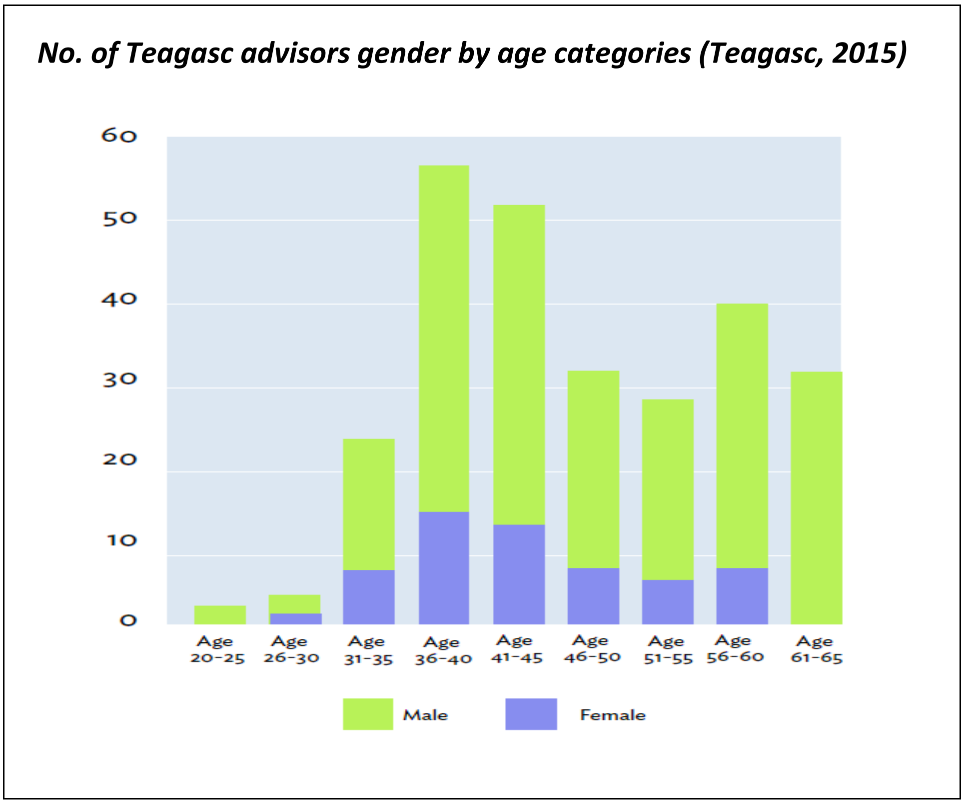

Figure 5. Teagasc agricultural advisors categorised as gender by age as adapted (Teagasc, 2015).

In relation to the main agricultural enterprises advised in, 51.6% of respondents offer their expertise in drystock which comprises of either beef or sheep farming enterprises or both respectively. This is while 41.9% of respondents stated that they advise in dairying mainly, with only 4% of participants advising in tillage and the remainder of 2.4% in soils and agri-environment. This is similar to the national overall percentage of Teagasc agricultural advisors broken down by main advisory enterprise as shown below in Figure 6.

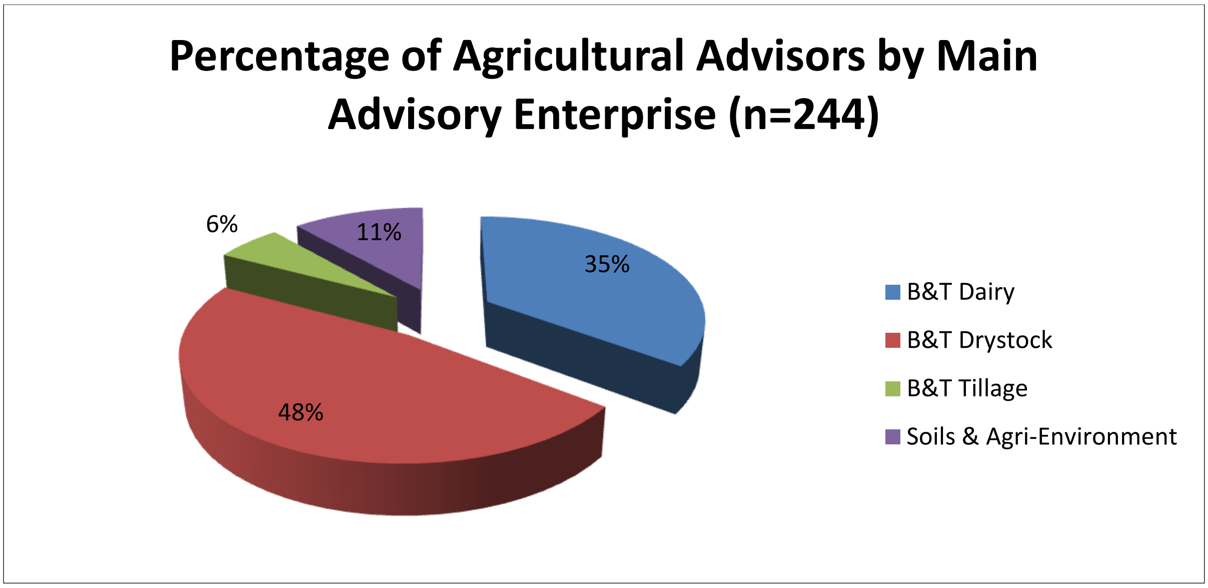

Figure 6. Percentage of Teagasc agricultural advisors by main advisory enterprise (Teagasc, 2016).

In terms of agricultural advisory experience, nearly half of all agricultural advisors (48.4%) surveyed had between 6-20 years' agricultural advisory experience as shown in Table 1.

3.1.3. To identify how male/female advisors define effectiveness in their advisory role

This section focuses on objective one of the study which is to identify how male/female advisors define effectiveness in their agricultural advisory role.

Characteristics that make an agricultural advisor effective

Respondents were asked to describe the three most important characteristics of an effective agricultural advisor. Qualitative answers were categorised into three key areas of competence that defined all the important characteristics that make an advisor effective which comprised of technical, behavioural and personal competencies, underpinned by soft or hard skills. Soft skills as defined by Parsons (2008) are the intangible, personal characteristics that establish a person's capabilities as a leader coupled with enhancing role performance and professional possibilities. They are qualities that are attractive for certain professions and not based on acquired technical knowledge (Robles, 2012). Soft skills are continuously honed through applied application during an individual's approach toward everyday life as well as in the workplace (Magazine, 2003). Unlike hard skills, which are about a person's skill set and ability to perform a certain type of task or activity, soft skills are interpersonal and broadly applicable (Parsons, 2008). Technical skills are the knowledge and proficiency required for a task referred to as a hard skill (Robles, 2012). In contrast, soft skills are both individual characteristics and behaviours (Robles, 2012). Personal skills are a core component of soft skills (Cafasso, 1996; Klaus, 2010). Soft skills include personal qualities and behavioural attributes (James & James, 2004; Nieragden, 2000; Perreault, 2004). Personal skills include an individual's personality and attributes (Parsons, 2008). A behavioural skill or competency contributes to the attributes and traits of an individual, leading to cause effect or exceptional performance in work-related situations (Boyatzis *et al.,* 2002). The three key areas of competencies that categorised the characteristics that make an agricultural advisor effective were analysed according to whether or not they mentioned characteristics relating to each competence as shown in Appendix 6. The following results presented below were analysed by gender to identify whether males and females had different interpretations of the characteristics that make an agricultural advisor effective. Table 5 shows the three key areas of competence that categorised the characteristics that makes an agricultural advisor effective by gender.

Table 5. Effectiveness defined by three main characteristics (n=124).

			Gender (%)	
Area of Competence		*Male (n=97)*	*Female (n=27)*	*Total (n=124)*
Technical	*Mentioned*	83.5	74.1	81.5
	Not mentioned	16.5	25.9	18.5
Personal	*Mentioned*	54.6	66.7	57.3
	Not Mentioned	45.4	33.3	42.7
Behavioural	*Mentioned*	89.7	88.9	89.5
	Not Mentioned	10.3	11.1	10.5

Most notably, there was slight difference in the interpretation by 84% of male agricultural advisors who mentioned technical skills as being more important to just 74% of females. In contrast, 67% of the female agricultural advisors said that personal attributes are more important compared to just 55% of men who had mentioned it.

Qualities that make an agricultural advisor effective

The mean score was calculated for the qualities that make an advisor effective. Respondents were asked to rank in order of importance the qualities that make an agricultural advisor effective with a rank score of one being the least important and five the most important. Analysis of the relationship between gender and qualities that make an advisor effective by mean score ranking revealed that the first three qualities were more highly ranked by the male agricultural advisors which included building trust with clients, regular contact with clients and influencing farmer decision-making. In comparison, the female agricultural advisors ranked more highly the last two qualities namely challenging a farmer to change and increasing output on a client's farm than their male colleagues as shown below in Table 6.

Table 6. Qualities that make an advisor effective by gender mean score ranking (n=124).

	Qualities by Gender Mean Score (1-5)				
Gender	*Building trust with clients*	*Regular contact with clients*	*Influence farmer decision-making*	*Challenging a farmer to change*	*Increasing output on a client's farm*
Male (n=97)	4.30	3.38	2.84	2.37	2.11
Female (n=27)	3.63	3.30	2.63	2.56	2.89

Tasks that make an agricultural advisor effective

Results of the tasks that make an advisor effective were ranked by gender mean score below in Table 7. A mean score ranking of seven was considered the most important while a mean score ranking of one was deemed to be the least important. Both males and females ranked one-to-one farm visits as the most effective task. This was closely followed by discussion groups by both genders respectively. Writing media articles was the least important task both male and female agricultural advisors placed emphasis on. Interestingly, females (3.56) placed more emphasis on succession and inheritance planning in comparison to males (3.21). The male agricultural advisors ranked organising walks and events ahead of succession and inheritance planning.

Table 7. Tasks that make an advisor effective by gender mean score ranking (n=124).

	Tasks by Gender Mean Score (1-7)						
Gender	*One-to-one farm visits*	*Discussion groups*	*Scheme work*	*Organising walks and events*	*Farm planning*	*Succession and inheritance planning*	*Writing media articles*
Male (n=97)	5.84	5.19	4.19	3.64	3.90	3.21	2.05
Female (n=27)	5.26	5.00	4.41	3.30	4.33	3.56	2.15

Relationship between level of effectiveness and gender

Participants were asked about their perceived level of effectiveness in their agricultural advisory role compared to other advisors in their region with no statistical significance with gender (P-value=0.306). Intriguingly, 44.3% more male agricultural advisors considered themselves 'more effective' than their colleagues in their respective regions. However, 66.7% more females considered themselves to have 'less' or 'same' level of effectiveness relative to their peers in their respective regions as seen in Table 8 below.

Table 8. Perceived level of effectiveness compared to other advisors in their region by gender (n=124).

	Effectiveness as an advisor		
Gender	*Less/Same*	*Effective*	*Total*
Male (n=97)	54	43	97
	55.7%	44.3%	100.0%
Female (n=27)	18	9	27
	66.7%	33.3%	100.0%
Total	72	52	124
	58.1%	41.9%	100.0%
Chisq=1.049ᵃ DF=1 Significance=0.306			

Approaches to become more effective as an advisor by gender

Respondents were asked to classify suggested approaches that they thought would help them to become effective in their agricultural advisory work. As shown below in Table 9, males and females ranked their preferences slightly differently. Men rated in-service training (4.55) the most effective way to become more effective, while women rated having an experienced mentor (4.56) first. They both placed developing communication skills as the third most important way to become more effective whilst further education was the least important way to become more effective in their opinion.

Table 9. To become a more effective advisor by gender mean score ranking (n=124).

	Becoming More Effective by Gender Mean Score (1-6)					
Gender	*Have an experienced mentor*	*Do some continuous professional development*	*Attend more in-service training*	*Complete further education*	*Develop communication skills*	*Have an independent coach/mentor*
Male (n=97)	4.46	3.23	4.55	2.37	3.94	2.45
Female (n=27)	4.56	3.15	4.19	2.30	3.93	2.89

General perceived self-efficacy score as a measure of effectiveness

As part of the questionnaire, agricultural advisors ranked nine statements from a four-point scale adapted from the general self-efficacy scale created by Schwarzer and Jerusalem (1995). The scale was created to assess an individual's general sense of perceived self-efficacy, coping measures and adaption after experiencing difficult situations or events (Schwarzer & Jerusalem, 1995). Preferably, ten statements should be randomly included as part of a questionnaire that has the same response format (Schwarzer & Jerusalem, 1995). To determine the result, summing up all responses to each of the ten statements will generate the final score within a scale range from 10 to 40 (Schwarzer & Jerusalem, 1995).

