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Abstract

This study is part of a larger project which aims to develop evidenced based training and resources for school nurses to support young people with their nutritional health (Burdett, 2015). The purpose of this action research study was to explore the impact upon the knowledge and confidence of school nurses following the completion of the nutritional health training.

A pre training questionnaire was provided to all school nurses prior to attending the 'champion training' in order to gather baseline information on the knowledge and confidence of the school nurse. A further questionnaire was provided to the school nurses one month following the training along with provision of resources. One focus group of five school nurses who attended the training was then completed, to explore the themes from the questionnaires.

When analysing the post course questionnaires there was a significant impact upon the school nurses self-assessed confidence levels as well as the ability to articulate the health impacts of obesity on young people. The questionnaires suggest that the training had a very positive impact upon the school nurse's confidence in particular. The themes highlighted from the focus group were 'increased knowledge but particularly confidence', 'barriers going forward' and 'areas for improvement'. Both the questionnaires returned and the focus group were able to highlight barriers going forward which may inhibit the sustained impact on knowledge and confidence discussed above. The area for improvement which the focus group appeared to be most vocal and passionate about was how to disseminate the training as 'champion'.

It is unknown as to whether the training has impact on practice in the long term and how it translates when the 'champions' disseminate the training within their own teams. It would be beneficial to complete further longitudinal qualitative research to explore these themes.

The purpose of this research study was to explore the impact newly designed nutritional health champion training had on the knowledge and confidence of school nurses. The training was ran as a pilot in the North East region of the United Kingdom (UK). Following the feedback gained in this research the training and resource pack were adapted. The training was then ran in four sites across the UK. Nutritional health is an important building block of attaining good general health (Department of Health, 2016). It is about consuming the right amount of fluids and eating a wide range of food types in the correct proportions and amounts in order to achieve a healthy body weight (NHS, 2016). The 'champion

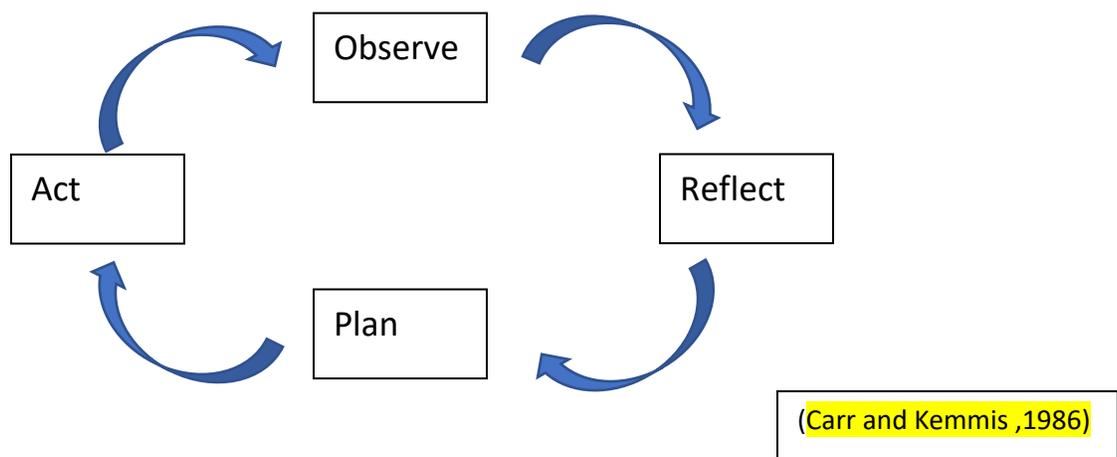
model' of training offers practitioners the opportunity to attend a training package and then take ownership in cascading the information within their organisation with evidence based resources (Institute of Health Visiting, 2016). It was hoped that accessing this training and relevant resource pack would enable the practitioners to feel more equipped to address this key public health issue (Department of Health, 2009).

The World Health Organisation (2017) define young people as twelve to nineteen year olds, this study follows that global evidence. A young person's health underpins their ability to flourish, stay safe and achieve as they grow into adulthood (Department of Health, 2009; Department of Health, 2016). Lifestyles and habits established by a young person will influence their health throughout their life and therefore the case for prevention and intervention is reinforced (Department of Health, 2009). Government policy has reflected for a number of years that the future health of our young people depends on an improvement and upgrade in practitioner's knowledge of key public health areas including nutritional health (NHS,2014).

This study is part of a larger project which aimed to develop and fund evidenced based training and resources for school nurses to support young people with their nutritional health (Burdett, 2015). It hopes to consider preventative measures to ensure today's young people do not become tomorrow's obese parents (Furlong et al., 2003; World Health Organisation, 2016). The purpose of this action research study is to explore the knowledge and confidence of school nurses following the completion of the nutritional health training.

Methodology and methods

For this action research study questionnaires and a focus group were completed, altering training in light of their feedback (McNiff, 2014). Action research is not about sourcing cause and effect (McNiff and Whitehead, 2012). Unlike traditional research it is not an aim to find closure, but instead the methodology is open ended and developmental (McNiff and Whitehead, 2012). In this study the change process is the evaluation of the pilot training and resource pack which allowed the ongoing product to be altered. Although it could be argued that this research does not complete the repeating cycle (Figure 1) that would normally be seen in action research it does incorporate the key element of ensuring that the participants are central throughout the process (Burnard, Morrison and Gluyas, 2011). As the wider national project continues the cycle of change improvement will continue (Burnard, Morrison and Gluyas, 2011).



The pre training questionnaire was completed by all school nurses (nineteen nurses) prior to attending the pilot 'champion training' and aimed to gather baseline information on the knowledge of the school nurse to support the final evaluation of the training and its impact.

A questionnaire was completed by the school nurses **one month** post the 'champion training' as they received a draft evidenced based resource for working with young people around nutritional health. This questionnaire was sent to all school nurses who attended the training and completed by eight of them. It was administered electronically and securely via NHS email systems to ensure data protection and comply with ethics (Marshall and Rossman, 2016). Subsequently this was compared to data sourced through the pre course questionnaire to allow evaluation of knowledge and confidence. One focus group was completed with five school nurses two months after the pilot training. This was guided by a set of schedules designed initially with the research aim in mind and was further shaped by the participants' dialogue and by the aim to explore the responses to the questionnaires in more depth.

The sampling strategy was purposive, working in partnership with the local NHS trusts and those school nurses who volunteered (Leedy and Ormrod, 2015). It was acknowledged that this might limit the representativeness of our sample, but the study had to work within the time and funding constraints of the overall project (Leedy and Ormrod, 2015). Although one focus groups of five school nurses is a small sample it was supported by the data sourced through the pre and post course questionnaires (Leedy and Ormrod, 2015). Themes were developed and the school nurses engaging with the research quickly provided saturation of data. The focus group took place two months following the pilot training to review impact and so that findings could inform future training sessions. The data collected was primary (Creswell, 2014).

This research study followed a method of thematic analysis (Braun and Clarke, 2006). Some argue that thematic analysis is not a method of analysis but a strategy used within other data analysis approaches (Willig 2014). However Braun and Clarke (2006) define thematic analysis as a flexible method of its own, designed to identify, analyse and report themes within data. Literature indicates that it a common model used within qualitative research as it is flexible and compatible with different approaches (Williamson and Whittaker, 2014).

Ethics

The wider project and this study have been reviewed by local NHS Trusts Research and Development teams and received approval as well as University Ethics approval (Burdett Trust, 2015). To be focused on ethics means to be focused on the people involved and the people it will affect (Marshall and Rossman, 2016). The whole process remained confidential and there were no negative consequences for those staff that choose not to take part in the study (Marshall and Rossman, 2016). Willing school nurses were provided with dates and details for the focus group two weeks in advance of the focus group date. This was to allow time for informed consent to be obtained and to clarify any issues (Marshall and Rossman, 2016). Participants were provided with information regarding the justification, aim, method and process of the project (Marshall and Rossman, 2016). This included the data to be recorded.