In Table 10 below, each statement is outlined with the percentage of respondents giving a response of between one and four. An overall mean average score was also generated for each answer given by respondents. The results show that 72.6% of respondents stated that they could nearly always solve difficult issues if they try hard enough. This is whilst 53.2% said that they sometimes find it is easy to accomplish aims and goals as an agricultural advisor. Just over half of agricultural advisors believe that they always have confidence in their agricultural advisory role. Interestingly, 81.5% of respondents will ask for help from another advisor if they need assistance with an issue. With a mean average score of 2.98, asking for assistance from a regional manager was the response participants would least consider when asking for guidance and support on an issue. This corresponds with the response that solving most issues investing the necessary time and effort can be achieved with a mean average score of 3.66. Thus, it is why they would not approach their regional manager if they can solve these issues accordingly themselves.

Table 10. General Self-Efficacy statements used to determine effectiveness in an agricultural advisor's role (n=124).

General Self-Efficacy Scale Statements	*(1) Rarely (%)*	*(2) Maybe (%)*	*(3) Sometimes (%)*	*(4) Always (%)*	*Mean Score (1-4)*
Solve difficult issues	0.0	0.8	26.6	72.6	3.72
Persuasion to complete a task successfully	0.0	8.1	50.0	41.9	3.34
Easy to accomplish aims and goals as an agricultural advisor	0.8	21.8	53.2	24.2	3.01
Confidence in agricultural advisory role	0.0	10.5	37.1	52.4	3.42
Confident to deal with unexpected issues/events arising	0.8	10.5	41.1	47.6	3.35
Solve most issues investing the necessary time and effort	0.0	2.4	29.0	68.5	3.66
Confronted with an issue but can find a solution	0.0	2.4	41.1	56.5	3.54
If assistance required, ask for help from another agricultural advisor	1.6	2.4	14.5	81.5	3.76
If assistance required, ask for help from regional manager	15.3	15.3	25.8	43.5	2.98

General self-efficacy score and perceived level of effectiveness

For the purposes of this study, the general self-efficacy (GSE) scale was adapted for determining the perceived self-efficacy amongst agricultural advisors in Teagasc. Nine adjusted statements were included in the questionnaire for respondents to answer with a scale range of 9-36 achievable. To complete the analysis of the results, this was adjusted following the completion of the survey by dividing the result by nine and multiplying by ten to achieve the 10-40 point scale.

The GSE mean score along with the perceived level of effectiveness compared to other advisors in their region was used as a combined measure of effectiveness to establish if any factors affected the level of self-efficacy of the agricultural advisors. As a result, this created four groups of agricultural advisors characterised by their GSE score and perceived level of effectiveness. A breakdown of this is presented below in Table 11. The mean GSE score average was used to categorize perceived self-efficacy into two groups based on the mean average which was equivalent to 34.19 into above (≥34.19) and below (≤34.18) it.

Table 11. Breakdown of agricultural advisor groups characterised by their GSE score and perceived level of effectiveness (n=124).

Group	GSE score	Perceived level of effectiveness
Group 1 – Hesitant (n=35)	Below mean average (≤34.18)	Same/Less effective
Group 2 – Over-confident (n=18)	Below mean average (≤34.18)	More effective
Group 3 – Modest (n=37)	Above mean average (≥34.19)	Same/Less effective
Group 4 – Confident (n=34)	Above mean average (≥34.19)	More effective

Relationship between combined effectiveness and agricultural advisory experience

Analysis was undertaken to determine if there was a relationship between level of agricultural advisory experience and combined effectiveness divided under three categories of between zero and five years, from six to twenty years and greater than twenty years as shown below in Table 12. There was a significant relationship determined between level of agricultural advisory experience and combined effectiveness (P-value=0.033). Most notably, nearly a third of the hesitant group had between zero and five years' experience in comparison to the confident group where two-quarters of this group had over twenty years' experience. There was a more even distribute of the level of agricultural advisory experience between the groups with between six to twenty years' experience. This would suggest that the more experience an agricultural advisor has, the more confident they become.

Table 12. Relationship between combined effectiveness and agricultural advisory experience (n=124).

	Level of Advisory Experience			
Combined Effectiveness	*0-5 years*	*6-20 years*	*>20 years*	*Total*
Group 1 –Hesitant (n=35)	12	17	6	35
(%)	34.3%	48.6%	17.1%	100.0%
Group 2 – Over-confident (n=18)	4	8	6	18
(%)	22.2%	44.4%	33.3%	100.0%
Group 3 –Modest (n=37)	7	18	12	37
(%)	18.9%	48.6%	32.4%	100.0%
Group 4 –Confident (n=34)	1	17	16	34
	2.9%	50.0%	47.1%	100.0%
Total	24	60	40	124
(%)	19.4%	48.4%	32.3%	100.0%
Chisq=13.716^a DF=6 Significance=0.033				

Relationship between combined effectiveness and main agricultural advisory enterprise advised in

Each Teagasc agricultural advisor advises either solely or across a number of agricultural enterprises including dairy, drystock and other enterprises comprising of tillage, poultry, pigs, poultry, rural development, organic farming, soils and agri-environment. Cross tabulation was used to determine if there was any significant relationship between combined effectiveness and the main agricultural advisory enterprise advised in. No relationship was found to exist between the two variables across the groups (P-value=0.898). The results as presented below in Table 13, show that over a quarter of all advisors fall into the hesitant group compared to other agricultural advisors in their region in both dairying and drystock. A higher percentage of advisors fall into the same group also advising in other enterprises.

Table 13. Relationship between combined effectiveness and main agricultural advisory enterprise advised in (n=124).

	Main Advisory Enterprise			
Combined Effectiveness	*Dairy*	*Drystock*	*Other*	*Total*
Group 1 –Hesitant (n=35)	14	18	3	35
(%)	40.0%	51.4%	8.6%	100.0%
Group 2 – Over-confident (n=18)	9	9	0	18
(%)	50.0%	50.0%	0.0%	100.0%
Group 3 –Modest (n=37)	16	19	2	37
(%)	43.2%	51.4%	5.4%	100.0%
Group 4 –Confident (n=34)	13	18	3	34
(%)	38.2%	52.9%	8.8%	100.0%
Total	52	64	8	124
(%)	41.9%	51.6%	6.5%	100.0%
Chisq=2.222[a] DF=6 Significance=0.898				

Relationship between combined effectiveness and perceived characteristics that make an advisor effective

As previously stated respondents described the three most important characteristics of an effective agricultural advisor. Qualitative answers were categorised into three key areas of competence that defined all the important characteristics that make an advisor effective which were technical, behavioural and personal skills. Analysis in Table 14 below investigating as to whether there is a relationship between combined effectiveness and perceived characteristics that make an advisor effective of technical skills revealed no significant relationship (P-value=0.948). On average, over three-quarters of those in each group mentioned it as a key characteristic that would make an advisor effective in their role.

Table 14. Relationship between combined effectiveness and characteristic mentioned - technical skills that make an advisor effective (n=124).

	Technical Skills		
Combined Effectiveness	*Not Mentioned*	*Mentioned*	*Total*
Group 1 –Hesitant (n=35)	7	28	35
(%)	20.0%	80.0%	100.0%
Group 2 – Over-confident (n=18)	4	14	18
(%)	22.2%	77.8%	100.0%
Group 3 –Modest (n=37)	6	31	37
(%)	16.2%	83.8%	100.0%
Group 4 –Confident (n=34)	6	28	34
(%)	17.6%	82.4%	100.0%
Total	23	101	124
(%)	18.5%	81.5%	100.0%
Chisq=0.361[a] DF=3 Significance=0.948			

The second characteristic mentioned as a key trait, personal skills, was also analysed to establish whether there was a relationship with combined effectiveness as shown below in Table 15. Whilst there was no relationship of significance established between both variables (P-value=0.246), there were slightly more noticeable differences between the groups that mentioned it as a key characteristic of an effective advisor. The over-confident group mentioned it most often (77.8%) followed by the confident group (58.8%) and the same for the hesitant and modest groups (51.4%)

Table 15. Relationship between combined effectiveness and characteristic mentioned - personal skills that make an advisor effective (n=124).

	Personal Skills		
Combined Effectiveness	*Not Mentioned*	*Mentioned*	*Total*
Group 1 –Hesitant (n=35)	17	18	35
(%)	48.6%	51.4%	100.0%
Group 2 – Over-confident (n=18)	4	14	18
(%)	22.2%	77.8%	100.0%
Group 3 –Modest (n=37)	18	19	37
(%)	48.6%	51.4%	100.0%
Group 4 –Confident (n=34)	14	20	34
(%)	41.2%	58.8%	100.0%
Total	53	71	124
(%)	42.7%	57.3%	100.0%
Chisq=4.144^a DF=3 Significance=0.246			

The final characteristic, behavioural skills, yielded a result of no significance in the relationship between it and combined effectiveness (P-value=0.251) in Table 16 below. Of interest however, is that across all groups, 90.3% of respondents mentioned it as a key characteristic of an effective advisor.

Table 16. Relationship between combined effectiveness and characteristic mentioned - behavioural skills that make an advisor effective (n=124).

	Behavioural Skills		
Combined Effectiveness	*Not Mentioned*	*Mentioned*	*Total*
Group 1 –Hesitant (n=35)	3	32	35
(%)	8.6%	91.4%	100.0%
Group 2 – Over-confident (n=18)	3	15	18
(%)	16.7%	83.3%	100.0%
Group 3 –Modest (n=37)	1	36	37
(%)	2.7%	97.3%	100.0%
Group 4 –Confident (n=34)	5	29	34
(%)	14.7%	85.3%	100.0%
Total	12	112	124
(%)	9.7%	90.3%	100.0%
Chisq=4.098^a DF=3 Significance=0.251			

3.1.4. To determine if the factors age, stage in family life-cycle and work-life balance affect self-efficacy

Using combined effectiveness as a basis for identifying if there is a relationship between variables, this focused on meeting the second research objective to determine if the factors age, stage in family life-cycle and work-life balance affect self-efficacy of the male/female agricultural advisors.

Relationship between combined effectiveness and age

Upon examination to identify a relationship between combined effectiveness and age, there was no relationship found between the two variables (P-value=0.243). Across all the age groups, most notably was that 66.1% of all advisors fall into the age category of 30-49 in Table 17. Of those between the age categories of <29 and 30-49 the overall majority lie within the hesitant and modest group.

Table 17. Relationship between combined effectiveness and age (n=124).

		Age		
Combined Effectiveness	*<29*	*30-49*	*>50*	*Total*
Group 1 –Hesitant (n=35)	7	23	5	35
(%)	20.0%	65.7%	14.3%	100.0%
Group 2 – Over-confident (n=18)	2	10	6	18
(%)	11.1%	55.6%	33.3%	100.0%
Group 3 –Modest (n=37)	7	24	6	37
(%)	18.9%	64.9%	16.2%	100.0%
Group 4 –Confident (n=34)	1	25	8	34
(%)	2.9%	73.5%	23.5%	100.0%
Total	17	82	25	124
(%)	13.7%	66.1%	20.2%	100.0%
Chisq=7.928[a] DF=6 Significance=0.243				

Relationship between combined effectiveness and work-life balance

Respondents were asked to give a ranking of their work-life balance on a scale of one to five. It was then categorised into two variables with a score of one to three renamed poor and four to five described as good for work-life balance. Analysis was carried out to see if there was any relationship with the combined effectiveness variable as shown in Table 18 below. This yielded no significant relationship with work-life balance (P-value=0.422). Across all the groups, over 61.3% of the agricultural advisors had a poor work-life balance compared to 38.7% who thought they had a good work-life balance. Most notably, the

68.6% of the hesitant group described their work-life balance as poor, as did the modest group at 64.9%.

Table 18. Relationship between combined effectiveness and work-life balance (n=124).

Combined Effectiveness	**Work-Life Balance**		
	Poor	*Good*	*Total*
Group 1 –Hesitant (n=35)	24	11	35
(%)	68.6%	31.4%	100.0%
Group 2 – Over-confident (n=18)	11	7	18
(%)	61.1%	38.9%	100.0%
Group 3 –Modest (n=37)	24	13	37
(%)	64.9%	35.1%	100.0%
Group 4 –Confident (n=34)	17	17	34
(%)	50.0%	50.0%	100.0%
Total	76	48	124
(%)	61.3%	38.7%	100.0%
Chisq=2.808[a] DF=3 Significance=0.422			

Relationship between work-life balance and stage in family life-cycle with children

The questionnaire asked all participants if they had any children and how many if they did as part of the factor of stage in family life-cycle. There was a near-marginal significant relationship found to exist between these two variables (P-value=0.181) in Table 19 as highlighted. While not statistically significant, there was a notable trend with respondents with children under eighteen were split halfway in terms of having a good or poor work-life balance while almost three-quarters of those without children reported poor work-life balance.

Table 19. Relationship between stage in family life-cycle with children and work-life balance (n=124).

	Work-Life balance		
Number of Children	*Poor*	*Good*	*Total*
None (n=33)	24	9	33
(%)	72.7%	27.3%	100.0%
Under 18 years and Adults (n=78)	43	35	78
(%)	55.1%	44.9%	100.0%
Adults only (n=13)	9	4	13
(%)	69.2%	30.8%	100.0%
Total	76	48	124
(%)	61.3%	38.7%	100.0%
Chisq=3.413[a] DF=2 Significance=0.181			

Relationship between stage in family life-cycle with children and effectiveness

Analysis was undertaken to determine if there was a relationship between the number of children and effectiveness as an advisor compared to others in their region. There was a near-marginal significant relationship between the two variables (P-value=0.055) as shown below in Table 20. While just outside the boundary of statistical significance, there was a prominent trend with respondents with children under eighteen as they were more likely to see themselves as more effective than their peers. Of those with no children, 30.3 % said they had the same or less effect compared to their colleagues with no children in their region. Whereas, those with children under eighteen and or adults, said 50% were more effective as an advisor in their region compared to their peers.

Table 20. Relationship between stage in family life-cycle with children and effectiveness (n=124).

	Effectiveness		
Number of Children	*Less/Same*	*More*	*Total*
None (n=33)	23	10	33
(%)	69.7%	30.3%	100.0%
Under 18 years and Adults (n=78)	39	39	78
(%)	50.0%	50.0%	100.0%
Adults only (n=13)	10	3	13
(%)	76.9%	23.1%	100.0%
Total	72	52	124
(%)	58.1%	41.9%	100.0%
Chisq=5.816[a] DF=3 Significance=0.055			

Relationship between elder care responsibilities and work-life balance

Respondents also answered whether or not they had elder care responsibilities. The responses were combined to form two new groups with either none or some/significant responsibilities. The some or significant elder care responsibilities categories were combined for this analysis, as it gave a statistically representative result as there were very few respondents with significant elder care responsibilities. This was compared with work-life balance to establish if a relationship existed with it as shown below in Table 21. No significance in the relationship was found to exist between the two variables (P-value=0.859). Following analysis, 59.5% of those who had no elder care responsibilities had a poor work-life balance and 64.4% who had either some or significant responsibilities had also a poor work-life balance.

Table 21. Relationship between elder care responsibilities and work-life balance (n=124).

	Work-Life Balance		
Elder Care Responsibilities	*Poor*	*Good*	*Total*
None (n=79)	47	32	79
(%)	59.5%	40.5%	100.0%
Some/Significant (n=45)	29	16	45
(%)	64.4%	35.6%	100.0%
Total	76	48	124
(%)	61.3%	38.7%	100.0%
Chisq=0.303[a] DF=2 Significance=0.859			

3.1.5. To establish if continuous professional development and other professional development supports (mentoring) impact on self-efficacy of male/female advisors

This section focuses on objective three of the study which is to identify how male/female advisors define effectiveness in their agricultural advisory role.

Relationship between education and combined effectiveness

Participants in the questionnaire were also asked about their level of education. For balanced representative analysis, the Masters and PhD categories were amalgamated. Table 22 below shows the results of a cross tabulation between the education and combined effectiveness variable. No relationship of significance was determined between both variables (P-value=0.616). The overall majority (54.5%) of the hesitant group had a third level degree compared to the rest of the groups whom the majority had a Masters or PhD. Most notably, in the over-confident group, 61.1% stated that they had completed further education after their third level degree.

Table 22. Relationship between combined effectiveness and education (n=124).

	Education		
Combined Effectiveness	*Third Level Degree*	*Masters/PhD*	*Total*
Group 1 –Hesitant (n=35)	19	16	35
(%)	54.3%	45.7%	100.0%
Group 2 – Over-confident (n=18)	7	11	18
(%)	38.9%	61.1%	100.0%
Group 3 –Modest (n=37)	15	22	37
(%)	40.5%	59.5%	100.0%
Group 4 –Confident (n=34)	16	18	34
(%)	47.1%	52.9%	100.0%
Total	57	67	124
(%)	46.0%	54.0%	100.0%
Chisq=1.792[a] DF=3 Significance=0.616			

Relationship between combined effectiveness and in-service training

Regarding in-service training, respondents were questioned about how often they attend in-service training on an annual basis across all enterprises as shown below in Table 20. For balanced representative analysis, the in-service training variable was combined to form two new variables namely 0-3 times a year and 4-5 times a year for enhanced analysis. This relationship between both variables had no strong association in their relationship (P-value=0.912). Across all groups a total combination of 88.7% attended in-service training 4-5 times a year. The hesitant group appeared to be the group that least attended training only up to three times a year where only 14.3% attended in-service training.

Table 20. Relationship between combined effectiveness and in-service training (n=124).

	In-service training		
Combined Effectiveness	*0-3 times a year*	*4-5 times a year*	*Total*
Group 1 –Hesitant (n=35)	5	30	35
(%)	14.3%	85.7%	100.0%
Group 2 – Over-confident (n=18)	2	16	18
(%)	11.1%	88.9%	100.0%
Group 3 –Modest (n=37)	4	33	37
(%)	10.8%	89.2%	100.0%
Group 4 –Confident (n=34)	3	31	34
(%)	8.8%	91.2%	100.0%
Total	14	110	124
(%)	11.3%	88.7%	100.0%
Chisq=0.529[a] DF=3 Significance=0.912			

Relationship between combined effectiveness and mentorship

No significant relationship exists between combined effectiveness and mentorship following analysis (P-value=0.174) as shown in Table 21 below. Interestingly, the hesitant group stated they have a low-level of engagement with a mentor at 54.3%. Compared to the other three groups, the hesitant group were least likely to seek out mentorship. While not statistically significant, there does appear to be a relationship with the hesitant group who are least likely to avail of mentoring.

Table 21. Relationship between combined effectiveness and mentorship (n=124).

	Mentorship			
Combined Effectiveness	*Low*	*Moderate*	*High*	*Total*
Group 1 – Hesitant (n=35)	19	13	3	35
(%)	54.3%	37.1%	8.6%	100.0%
Group 2 – Over-confident (n=18)	4	9	5	18
(%)	22.2%	50.0%	27.8%	100.0%
Group 3 –Modest (n=37)	12	18	7	37
(%)	32.4%	48.6%	18.9%	100.0%
Group 4 –Confident (n=34)	10	19	5	34
(%)	29.4%	55.9%	14.7%	100.0%
Total	45	59	20	124
(%)	36.3%	47.6%	16.1%	100.0%
Chisq=9.000[a] DF=6 Significance=0.174				

3.2. Section B - Semi-structured Interviews

This section summarises the six semi-structured interviews held throughout Ireland with Teagasc agricultural advisors.

3.2.1. Approach to Semi-structured Interviews

Upon completion of the questionnaire, all participants had the option to consent to a semi-structured interview with 41% of respondents agreeing to participate further. For the semi-structured interview, six agricultural advisors, three males and females were chosen to participate based on gender, age, agricultural advisory experience and education level. The semi-structured interview guide created, focused on the three main themes of perceived effectiveness in the agricultural advisory role, career stage and work-life balance as demonstrated in Appendix 1 derived from the literature review. Each interview lasted approximately thirty minutes in duration.

3.2.2. Semi-structured Interview Participant Profiles

The following profile below outlines the six respondents that voluntarily agreed to participate in the semi-structured interview for the research study. Six participants were chosen based on a number of characteristics. These included gender, age, agricultural advisory experience, enterprise advised in and education level. One female and male were selected from each of the following age categories; <29, 30-39 and 40-49. This was further characterised based on advisory experience, education and enterprises advised in as shown below in Table 23.

Table 23. Agricultural Advisor Characteristics (n=6).

	Sample (%)	No. of Respondents (n=6)
Gender		
Male	50.0	3
Female	50.0	3
Age		
<29	33.3	2
30-39	33.3	2
40-49	33.3	2
Education		
Third Level Degree	33.3	2
Masters/PhD Degree	66.7	4
Main Agricultural Enterprises Advised in		
Dairy	33.3	2
Drystock	50.0	3
Tillage	16.7	1
Agricultural Advisory Experience		
0-5 years	33.3	2
6-20 years	50.0	3
>20 years	16.7	1

Detailed analysis of all six interview was undertaken to illicit the key themes that were most evident across all interview transcripts. The themes of self-efficacy coupled with job effectiveness as an agricultural advisor, work-life balance, stage of family life-cycle, continuous professional development and mentorship were all prominent in the semi-structured interviews relating to the research objectives of the study.

Self-efficacy and job effectiveness

Establishing a career as an agricultural advisor by building trust and establishing relationships with clients is a recurring theme within the role of the agricultural advisor. The role begins with building relationships with the clientele. Being effective is achieved through success with completion of tasks. This is evident from the thematic analysis related to job effectiveness.

"I think with some farmers more than others, I would find that I'm effective in the advisory role in terms of scheme work. I would be effective on that and that they get paid at the end of the day." #AD42

"You see the best influences where you laid the seed for doing that…it's those kinds of things where you use farmer's experiences to show little wins that you can get…if you're looking for big changes you won't see them in the short space." #AD105

Additionally, job effectiveness is linked with building relationships with clients. Agricultural advisors must build trust and a working relationship in order to encourage knowledge transfer and technology or practice adoption. Relating to personal experience can encourage relationship building between the client and agricultural advisor.

""I'm not going to tell them to do something that I know I wouldn't be prepared to do myself……When they are taking something on board and they see payback from it….you know that's where I get my kick from the job." #AD7

"I often find myself saying what I do at home is…..I would say it's a benefit because farmers know of my parents and in more than one way they could be trusting of you than a stranger." #AD42

Job effectiveness is also linked to performance in the agricultural advisory role. Some of the respondents related to the burdening of so called scheme work and challenges in the role with the increasing amount of paperwork which hindered their ability to complete tasks and to be effective as an agricultural advisor contrary to a perceived higher self-efficacy. Job effectiveness was viewed differently by all respondents in the interpretation. It was evident that each respondent believed that effectiveness can be achieved through the completion of a scheme application as suggested by two respondents below:

"I was made permanent quite young.…… to work as a beef advisor and REPS advisor….my career; it's been 'scheme based work' REPS and environmental." #AD10

"I think with some farmers more than others I would find that I'm effective in the advisory role in terms of scheme work. I would be effective on that and that they get paid at the end of the day." #AD42

Another view was similarly held in relation to discussion groups involved in a scheme in terms of job effectiveness. This is just one example where an advisor was slightly insecure about discussion groups and their ability to be effective. They felt that the scheme work would make an advisor effective because they have completed a task. Even if this was not the case, they would still like to believe that they would have the discussion group without the administrative duties and scheme work attached, as stated below:

"I would like to think that if there was no scheme there that I'd still have two discussion groups going and that the clients would think that they would benefit from being in a discussion group…I want to have just a 'good reputation' to clients." #AD42

Job effectiveness was viewed differently by all respondents in the interpretation. It was evident that scheme work was not necessarily viewed as a form of job effectiveness. As an administrative duty, it wasn't necessarily a task that gives an advisor a good reputation with their client. In fact, it could be a source of frustration of invaluable time spent, as suggested below:

"I didn't go to UCD' to be filling out forms." (Referring to tasks performed on behalf of some clients), #AD7

Agricultural advisors can lose their ability to encourage future development and knowledge transfer adoption of new practices and technology with their clients. This happens quickly as they have to prioritise their responsibilities which can mainly be dictated by scheme work. Hence, their ability to be effective in their role through farm visits, discussion groups and events can be hindered. Similarly, this was again evident whereby, scheme work like single farm payments can dictate an agricultural advisors' time for a long period in the springtime as summed up by this respondent:

"Some advisors sit behind a desk and get stuck there at single farm payment." #AD3

As previously acknowledged, discussion groups are viewed by some of the participants as primary examples of job effectiveness. However, one of the participants highlighted the burden and of administration involved with discussion groups. They mentioned the heavy workload associated with it and also the scheme work if they are involved with discussion groups who participate through a scheme. This extra work can lead to ineffectiveness and job dissatisfaction affecting other parts of their role such as tasks like individual farm visits as suggested below by one respondent:

"I see three or four of my colleagues who are spending a couple of hours studying excel sheets (Knowledge Transfer Scheme Discussion Groups) to see who hasn't made the four/five meetings.......I can see guys demoralised that they took on too many groups and they didn't get out to see the clients."#AD3

"You could be talking about breeding and it could be relevant to only a small number of farmers and at the same time it needs to be covered. So it is about 'juggling' things and trying to aim different topics and sessions at that." #AD42

Job effectiveness can be achieved by trying to manage the workload effectively through practical measures. This was evident with one of the respondents who clearly had set out objectives to try and improve their ability to try to relieve the workload associated with extra scheme administration and use that time more efficiently. This would be through directing the responsibilities to other sources so that they could concentrate on more important aspects of their role such as visiting clients instead. This was apparent with this respondent who stated:

"You're a key influencer and I think they value you that bit more..... I would sit down with my boss at the start here for PMDS and say 'I want to make more visits earlier in the year' and they'd accommodate me by subcontracting out some of my single farm payment but they'd say I know you'll make use of them." (Talking about (PMDS) performance management development system with their manager to enhance their effectiveness by carrying out more farm visits annually) #AD3

The importance of building client relationships and a reputation as an agricultural advisor with the clientele can enhance their ability to be effective in their role even if it requires flexibility and facilitation of clients to help them in terms of scheme work. This was evident with one respondent who placed emphasis on the client-advisor relationship and its' significance. Showing flexibility and facilitation for clients helps to build trust and forge a stronger working relationship and also their ability to be effective in the client's view to complete tasks and deliver good customer service. A good example of this was given by a respondent who referred to the importance of prioritising a client's farm planning needs in a short period in order to be perceived as effective by that client in their ability to deliver results for them by completing the scheme work.

"I had to do a TAMS application to put on 2-4 units at the back of the parlour and the deadline is in two days' time and they are getting onto you now. You know you just have to accommodate them." #AD60

As shown, there are different, diverse views and interpretations held by the respondents. This is influenced and shaped by a number of factors including the perceived view of effectiveness in the role which varies from completing scheme work to farm visits. Each interpretation of effectiveness is different due to the personal, subjective view which is influenced cognitively by the person, their behaviour and environment, as explained by the social cognitive theory which underpins self-efficacy and job effectiveness.

Work-life balance and stage of family life-cycle

Managing your work-life balance is essential to manage both your workload and also your personal and family life effectively. It also has an impact on an advisor's sense of self-efficacy. Several examples were given by participants of the ways to manage this workload effectively and also negatively. Most notably, was how the respondents managed their role effectively and had different approaches to manage work-life balance. An example of one respondent clearly demonstrates how simple management of their workload can have a positive effect on maintaining a good work-life balance:

"I've learned over the years to say 'no' to what you can and can't do…..by saying 'no' that's just one example of how to manage your workload." #AD3

The same respondent also emphasised the importance of planning and managing time to coordinate the role and prioritise tasks that are required to be done. This was highlighted by this respondent who clearly understood the need for prioritisation to successfully and efficiently maintain a good work-life balance. This respondent clearly had a definite understanding of how to maintain that work-life balance:

“I plan in advance of what I’m doing each month and determinedly stick to it….If you plan and know you have a manageable workload then you know you’re not going working after 5.30pm in the evening and be home on time for your dinner….I switch off and don’t bring my work home with me.” #AD3

Work-life balance also requires extra support especially when some of the advisors were more advanced in their career and had a family also. The significance of time-management, back-up support, communication and flexibility of work-load was a recurring theme between the domains. For example, having a supportive family was an essential part of maintaining the balance as suggested by this respondent:

”I’m lucky because I have massive backup and a very supportive husband...I don’t have a big long commute to my work so I’m not actually tired when I get here. I think a couple of advisors had a commute for an hour or an hour and a half commute and they’d look at it very differently…I wouldn’t be able to do night-time work unless you had somebody at home or somebody to take the ‘brunt’ of it really.” #AD10

Disciplining one’s self begins with learning to separate the work and family domains namely, not completing extra tasks from work at home. One interview participant gave an example of how they manage that work-life balance by learning to detach themselves from their role and working environment stating:

”I wouldn’t really bring much work home with me. I would have a personal and work phone and I don’t want to look at the work phone over the weekend. I kind of want to keep them separate….when you leave work; you leave it in work. You’re not bringing things with you and not trying to finish things late at night….I’d leave work and not really think about it.” #AD42

One respondent who was still in the midst of learning to separate their work-life balance clearly had difficulty between managing both their personal and work-life domains. An example of poor management of personal and work domains was shared:

“If I come into work pissed off about something or if I come in tired or wrecked my whole performance and concentration is gone for the day.” #AD7

Work-life balance can be hindered by numerous factors which affect balancing of the workload. For example, commuting was recognised as a hindrance to a perceived good-work life balance for one respondent. Recognition of poor time management and commuting was a factor in this advisor's daily challenge to try and better their work-life balance by changing their approach. This respondent stated:

(Acknowledging poor work-life balance and after changing work-life balance for better management) "I was commuting and it was 82 miles morning and evening. That wasn't a good work-life balance….I can do the school run in the morning, drop the kids to school and my wife collects them, my wife starts earlier and finishes earlier so she can collect them. So we have a good-work life balance." #AD105

Another example of poor management of workload is where an advisor struggled with parental leave and workload. As a result they struggled to achieve a successful work-life balance as explained below:

" I was applying for parental leave. I had been on it and came off it and on it and off it literally due to workload. There was no adjustment to workload. I had the same number of clients and you'd have the same deadlines. You'd end up taking files home with you that lent itself that you could do it at night." #AD60

It was evident that some advisors were at different stages of the family life-cycle and had different challenges to overcome. Other respondents highlighted how they separate their work-life balance by having a good management structure leading to a successful approach to balancing their work, personal and family life.

Continuous professional development and further education

Continuous professional development presents the opportunity for agricultural advisors to up-skill their techniques and also the opportunity to advance their knowledge and learning. This varies from in-service training to further education which is essential for keeping up-to-date in the role as an agricultural advisor and for career progression. Opportunities for further education helped to gain valuable experience and knowledge. This is summarised by one respondent who completed further education stating:

"The masters gave you more time to think of what I might or might not do." #AD3

Continuous professional development offers a networking and knowledge-sharing opportunity and prospect to meet other agricultural advisors. This was evident in the interviews with advisors who placed huge emphasis on the networking and opportunity to advance their knowledge base and learning with more experienced advisors. This was outlined by one respondent who commented:

“In-service training was great for a chance to meet up with your colleagues again.” #AD3

Another important area that was emphasised by respondents was the value of the networking opportunity with advisors from across the organisation. This was crucially important as they were able to share experiences and problems which benefited their learning and helped to deal with conflicting issues with clients and on-going development of technical issues affecting them. Again, one respondent clearly highlighted this when they discussed the benefits of in-service training, one form of continuous professional development.

“You’ll have somebody who has something you have come across or he came across last week and you’re going to come across this week and you’re heading off having to go to that person with the query and he’ll be able to answer it there and then with a discussion around it or somebody has seen it 3-4 years ago and all that information is coming out there and it’s great.” #AD105

Continuous professional development and further education have positive effective outcomes for agricultural advisors to benefit from, to assist with on-going issues and keep up-to-date with technical information and the opportunity to network with like-minded others. All this helps to contribute positively toward the self-efficacy of an individual.

Other development supports - mentorship

Other development supports such as mentorship have been identified as a recurring theme throughout the interviews with respondents. This was evident when one respondent commented on the benefit of having the opportunity to talk and learn from other more experienced agricultural advisors who had ‘know how’ experience working and dealing with issues those respondents may have come across also and could benefit from the mentoring. This example demonstrates this:

"It was nice to be asked in and that someone was looking over you and watching out for you….It's important that advisors get some mentorship or help…I do believe in mentoring young advisors as they need help." #AD3

A positive environment encourages positive relations for advisors to benefit from other agricultural advisors and enhance their ability to be more effective in their advisory role and having that as an option was important. This was again identified when one respondent mentioned the significance of an 'open door policy':

"There was an open door policy, if you had something you wanted to ask you could ask them. If you asked something you were always given time." #AD105

Not only does the mentorship benefit the advisor themselves, but also gives them the possibility to reflect and think about how they can improve their approach or method to engage with clients or deal with conflict effectively in their role. Learning and reflection benefit the agricultural advisor positively contributing to their sense of self-efficacy as underpinned by this respondent who explained that learning about one's self can be a positive experience for learning to improve engagement, execution and management of tasks by getting feedback from others through mentoring or by exploring ideas and approaches suggested by colleagues:

"I think it's huge in terms of your work and your workplace knowing that you have someone you can go to…. Sometimes you just don't know if somebody else came in with you on occasions, you could learn a lot about yourself as an advisor to see how you manage things when they crop up in a meeting. You would learn more about different advisory things but just running and managing the group; you'd maybe get ideas to run or manage the group better." #AD60

Mentorship was an area that agricultural advisors positively contributed their opinions as it gave them the chance to learn, develop and hone their ideas, responses, and approaches to tasks whilst also giving perspective for reflection on previous experiences which allows for the progression and improvement of their effectiveness as agricultural advisors.

3.3. Section C - Discussion

This section presents a discussion on the research study findings and analysis coupled with discussing findings of similar studies. The structure and content of this section follows the outline of the research objectives.

3.4.1. Introduction

The focus of this study examined the use of social-cognitive theory as a basis in assessing the generalized perceived self-efficacy as a measure of perceived effectiveness of agricultural advisors based in the Teagasc Organisation. This cross-sectional design employed the research methodologies of a questionnaire which ascertained the general self-efficacy of the agricultural advisor and defined what makes an effective in their role. In addition, it examined whether the factors of age, experience, stage in family life-cycle, work-life balance, continuous professional development and other development supports namely, mentoring, impacted on their general self-efficacy. The semi-structured interviews further elicited information pertaining to the research objectives and questions outlined which were:

1. To identify how male/female agricultural advisors define 'effectiveness' in their agricultural advisory roles.
2. To determine if the factors of age, stage in family life-cycle and work-life balance affect self-efficacy of male/female agricultural advisors.
3. To establish if continuous professional development and other professional development supports - mentoring impact on self-efficacy of female/male advisors.

3.4.2. Objective one - Identify how male or female agricultural advisors define effectiveness in their agricultural advisory roles

To determine effectiveness of the agricultural advisor, different variables including characteristics, qualities, tasks and self-perceived level of effectiveness were analysed to identify this objective.

Respondents were asked to describe the three most important characteristics of an effective agricultural advisor. All qualitative answers ascertained were categorised into the three key areas of competence namely technical, behavioural and personal competencies. There was a slight difference in the interpretation by male agricultural advisors who identified technical skills as being more important than female agricultural advisors. In contrast, female agricultural advisors stated that personal attributes were just as significant in comparison to men. As previously denoted, literature suggests that 'soft' skills were just as good an indicator of job performance as traditional job qualifications or hard skills. Although, soft skills are important to recognize and improve, 'hard' skills are just as important. Whilst both genders placed more emphasis on certain characteristics, individual perceptions do not always encapsulate the objective competencies and may be influenced. Although, they are a critical indicator of how individuals experience their role and environment (Riggle *et al.,* 2009). Demerouti *et al.,* (2001) highlighted that employee' perceptions of job characteristics relate to their respective observed experiences.

Analysis of the relationship between gender and qualities that make an advisor effective by mean score ranking highlight that both sexes ranked building trust with clients as the most important quality. Trust is an integral part of maintaining working relationships with clientele. Hacker *et al.,* (2001) contended that trust consists of three parts: consistency, commitment and capability. However, if trust does not exist, then one of these components is potentially missing. The more trust the advisor and client have in each another, the more they appreciate their working relationship (Hacker *et al.,* 2001). Trust becomes a key trait for the stability of any working relationship and continued success (Doney & Cannon, 1997; Kramer & Tyler, 1995; Sharma & Pattersson, 1999). A farm visit is an important part of the agricultural advisor's work in terms of establishing rapport with the clientele in their region coupled with building trust and confidence which are crucial to the success and effectiveness of their work. Both genders ranked one-to-one farm visits as the most effective task, followed by discussion groups by both genders respectively. The farm visit is an approach which best supports the context of the local region, which farmers particularly value, coupled with the interpretation of agricultural knowledge that advisors can disseminate (Jones *et al.*, 1987; Dampney *et al.,* 2001). The farm visit is the most effective advisory tool an agricultural advisor can utilise and is the most valued communication method by the client (Fearne 1991; Angell *et al.,* 1997; ADAS 2000).

Participants were asked about their perceived level of effectiveness in their agricultural advisory role compared to other advisors in their region. It had no significant relationship with gender. Intriguingly, more male agricultural advisors considered themselves 'more effective' than their colleagues in their respective regions. However, more females considered themselves to have 'less' or the 'same' level of effect relative to their peers in their respective regions. Albeit, both genders may exhibit similar levels of performance in their role, they could perceive their abilities to be effective differently (Bandura, 1997). With regard to self-efficacy, research studies have shown that this is lower for women (Beyer, 1990; West *et al.,* 2002; Sieverding & Koch, 2009). This links in with the relationship between perceived level of effectiveness and gender and why women may perceive themselves as the less effective to their colleagues in their region. As previously stated in the literature review, women tend to have a lower general perceived self-efficacy working in male-dominated professions.

Respondents were asked to rank helpful ways that they thought would help them to become more effective in their agricultural advisory work. Both sexes ranked their preferences slightly differently. The males rated in-service training as the most valuable way to become more effective, whilst the females chose the option of having an experienced mentor instead. Further education was the least important way to become more effective in their opinion. In-service training helps to enable agricultural advisors to hone and develop their skills and relevant competencies in addition to equipping them with the skill to manage difficult or technically advanced challenges in their agricultural activities (Okereke & Onu, 2007). Literature has clearly highlighted the long-standing contribution that role models, mentors, and mentoring positively offer as a central part in professional development and transition (Seevers & Foster, 2004). A mentor is delineated as an experienced individual who guides and influences a less experienced person (Foster & Seevers, 2004).

As previously stated, for the purposes of this study, the general self-efficacy (GSE) scale was adapted for determining the perceived self-efficacy amongst agricultural advisors. The GSE mean score along with the perceived level of effectiveness compared to other advisors in their region was used as a combined measure of effectiveness. This was to establish if any factors affected the level of self-efficacy of the agricultural advisors. Four new groups were created characterised by their GSE score and perceived level of effectiveness into the hesitant, modest, confident and over-confident groups.

There was a significant relationship between the level of experience and combined effectiveness identified. Most notably, nearly a third of the hesitant group had between zero and five years' experience in comparison to the confident group where two-quarters of this group had over twenty years' experience. This suggests that perhaps the more experience an advisor has, the more confident they become. Awasthi *et al.,* (2001) found in a similar study that experience in a role is an important determinant in performance and effectiveness in a role. It is evident that the more confident an individual is in terms of efficaciousness and experience, as was found with the confident group, the more likely they are to be effective in performing tasks in their role. For the hesitant group, the inexperience could possibly impact self-efficacy negatively and the ability to complete tasks effectively in their role.

Each Teagasc agricultural advisor can advise either solely or across a number of agricultural enterprises as stated previously. Analysis revealed no significant relationship between combined effectiveness and the main agricultural advisory enterprise advised in. The results showed that over a quarter of all advisors fall into the hesitant group advising in both dairying and drystock enterprises. Linder (2001) found that the correlation between competency and performance was strong and significant. This shows that competencies lead to stronger confidence of the agriculture advisor as a leader to achieve the desirable performance working in different agricultural enterprises.

Investigation of a relationship between combined effectiveness and perceived characteristics that make an advisor effective, namely technical, personal and behavioural skills demonstrated no significance between the three variables. The overall majority of each group mentioned it as a key characteristic that would make an advisor effective in their role except for the over-confident group. The second characteristic, personal skills had more noticeable differences associated with all the groups which mentioned it as a key characteristic of an effective advisor with the over-confident group mentioning it most often. The final characteristic, behavioural skills yielded no significance in the relationship between it and combined effectiveness. Across all groups, respondents mentioned it as a key characteristic. Most notably was that it could be suggested that the over-confident group compensate for a lack of technical skill with reliance on their personal skills. Jonassen and Grabowski (1993) found that individuals with an internal locus of control which is determined by hard work, success and attributes such as overconfidence have a strong sense of personal self-efficacy. Their prospect and expectation of a successful outcome is based on their view of their effort, capability, and competency level and as a result can lead to over-confidence.

Within the semi-structured interviews, establishing a career as an agricultural advisor by building trust and establishing relationships with clients through job effectiveness was an important theme identified. An agricultural advisors' role begins with building relationships with the clientele. Being effective is also achieved through success with completion of tasks and is evident from the thematic analysis related to job effectiveness and efficaciousness of the person. Agricultural advisors must build trust and a working relationship first before they seek to transfer knowledge and technology or practice adoption. Relating to personal experience can encourage relationship building between the client and agricultural advisor. Some respondents discussed the additional burdening of scheme work and challenges in the role. This increase in paperwork hindered their ability to complete tasks and to be effective as an agricultural advisor. Job effectiveness was viewed differently by all respondents in the interpretation. It was evident that scheme work was not necessarily viewed as a form of job effectiveness. As an administrative task, it doesn't necessarily give an advisor a good reputation with their client. In fact it can be a source of frustration of invaluable time invested.

Agricultural advisors can lose their ability to help future development and knowledge transfer adoption of new practices and technologies with their clients very quickly as they have to prioritise their responsibilities which can be easily dictated by scheme work. Hence, their ability to be effective in their role through other methods such as farm visits, discussion groups and events can be hindered. As previously mentioned, discussion groups were viewed by the majority of participants as primary examples of job effectiveness. However, for example one of the participants involved with discussion groups as a facilitator through a scheme highlighted that because of the heavy administration burden associated with that scheme, it required significant time to complete to the administration and thus affected them to devote their time to other aspects of their work. This meant that extra time was devoted to more administration and less for more perceived effective approaches with clients such as farm visits.

Job effectiveness can be achieved by trying to manage the workload effectively through practical measures. This was evident where setting out objectives helped to relieve the workload associated with scheme work by directing the responsibilities to other sources. As a result, that they could concentrate on more important aspects of their role. Building client relationships and a good reputation as an agricultural advisor with the clientele, enhances the ability to be effective in the role even if it requires flexibility and facilitation of clients to help them in terms of their scheme work. This was evident with emphasis placed on the client-advisor relationship and its significance as it determines the working relationship to be effective in the client's view of job effectiveness and good customer service. As shown, there are different, diverse views and interpretations held by advisors at different stages of their careers. This is influenced and shaped by a number of factors including the perceived view of effectiveness in the role which varies from completing scheme work to farm visits. Each interpretation of effectiveness is diverse due to the personal, subjective view which is influenced cognitively by the person, their behaviour and environment, as explained by the social cognitive theory which underpins self-efficacy and job effectiveness. Previous literature has highlighted that both self-efficacy and motivation are both integral part of job performance and effectiveness. Judeh (2012) looked at whether characteristics of a job had any impact on job performance and self-efficacy. The study showed that it did have an impact on job performance, effectiveness and self-efficacy (Judeh, 2012). General self-efficacy and role effectiveness coupled with performance have been linked with the ability to adapt and cope with tasks coupled with acquisition of more skills (Mitchell *et al.,* 1994).

3.4.3. Objective two - Determine if the factors of age, stage in family life-cycle and work-life balance affect self-efficacy of male/female agricultural advisors

Using this combined effectiveness as a basis for identifying relationships between factors, this section will focus on meeting the second research objective to determine if the factors of age, stage in family life-cycle and work-life balance affect self-efficacy of the male/female agricultural advisors.

Upon examination to identify a relationship between combined effectiveness and age, there was no significant relationship between the two variables. Of those between the age categories of less than 29 and the 30-49 range the overall majority fell into the hesitant and modest group. Kuruna (1986) found that extension agents' age was moderately associated to their effectiveness and role performance. Similarly, Long and Swortzelow (2007) reported a positive relationship between age of agricultural extension agents and their effectiveness coupled with job performance. Whilst, the relationship had no significance, for these two variables, it was evident that the less confident individuals are younger in age compared to those that are older.

Analysis was carried out to see was there any relationship between work-life balance and combined effectiveness. This yielded a near-marginal significant relationship identified with work-life balance. Across all the groups, the overall majority indicated they had a poor work-life balance compared to those who thought they had a good work-life balance. Most notably, the majority of the hesitant group described their work-life balance as poor, as did the modest group. Literature indicates that key competencies are beginning to emerge, which may relate to improved job effectiveness, including self-efficacy, and confidence (Grant *et al.,* 2013). The three areas are inter-related, in that job effectiveness can be impacted negatively and positively by self-efficacy and work-life balance (Grant *et al.,* 2013). Those with more confidence perhaps therefore have better organizational management of their role and work-life balance. Those who have lower self-efficacy and confidence may not believe that they are as effective and therefore have poorer organizational management and balance between their work and personal life.

There was a strong relationship found to exist between these two variables of combined effectiveness and children as part of the family in life-cycle variable. Of those who didn't have children, again the majority stated they had a poor work-life balance. Of those with children either under 18 years or adults, over half had a poor work-life balance. With a family, because better management of work-life balance is required, this is perhaps why those with more family responsibilities may have indicated why they maintain and perceive that they have a better work-life balance. Task identity, significance and variety all factor into experienced job meaningfulness (Hackman & Oldham, 1976). This can benefit the work-life balance and family domain. An example would be working on a demanding job assignment which requires the use of diverse set of skills allowing the individual to experience a sense of competence, growth and learning (Kahn, 1990). This also promotes additional positive benefits for the family domain. Similarly, job autonomy has been linked with better parent-family and child interactions (Stewart & Barling, 1996) through its influence on job-related effect. Hence, having enriched job-related experiences can increase the possibility that a person will experience positive emotion at work which can benefit the family domain and work-life balance (Wayne *et al*., 2007).

No significance was found to exist between the two variables of combined effectiveness and elder responsibilities. Following analysis, over half of those who had no elder care responsibilities stated they had a poor work-life balance. Similarly, for those who had either some or significant responsibilities, they stated they also have a poor work-life balance. According to Hill *et al.,* (2001) parents with children and elder-care responsibilities have to manage the demands of their workplace and home which can become difficult to balance, often contributing to a poor work-life balance.

Another recurring theme in the semi-structured interviews was work-life balance. Managing the work-life balance is essential to balance both the workload and personal and family-life effectively. It also has an impact on an advisor's sense of self-efficacy. Several examples were given in the interviews by participants of the ways to manage this workload effectively. Most notably, was how the respondents managed their role effectively through different methods such as learning to be able to manage time by planning in advance to coordinate and prioritise tasks effectively.

People with family responsibilities placed emphasis on time-management, back-up support, communication and job flexibility to achieve that stability within work and family life. Another point highlighted was the ability to discipline one's self by separating work and personal life. In other words, this meant not completing extra work-related tasks at home. Work-life balance can be hindered by numerous factors which affect balancing of the workload. Recognition of poor-time management, commuting and family conflict were all examples given of poor work-life balance. Some advisors were at different stages of the family life-cycle and had different challenges to overcome. Organizational management is good practice and leads to a successful approach of balance between work, personal and family life as suggested by agricultural advisors who perceived that they had achieved a successful good work-life balance. Work life balance is a very important concept that goes beyond prioritizing the work and family domain (Perrons, 2003). Work-life balance has implications on people's attitudes, behaviours, well-being coupled with job effectiveness

(Eby *et al.,* 2005). This is reflected in the successful execution of tasks of the person, which affects their work performance and effectiveness (Eby *et al.,* 2005). People who are content are more efficacious when they are able to balance their work-life demands (Perrons, 2003).

3.4.4. Objective three - Establish if continuous professional development and other professional development supports - mentoring impact on self-efficacy of female/male advisors

The overall majority of the hesitant group had a third level degree compared to the rest who had a Masters or PhD. Most notably, those in the over-confident group had all completed further education after their third level degree. This relationship between in-service training and combined effectiveness had no association. Across all groups the total majority attended in-service training four to five times a year. Those that least attended appear to be those in the hesitant group. Continuous professional development consists of in-service training and further education which is essential for keeping up-to-date in the role as an agricultural advisor and for career progression. This also gives staff in the organisation the networking opportunity to ask questions. This was evident in the interviews, with advisors that placed huge emphasis on the networking opportunity to develop their knowledge base with more experienced colleagues. This was especially with conflicting issues with clients and on-going technical issues affecting them. This all contributes positively to the self-efficacy the individual. According to Jhansi (1985), higher educational qualification and continuous professional development training can have a positive and significant relationship with the level of performance and effectiveness of individuals.

On reviewing the relationship between combined effectiveness and mentorship, it was evident that there was no association between the two variables following analysis. However interestingly, the hesitant group stated they have a lower-level of engagement with a mentor. Compared to the other three groups, the hesitant group were least likely to seek out mentorship. Although there was no significant relationship between these variables, it was evident that this group, were least likely to engage with mentorship.

In the semi-structured interviews, mentorship was identified as a reoccurring theme throughout the interviews with respondents. A positive environment contributes to a positive mentoring experience. Mentorship gives the advisor the chance to reflect and think about how they can improve their approach or method to engage clients or deal with conflict effectively in their role. Learning and reflection benefit the agricultural advisor positively contributing to their sense of self-efficacy. Mentorship was an area to which agricultural advisors positively contributed their opinions. It gave them the chance to learn, develop and hone their ideas, responses, and approaches to tasks whilst also giving perspective for reflection on previous experiences allowing for the progression and improvement of their effectiveness as agricultural advisors. Numerous scholars have highlighted the importance of mentoring relationships as a way for developing and enhancing the professional career and personal development of individuals. For example, research has illustrated that people who are mentored are more confident, motivated, efficacious and likely to progress and advance much further in their professional careers (Fagenson, 1989; Dreher & Ash, 1990; Whitely, *et al.,* 1991; Scandura, 1992).

Chapter 4 – Conclusions and Recommendations

4.1. Introduction

This chapter summarises the findings and presents the conclusions of the research study as well as making some recommendations. The focus of this study was the use of social-cognitive theory as a basis in assessing generalized perceived self-efficacy as a measure of perceived effectiveness of agricultural advisors working in Teagasc in Ireland. It examined whether the factors of gender, age, experience, stage in family life-cycle, work-life balance, continuous professional development and other development supports namely mentoring would impact on general self-efficacy. These findings are based on detailed analyses of literature, as well as a questionnaire survey and semi-structured interviews with advisors.

The study developed four categories of advisory effectiveness namely hesitant, over-confident, modest and confident based on a combination of general self-efficacy (GSE) scores with the advisor's own perception of whether they were more, the same or less effective than their peers in their region. These categories were used as a basis for analysing whether there was any relationship between effectiveness and a number of factors that had been identified in the study objectives. The analysis yielded interesting relationships especially with the category of the hesitant group. Whilst agricultural advisors have an overall high level of perceived self-efficacy, those categorised and deemed to have a lower sense of self-efficacy and perceived effectiveness in the hesitant group were younger, had a lower level of experience, poorer work-life balance and fewer family or elder care responsibilities. They also had low levels of engagement with continuous professional development and other professional development supports namely mentoring. The study found that Irish agricultural advisors perceive themselves to be highly efficacious as they gain more experience. Male agricultural advisors perceived themselves as slightly more efficacious then their female colleagues. There were some significant differences in general self-efficacy across the factors of agricultural advisory experience, work-life balance and stage in family life-cycle with children. The implications of these differences across these factors are discussed.

4.2. Key findings

To meet the research objectives of the study, the GSE scale was adapted to determine the perceived self-efficacy amongst agricultural advisors. The GSE mean score along with the perceived level of effectiveness compared to peers was used as a combined measure of effectiveness creating four groups of agricultural advisors namely the hesitant, over-confident, modest and confident group. This identified and established if any factors affected their level of self-efficacy in the research study.

4.3. Objective one - Identify how male or females agricultural advisors define effectiveness in their agricultural advisory roles

The study used a number of different questions to explore advisor's views on what being effective as an advisor entails as well as their views of their own effectiveness in their role. They were questioned about the characteristics and qualities of an effective advisor as well as the importance of different advisory tasks for an effective advisory. They also indicated their self-perceived level of effectiveness compared to other advisors in their region.

There were a lot of similarities in the characteristics, qualities that male and female advisors identified that are perceived to make an advisor effective. Most noteworthy, male agricultural advisors mentioned technical skills slightly more often than females but in contrast females mentioned personal skills more often than the males did. Interestingly, both men and women ranked building trust with clients as the most important quality an advisor can have. Trust is an essential part in maintaining effective relationships with clients and an integral part of a working relationship. A farm visit was ranked as the perceived task that makes an advisor most effective and remains an important part of the agricultural advisor's work. This is coupled with building a rapport with the clientele in their region in addition to building trust and confidence with them. An agricultural advisor's effectiveness is built on a combination of characteristics, qualities and tasks. Despite a slight difference in interpretation by gender of the variables perceived to make an agricultural advisor effective there was no significant relationship identified. Men rated in-service training as the most valuable way to become more effective, while women stated that having an experienced mentor was the most important approach.

The study found a significant relationship between advisor's level of experience and combined effectiveness. Agricultural advisors that fell into the hesitant 'group' were more likely to be those with low levels of experience and at an early stage of their professional career. Those with less experience may have lower self-efficacy and confidence in themselves.

Agricultural enterprises advised in and combined effectiveness had no relationship. Enterprises advised consist of dairy, drystock and other enterprises comprising of tillage, poultry, pigs, poultry, rural development, organic farming, soils and agri-environment. Investigation of a relationship between combined effectiveness and perceived characteristics that make an advisor effective namely technical, personal and behavioural skills revealed no significance between the variables.

The importance of building rapport and trust with clients was emphasised in the semi-structured interviews in terms of building a career and good reputation. Agricultural advisors must build trust and a working relationship in order to encourage knowledge transfer and technology or practice adoption. Relating to personal experience can encourage relationship building between the client and agricultural advisor. Job effectiveness is also linked to performance whereby an advisor is effective through the successful completion of tasks and self-efficacy is a measure of the ability to complete a task. The successful completion of tasks can lead to a higher perceived level of self-efficacy coupled with a sense of achievement. This is evident from the thematic analysis related to job effectiveness. Some of the respondents related to the burdening of 'scheme work' and challenges in the role with the increasing amount of paperwork which hindered their ability to complete tasks.

Job effectiveness can be achieved by better management of the workload through practical measures and approaches such as outsourcing of scheme work. Interviewees revealed how this allowed them concentrate on more important aspects of their role such as individual farm visits. Building client relationships and a good reputation as an agricultural advisor with the clientele enhances the ability to be effective in the role even if it requires flexibility and facilitation of clients to help them in terms of their 'scheme' work. Each interpretation of effectiveness is different due to the personal, subjective view which is influenced cognitively by the person, their behaviour and environment, as explained by the social cognitive theory which underpins self-efficacy and job effectiveness.

Ultimately, from the analysis of results, effectiveness in the role of an agricultural advisor is derived through relationship and trust building with clients, completion of tasks varying from farm visits to administration of scheme work. The interpretation of the effectiveness is subjective, whereby some tasks are deemed as a hindrance of effectiveness, nonetheless organizational management of workload can ease the burden allowing a shift of focus towards more important priorities of an agricultural advisor's role. An agricultural advisor could try to outsource some of the scheme work to help co-ordinate their time-management and workload. A regional manager could have a role through the professional management development system (PMDS) through facilitation of outsourcing the extra administrative duties impacting the job effectiveness of an agricultural advisor.

4.4. Objective two - Determine if the factors of age, stage in family life-cycle and work-life balance affect self-efficacy of male/female agricultural advisors

Using combined effectiveness as a basis for identifying relationships, this focused on meeting the second research objective to determine if the factors age, stage in family life-cycle and work-life balance affect self-efficacy of male/female agricultural advisors.

Combined effectiveness and age had no relationship. The less confident individuals were younger in age compared to those that are more efficacious or confident in their role. Work-life balance and combined effectiveness had no relationship. The hesitant group described their work-life balance as the worst. Those who have lower self-efficacy and confidence may not believe that they are as effective. Therefore, they may have poor organizational management and balance between both their work, personal and family domain. With regard to the children variable as part of the stage in family in life-cycle factor a relationship was identified between it and combined effectiveness. No significance was found to exist between the stage in family life-cycle related variable of elder care responsibilities and combined effectiveness. Over half of all respondents, who had either some or significant responsibilities had to manage the demands of their job and family. Those with family and elder care responsibilities had the best work-life balance and were the best at managing their workload effectively.

The semi-structured interviews focused on the importance of managing the work-life balance as it can impact on general self-efficacy. People with family responsibilities placed emphasis on time-management, back-up support, communication and job flexibility relating to work-life balance to achieve that stability within all domains. Recognition of poor-time management, commuting and family conflict were all examples of poor work-life balance as perceived by the interviewees. Some advisors were at different stages of the family life-cycle and had different challenges to overcome. Similarly, emphasis was placed on organizational management as beneficial leading to a successful approach of balance between work, personal and family-life.

Children as a part of the stage in family life-cycle variable had a significant relationship with work-life balance. People with family responsibilities seemed to have a better work-life balance and perceived level of self-efficacy. In contrast, the individuals with no family responsibilities or elder care responsibilities seemed to struggle more with work-life balance and had a lower sense of self-efficacy with the hesitant group again featuring as the group struggling with work-life balance. Teagasc human resources and higher management should promote their initiatives to support work-life balance more effectively so that staff are aware of these benefits as part of the work-life balance policy in place. These initiatives include job-sharing, career break policy, statutory leave and shorter working year scheme.

4.5. Objective three - Establish if continuous professional development and other professional development supports - mentoring impact on self-efficacy of female/male advisors

The combined level of effectiveness variable had a relationship with education and in-service training. However, it had no relationship with mentoring. Yet, in the semi-structured interviews, mentorship was a frequent theme reiterated by respondents. The hesitant group were least likely to engage with continuous professional development and other professional development supports specifically mentoring. This group had the least confidence and low sense of self-efficacy of all the participants categorised into groups. As a result, they may not be able to be as effective in their role and ability to complete tasks and deal with conflict.

Mentorship was suggested as an approach to encourage networking and knowledge-sharing which can build the capacity of less experienced younger advisors who appear to be less confident and perceive themselves as less effective in the role compared to older and more experienced advisors with better organizational management of workload and work-life balance. Continuous professional development plays a key role in providing the environment for agricultural advisors to share their experiences and problems.

Continuous professional development aimed at organisational and self-management could be promoted for agricultural advisors to undertake. Programs such as the Certificate for European Consultants in Rural Areas (CECRA) may be of benefit for personal development for staff in the organisation. This program helps individuals to gain communicative, social and personal development knowledge and skills relating to their role. They learn how to plan, implement, accomplish, assess and reflect individual and group advisory tasks, events, and projects coupled with reflection on their professional actions in their agricultural advisory role. It also provides a networking platform to meet other agricultural advisors and a knowledge-sharing opportunity.

4.6. Conclusion

In conclusion, this study established that Irish agricultural advisors perceive themselves to be highly efficacious. Male agricultural advisors perceived themselves as slightly more efficacious then their female colleagues. Effectiveness of an agricultural advisor was defined by identifying the characteristics, qualities and tasks that make an agricultural advisor effective. An agricultural advisor with a combination of technical, personal and behavioural skills was deemed to be the most effective in their advisory role. Building trust with clients was the most important quality an agricultural advisor can possess. A farm visit was the most important task that made an agricultural advisor effective.

There were some significant differences in general self-efficacy across the factors of agricultural advisory experience, work-life balance and stage in family life-cycle with children. Those with more agricultural advisory experience have a higher level of combined effectiveness. Agricultural advisors who had children perceived themselves to have a better work-life balance compared to those with no children and elder responsibilities. Those who engaged with continuous professional development and other professional development supports namely mentoring had a higher perceived level of combined effectiveness. Ultimately, the concept of self-efficacy is especially important in supporting continuous professional development of agricultural advisors. It can enhance and develop an agricultural advisor's organisational management of their workload which could lead to enhanced effectiveness and successful completion of tasks. Hence a higher sense of self-efficacy could be achieved as a result.

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Appendix 1 - E-mail of Invitation to Participate in Questionnaire

Agricultural Advisor Self-efficacy Study

Hi all,

My name is Angela Ryan and I am currently undertaking research for a Masters in Agricultural Extension on factors affecting self-efficacy of the agricultural advisor and would really appreciate your participatory feedback. Self-efficacy is defined as an individual's perception of their role and ability to complete a task. This research is part of a Masters in Agricultural Extension and Innovation programme and is funded by Teagasc under the Walsh Fellowship programme. I am under the supervision of Dr. Monica Gorman in UCD.

I am seeking Teagasc agricultural advisors to participate in an online questionnaire. Click on the link below to complete the survey which will take approximately 10 minutes.

https://goo.gl/forms/rLY0Lwt39WcxTF4u2

All information provided as part of this research will be safeguarded and held in the strictest confidence.

Once you complete the online questionnaire, you will also be given the option to participate further in the study in a semi-structured interview.

The closing date for completion of this survey is the 1st June 2017. Your participation is entirely voluntary and greatly appreciated. If you have any further questions about this research please don't hesitate to contact me.

Kind regards,

Angela Ryan

Appendix 2 - Online Questionnaire

Self-efficacy of the Agricultural Advisor

I am currently undertaking research for a Masters in Agricultural Extension on factors affecting self-efficacy of agricultural advisors and would really appreciate your participatory feedback. Self-efficacy is defined as an individual's perception of their role and ability to complete a task. Please answer the following survey questions that best relate and describe your self-efficacy as an agricultural advisor. The survey will take about 10 minutes approximately to complete. All information provided as part of this research will be safeguarded and held in the strictest confidence.

*Required

About You

Please TICK the response that best describes you.

1. **Q1. What is your gender?** *

   Mark only one oval.

   - ◯ A) Male
   - ◯ B) Female
   - ◯ Other: ____________________

2. **Q2. What age are you?** *

   Mark only one oval.

   - ◯ A) 20-29
   - ◯ B) 30-39
   - ◯ C) 40-49
   - ◯ D) 50-59
   - ◯ E) Over 60

Stage of Career

Please TICK the response that best describes you.

3. **Q3. The highest level of education you have completed is:** *

   Mark only one oval.

   - ◯ A) Third Level Degree - Level 8 Degree in Agricultural Science
   - ◯ B) Master's Degree (Level 9)
   - ◯ C) Doctor of Philosophy (Ph.D - Level 10)
   - ◯ Other: ____________________

4. **Q4. How long have you been an agricultural advisor? ***

Mark only one oval.

- A) <1 year
- B) 1-5 years
- C) 6-10 years
- D) 11-20 years
- E) > 20 years

5. **Q5. What type of agricultural enterprises do you advise in? ***

Tick all that apply.

- A) Dairy
- B) Beef
- C) Sheep
- D) Tillage
- E) Environment and Technology
- F) Soils and Environment
- G) Pigs
- H) Poultry
- I) Organic
- Other: ____________________

6. **Q6. Which part of Ireland are you advising in? ***

Mark only one oval.

- A) Munster
- B) Leinster
- C) Ulster
- D) Connacht

Advisory Role - Self-efficacy

Please state your response.

7. **Q7. Please describe the three most important characteristics of an 'effective' agricultural advisor in your opinion: ***

____

8. **Q8. Please rank in order of importance the tasks that make an agricultural advisor 'effective' (1= least important and 7= most important):** *

Mark only one oval per row.

	1	2	3	4	5	6	7
A) One-to-one farm visits	◯	◯	◯	◯	◯	◯	◯
B) Discussion Groups	◯	◯	◯	◯	◯	◯	◯
C) Scheme work (e.g. BPS scheme work)	◯	◯	◯	◯	◯	◯	◯
D) Organising farm walks or events	◯	◯	◯	◯	◯	◯	◯
E) Farm planning	◯	◯	◯	◯	◯	◯	◯
F) Succession and inheritance planning	◯	◯	◯	◯	◯	◯	◯
G) Writing media articles	◯	◯	◯	◯	◯	◯	◯

9. **Q9. How effective do you think you are as an agricultural advisor compared to other advisors in your region?** *

Mark only one oval.

◯ A) I think I am more effective

◯ B) I think I am about the same

◯ C) I think I am less effective

General Self-Efficacy

Please TICK the response that best describes your general work self-efficacy the following questions (1= rarely and 4= almost always).

10. **Q10. I can solve difficult work issues if I try hard enough.** *

Mark only one oval.

	1	2	3	4	
Rarely	◯	◯	◯	◯	Almost Always

11. **Q11. If I am challenged, by a client or work colleague I can find a way to persuade them in order to complete a task successfully.** *

Mark only one oval.

	1	2	3	4	
Rarely	◯	◯	◯	◯	Almost always

12. **Q12. It is easy for me to accomplish my aims and goals as an agricultural advisor.** *

Mark only one oval.

	1	2	3	4	
Rarely	◯	◯	◯	◯	Almost always

13. **Q13. How confident are you in your agricultural advisory role?** *
Mark only one oval.

	1	2	3	4	
Rarely	⬭	⬭	⬭	⬭	Almost always

14. **Q14. I am confident that I can deal efficiently with unexpected issues and or events arising.** *
Mark only one oval.

	1	2	3	4	
Rarely	⬭	⬭	⬭	⬭	Almost always

15. **Q15. I can solve most issues if I invest the necessary time and effort.** *
Mark only one oval.

	1	2	3	4	
Rarely	⬭	⬭	⬭	⬭	Almost always

16. **Q16. When I am confronted with an issue, I can usually find a solution to it.** *
Mark only one oval.

	1	2	3	4	
Rarely	⬭	⬭	⬭	⬭	Almost always

17. **Q17. If I need assistance, I can ask for help from another agricultural advisor in the office.** *
Mark only one oval.

	1	2	3	4	
Rarely	⬭	⬭	⬭	⬭	Almost always

18. **Q18. If I need assistance, I can ask for help from my regional manager.** *

Mark only one oval.

	1	2	3	4	
Rarely	⬭	⬭	⬭	⬭	Almost always

19. **Q19. I have (or have had) a mentor with whom I discuss how to improve my effectiveness in work.** *

Mark only one oval.

- A) Never
- B) Sometimes
- C) Often

20. **Q20. Please rank in order of importance the qualities that make an agricultural advisor 'effective' in your opinion (1= least important and 5= most important):** *

Mark only one oval per row.

	1	2	3	4	5
A) Building trust with clients	⬭	⬭	⬭	⬭	⬭
B) Regular contact with clients	⬭	⬭	⬭	⬭	⬭
C) Influence farmer decision-making	⬭	⬭	⬭	⬭	⬭
D) Challenging a farmer to change	⬭	⬭	⬭	⬭	⬭
E) Increasing output on a client's farm	⬭	⬭	⬭	⬭	⬭

General Self-Efficacy

Please TICK the response that best describes you.

21. **Q21. How many times a year do you attend in-service training?** *

Mark only one oval.

- A) Never
- B) Once a year
- C) Maybe 2-3 times a year
- D) Maybe 4-5 times a year
- E) Monthly

22. **Q22. To become a more 'effective' agricultural advisor, rank the following in terms of their usefulness (1= least important) and (6= most important).** *

Mark only one oval per row.

	1	2	3	4	5	6
A) Have an experienced advisor as a mentor						
B) Do some continuous professional development training (e.g. CECRA training)						
C) Attend more in-service training						
D) Complete Further Education (Masters/PHD etc.)						
E) Develop communication skills						
F) Have an independent coach / mentor						

23. **Q23. Are you undertaking any other professional development training?** *

Mark only one oval.

- A) Yes *Skip to question 24.*
- B) No *Skip to question 25.*

General Self-Efficacy

Please state your response.

24. **Q24. If yes, please describe:** *

Work-Life Balance

Please TICK the response that best describes you.

25. **Q25. Are you a:** *

Mark only one oval.

- A) Full-time Advisor *Skip to question 27.*
- B) Part-time Advisor *Skip to question 27.*
- C) Job-sharing with another Advisor *Skip to question 26.*

Work-Life Balance

Please TICK the response that best describes you.

26. **Q26. If you are job-sharing, does it affect your work-life balance? ***

Mark only one oval.

- A) Positive effect
- B) Negative effect
- C) No effect

Work-Life Balance

Please TICK the response that best describes you.

27. **Q27. How far do you travel to reach the Teagasc office you are based in? ***

Mark only one oval.

- A) <10km
- B) 10-30km
- C) 31-60km
- D) 61-90km
- E) >90km

28. **Q28. How many hours on average do you work a week in your agricultural advisory role over the required 37.5 hours/week? ***

Mark only one oval.

- A) None
- B) 1-4 hours/week
- C) 5-9 hours/week
- D) 10+ hours/week

29. **Q29. If you work more than the required 37.5 hours/week you spend your extra time on which of the following? ***

Tick all that apply.

- A) Meeting a scheme deadline (e.g. BPS, Derogation etc.)
- B) Running an event (e.g. Dairy Seminar)
- C) Running a discussion group meeting (e.g. Night meeting)
- D) Carrying out a farm visit
- E) All of the above

30. **Q30. I have a good work-life balance (1= Disagree strongly and 5= Agree strongly): ***

Mark only one oval.

	1	2	3	4	5	
Disagree strongly						Agree strongly

31. **Q31. How often do you complete physical exercise? ***

Mark only one oval.

- A) None
- B) 1-2 times a week
- C) 3-4 times a week
- D) Daily

Work-Life Balance

Please TICK the response that best describes you.

32. **Q32. Are you: ***

Tick all that apply.

- A) Single
- B) Married
- C) Divorced/Seperated
- D) Widower
- E) Long-term partner

33. **Q33. Have you any children? ***

Mark only one oval.

- A) Yes
- B) No *Skip to question 35.*

Work-Life Balance

Please TICK the response that best describes you.

34. **Q34. How many children in the following age categories have you?**

Mark only one oval per row.

	None	1	2	3	4	5	6
A) 0-4 Years							
B) 5-12 years							
C) 13-18 years							
D) >19 years							
E) Independent Adult							

Work-Life Balance

Please TICK the response that best describes you.

35. **Q35. Do you have elder care responsibilities or care for other dependent adults? ***

Mark only one oval.

- A) None
- B) Some
- C) Significant

Thank You

All information provided as part of this research will be safeguarded and held in the strictest confidence.

36. **Are you are willing to be contacted further as part of this research?** *

Mark only one oval.

- A) Yes — *Skip to question 37.*
- B) No — *Stop filling out this form.*

Further Participation

All information provided as part of this research will be safeguarded and held in the strictest confidence.

37. **If yes, please provide your email address below:** *

Appendix 3 - Consent Sheet for Participant Semi-Structured Interview

Dr. Monica Gorman,

Assistant Professor in Agricultural extension and Innovation,

UCD School of Agriculture and Food Science,

Belfield, Dublin 12.

Phone: +353 1 7167768

Angela Ryan

UCD/Teagasc Walsh Fellow

Teagasc, Dromin Road,

Nenagh, Co. Tipperary.

Phone: +353 76 1114722

'Exploring the experiences of Irish men and women's self-efficacy working as agricultural advisors.'

PARTICIPANT CONSENT FORM

BY SIGNING AND RETURNING THIS CONSENT FORM YOU ARE INDICATING YOUR AGREEMENT WITH THE FOLLOWING STATEMENTS:

- I have read and understood the attached Participant Information Leaflet for this study.
- I have had the opportunity to ask questions and discuss the study.
- I have received satisfactory answers to all my questions.
- I have received enough information about this study.
- I understand that no one will have access to identifiable information and that Angela Ryan will be responsible for safeguarding my identity confidentially and am satisfied with this arrangement.
- I understand that I am free to withdraw from the study up until the semi-structured interview stage.
- I agree to take part in the study.

Participant's Signature: ________________________________ Date: _________________________

Appendix 4 - Information Sheet for Semi-Structured Interview Participant

Dr. Monica Gorman,

Assistant Professor in Agricultural Extension and Innovation,

UCD School of Agriculture and Food Science,

Belfield, Dublin 12.

Phone: +353 1 7167768

Angela Ryan

UCD/Teagasc Walsh Fellow

Teagasc, Dromin Road,

Nenagh, Co. Tipperary.

Phone: +353 76 1114722

'Exploring the experiences of Irish men and women's self-efficacy working as agricultural advisors.'

PARTICIPANT INFORMATION LEAFLET

You are invited to participate in a research study. Thank you for taking time to read this information leaflet.

Research: This research will explore the experiences of Irish women and men's self-efficacy working as agricultural advisors. This research is part of a Masters in Agricultural Extension and Innovation programme and is funded by Teagasc under the Walsh Fellowship programme. I am under the supervision of Dr. Monica Gorman in UCD.

Aim of Study: The aim of this research is to explore the experiences of Irish women and men's self-efficacy working as agricultural advisors.

Participation: I am seeking agricultural advisors to participate in an online questionnaire. If you complete the online questionnaire and agree to participate further in the research you may be contacted to partake in a participatory semi-structured interview. Your participation is entirely voluntary. All information provided as part of this research will be safeguarded and held in the strictest confidence.

Confidentiality: All information collected as part of the study will be safeguarded and held in the strictest confidence.

Right to withdraw: You can decide to withdraw from the study up until the semi-structured interview stage.

Further information & contact details: If you have any further questions about the research or would like information on the findings, you can contact Angela Ryan – Phone: 076-1114722 or e-mail: angela.ryan.@teagasc.ie or Dr. Monica Gorman – Phone: 01-7167768 or e-mail: monica.gorman@ucd.ie.

Appendix 5 - Semi-structured Interview Guide

Table 24. Interview guide for the semi-structured interviews (n=6).

Date of Interview						
Advisor ID						
Location						
Advisory type						
Age						
Full time/Job-sharing						
Main Theme	**# Subtheme 1**		**# Subtheme 2**		**# Subtheme 3**	
Advisory Role-Self-efficacy	*Self-efficacy - Perception of one's advisory role*		*How do you define effectiveness in your agricultural advisory role?*			
Stage of Career	*Career Stage – Role models and mentors*		*Professional development support - mentoring*		*Continuous Professional development*	
Work-Life Balance	*Age and stage in family life-cycle*		*Distance to work and working hours*		*Lifestyle*	

Appendix 6 - Effective Advisory Characteristics

Table 25. Effective advisory characteristics categorised (n=124).

Question 7.		**Hard Skills**	**Soft Skills**	
		Technical Knowledge	**Personal/ Emotional Attributes**	**Behavioural Skills**
Please describe the three most important characteristics of an 'effective' agricultural advisor in your opinion:		**Var015**	**Var016**	**Var017**
1.	Listen, problem-solve and work under pressure.			3
2.	Good knowledge, able to get it across to audience, good personal skills.	1	1	1
3.	Strong technical knowledge, excellent communication skills and team-player with colleagues.	1		2
4.	To keep up to date with research, understand the needs of my clients and help my clients adapt to new research.	2	1	
5.	Knowledge, accuracy, organisation skills and empathy / care.	2	2	1
6.	Good listener, effective communicator and certain degree of empathy.		1	2
7.	Must be able to translate the facts into layman's terms for the farmer. Must be able to tailor the advice given to the individual farmer and their situation. There is no point in pushing the likes of 24 month calving at a beef farmer who is struggling to get cows in calf never mind calve them earlier. An advisor must be able to put their hand up and say it if they do not know the answer to a question. Farmer's do not appreciate and can see through bullshit. No	1	1	2

	advice is better than incorrect advice.			
8.	Ability to listen, understand and empathize within reason. Have knowledge and or contacts (relevant referral) and analytical ability to provide solutions/ suitable plans. Consistency to follow through and follow up on all aspects of advice/direction given (in short and medium-term).	1	1	3
9.	Personality, communication skill and competent.	1	1	1
10.	Technical knowledge, adaptability, interpersonal skills and apathy.	2	1	1
11.	Competent, reliable and good people skills.	1		2
12.	Confident, knowledgeable and organised.	1	1	1
13.	Empathy, good communicator, good listener, technical ability, to 'care' about a client's farm business and future directions.	1	2	2
14.	Knowledgeable, understands and empathises with clients and is proactive and challenging with clients.	1	2	2
15.	Organised, up-to-date on technical knowledge and driven.	1		2
16.	Customer care and industrial knowledge.	1		1
17.	Technical knowledge, communication and team-work.	1		2
18.	Able to analyse a situation, find a workable solution and communicate the solution to the problem in a manner that the client understands. Be empathetic to the situation and be available for follow up advice.	1	1	2
19.	Good listener, empathy with client and good	1	1	1

	technical knowledge.			
20.	Self-reliant, confident and hard working.	1	1	1
21.	Knowledgeable, hard-working & dedicated.	1	1	1
22.	Ability to communicate effectively, organised and gives simple answers and advice.	1		2
23.	Up-to-date knowledge, shows interest and trustworthy.	1	2	
24.	Enthusiasm, high level of technical knowledge and availability.	1	1	1
25.	Knowledgeable, good communicator and practical.	2		1
26.	Technical information, common sense and pro-activeness.	1	1	1
27.	Efficient, well organised, good at multi-tasking and good communicator.			4
28.	Empathy, confidence and approachable.		2	1
29.	Technically strong, good communication skills and practical application.	2		1
30.	Producing results, producing targets and implementing change.	3		
31.	Technical knowledge coupled with communication skills and ability to change.	2		1
32.	Engaging with clients, ability to communicate and honest.		1	2
33.	Personality, technical ability and contactable.	1	1	1
34.	Knowledgeable, confident and drive/innovation.	1	1	1
35.	Ability to communicate, ability to listen and flexibility.			3
36.	Approachable, knowledgeable and adaptable.	1		2
37.	Good technical knowledge, good communicator and reliable/honest with clients	1	1	1

38.	To have the desire to improve the efficiency of the clients that I serve in terms of improved financial returns and in conjunction with farm family lifestyle, ability to communicate with the clients to get the messages across that will lead to better Farm Family Lifestyle and have the reputation of trust and reliability between advisor and client.	1	2	1
39.	Diligent, practical and adaptable.	2		1
40.	Good technical knowledge, good communicator and empathy.	1	1	1
41.	Good knowledge base, knows when to listen and when to advise and has ability to think and react outside the box.	1		2
42.	Friendly, approachable and attentive.		2	1
43.	Good technical knowledge, assessable and good communicator.	1		2
44.	Good ability to communicate, have good technical knowledge and have credibility with farmers.	1	1	1
45.	Financial competence, good communication and big picture thinking.	1		2
46.	Interest, knowledge and good communicator.	1	1	1
47.	To be technically proficient this allows confident interaction with farmers.	1	1	
48.	Interest in the job, client, is technically proficient and good communicator.	1	1	1
49.	Proactive, responsive, and collaborative.			3
50.	Knowledgeable, good communicator and has ability to create a rapport with clients.	1		2
51.	Motivation, belief in oneself-confidence, self of		2	1

	being supported by management, sense of appreciation by the clients.			
52.	Approachable, receptive to query, analyse efficiently and deliver concise advice.	1		3
53.	Impartial, honest and reliable.		1	2
54.	Informed, up-to-date and trusted.	2	1	
55.	Flexibility, wide ranging communication skills and efficient re phone calls, job completion etc.			3
56.	Knowledgeable, experienced and excellent communicator.	1		2
57.	Excellent communication skills, organisational skills and empathy.		1	2
58.	Good work organization, good technical knowledge and enthusiasm.	1	1	1
59.	Approachable, proactive and positive.		1	2
60.	To have technical knowledge required in various areas. To be credible, be prepared to say I don't know when you don't or not sure. To have the trust of clients and be empathetic towards them/their circumstances - ie huge variety of skills at farm level - ie much bigger level of illiteracy than we think, computer skills, we tend to over complicate matters/advise when a big number of clients want things simple/simplified.	1	3	
61.	Understand client's needs, confidence with technical ability and package research findings for use/understanding by farmers.	2	1	1
62.	Hard working, open minded and highly technical.	1		2
63.	People skills, technical knowledge and confidentiality.	1	1	1

64.	Motivated, technically competent and confident.	1	2	
65.	Patience, technical knowledge and communication skills.	1	1	1
66.	Self-confidence, knowledge of subject, good facilitation skills.	1	1	1
67.	Personality, technical knowledge and communication.	1	1	1
68.	Knowledgeable, good communicator and self-motivating.	1		2
69.	Technical knowledge, ability to communicate and transfer knowledge and attention to detail.	1	1	1
70.	Technical knowledge, good communication and practical experience in farming.	2		1
71.	Have full and up to date knowledge of schemes and services, have good communication skills and ability to recognise and advise on new EU regulations and directives.	1		2
72.	Need to be technically minded. Need to be efficient in role. Need to build rapport with clients	1	1	1
73.	Decisive: Farmers contact looking for advise/answers need to be able to give them. Informed: Keep up to date. Challenging: Keep clients motivated.	1		2
74.	Experience and knowledge, communication skills and confidence.	1	1	1
75.	Knowledge of important issues, good organiser and ability to work on your own.	1		2
76.	Establish clearly where the farmer 'is at' and work with him accordingly. Be clear that the	1		3

	technical messages are correct and appropriate to the farmer in front of you. Keep a very open mind and listen to what farmers say.			
77.	An effective advisor must display good technical knowledge, be professional with clients (confidential affairs), must be trustworthy and respected.	1	2	1
78.	Honest, independent and discreet.		1	2
79.	Yes	Not a valid answer		
80.	Technical knowledge, problem-solving and planning.	1		2
81.	Good Listener, good communicator and ability to see things on-farm / farm data.	1		2
82.	Practical knowledge, ability to forward plan with farmers and ability to facilitate discussion groups.	1		2
83.	Competent, informed and thorough.	2		1
84.	Practical, approachable and contactable.	1		2
85.	Good listener, good analyser of facts and empathy with client.		1	2
86.	Knowledge, communication and working.	1		2
87.	Good communicator, good facilitator and high level of technical knowledge.	1		2
88.	Agricultural knowledge, flexibility and communications.	1		2
89.	Competence, effective communicator and reliable.	1		2
90.	Good communication, good knowledge and timely completion.	1		2
91.	Being organised, ability to keep up to date and willing to listen.	1		2

92.	Dedication, organisation and social skills.		1	2
93.	Logical assessment, technical knowledge and devising a solution.	1		2
94.	Good listener, good technical knowledge of your area and good communicator.	1		2
95.	Technical knowledge, good communication skills and teamwork.	1		2
96.	Practical, empathetic and technically knowledgeable.	2	1	
97.	Communication, analytical and technical competence.	1		2
98.	Good communicator, practical and relevant to farming community.	2		1
99.	Being organised, good communicator, have a good understanding of people and being able to get on with farmers and colleagues.			3
100.	Innovative, passionate, good communicator.		1	2
101.	Knowledgeable, patient and good listener.	1	1	1
102.	Knowledgeable, friendly and adaptable.	1	1	1
103.	Get along and understand farmers, translate scientific papers into something farmers can understand and never be afraid to admit they do not know something.	1	1	1
104.	Knowledgeable, modern and up-to-date, and able to solve problems quickly.	2		1
105.	Genuine, enthusiastic and personable.		3	
106.	Technical knowledge, confidentiality and availability to clients.	1	1	1
107.	Good listener, empathetic and knowledgeable.	1	1	1
108.	Loyal, hard-working and communicating with client.		1	2

109.	Good communication skills, good technical knowledge and well organized/good time management.	1		2
110.	To be interested & enthusiastic about the job. To have great communication skills and speak the same language (no jargon) as the client. To be able to influence and advise as opposed to instruct		2	2
111.	Technically competent, good communicator and is someone that clients' trust.	1	1	1
112.	Willing to listen and give farmer friendly advice.	1	1	
113.	Knowledge, organisational skills and empathy.	1	1	1
114.	Influential, knowledgeable and diligent.	2		1
115.	Technical, good people person and organised.	1	1	1
116.	Need to be a good listener, have good technical knowledge and adopt to change as required.	1		2
117.	Knowledgeable, professional and trustworthy.	1	1	1
118.	Be a good listener, be able to fulfil any promises/work to be carried and be helpful.	1	1	1
119.	Good communicator, empathic, self-directed and motivated.	1	2	1
120.	Confidence, knowledge and independent.	1	1	1
121.	Empathetic, organised and technical ability.	1	1	1
122.	Good communicator, knowledge and professionalism.	1		2
123.	You must be a good communicator, personable and honest.		2	1
124.	Honesty, empathy and diligence.	1	2	