Findings and Discussion

The school nurses were able to articulate in the pre training questionnaire the impact of obesity on young people as well as having awareness of the latest policy and evidence around nutritional health. Their contributions focused upon the physical effects however 50% of the respondents also commented on the greater risk of emotional health concerns such as low mood or depression. 52% also named the Childhood Obesity: A Plan for Action (Department of Health, 2016) as a key piece of current policy. It was clear therefore, despite a reported lack of formal training for many, that there was a section of school nurses able to explain their existing explicit knowledge (Smith, 2001).

By the time the school nurses had completed the post course questionnaire 100% of them were able to articulate the emotional and physical impact of obesity on young people and demonstrate awareness of the latest evidence. This included 75% noting the Childhood Obesity: A Plan for Action (Department of Health, 2016) as important. However, the volunteers who completed the post course training were fewer in number and 75% of them had five years' experience or more in the field. Therefore, it was difficult to know at this stage if the apparent growth in knowledge was due to professional experience in the participants leading to intuitive knowledge (Smith, 2001).

Next, the analysis process led the researcher to the qualitative rating scale of 0-5 (see table one), which the school nurses used to subjectively explore their confidence in this area of their practice. In the pre training questionnaires, the participants' scores ranged between '2' and '5'. Literature suggests there is a lack of clarity regarding nursing

confidence and therefore it is unknown if this has an impact upon its recognition (Crooks et al., 2005). When analysing the post course questionnaires there was a significant impact upon the school nurses' self-assessed confidence levels. All of the respondents identified themselves as '4' or '5' in all areas. The significant change in all areas appears to demonstrate that the school nurses felt that the training had a very positive impact upon their confidence.

The area with the lowest number of school nurses scoring '5' for their confidence was in motivational interviewing. Respondents were extremely positive about the resource pack gained through the training. 100% of them used positive terms to describe what they thought of the pack. This included 50% stating it was helpful and user friendly in practice. The questionnaire did appear to highlight that the participants lacked confidence in how to share the training and resources with their colleagues as the 'champion'.

The researcher then continued to thematically analyse the data received through both the focus group transcript and the notes made regarding interaction in the observation log. A model was followed to ensure the use of a trustworthy approach (Braun and Clarke, 2006; Creswell, 2013). The lexis used by the school nurses to discuss the training as well as the impact upon practice was overwhelmingly positive and this was supported by the non-verbal communication documented in the observation log. Adjectives from a variety of participants included 'great', 'useful', 'practical', 'powerful', 'inspired' and 'beneficial'. It could be argued that this positive feedback was as a result of the participants' high level of engagement during the training (Neufeld et al., 2006).

In line with the chosen analysis model the researcher searched and reviewed themes finally defining them (Braun and Clarke, 2006). The themes were 'increased knowledge but particularly confidence', 'barriers going forward' and 'areas for improvement'.

'Increased knowledge but particularly confidence'

All of the focus group participants stated that they felt the training increased their knowledge and confidence. The focus group discussed the areas of knowledge gained, some were generalised in their contribution such as 'the actual day we had was just really loads of useful information' and 'I think the content was great'. Others were able to highlight more specific knowledge gained, for example 'in the past my concern was that, giving conflicting advice ... that is what I learnt, what advice should you be giving'. Both the generalised contribution and the specific thoughts were supported in the post training questionnaire where all of them were able to articulate the emotional and physical impact of obesity on young people and demonstrate awareness of the latest evidence.

Again, the particular increase in the school nurses confidence was evident. There was a feeling that the training 'reinforced' knowledge and therefore in turn increased the confidence in practice. The group reflected on specific cases and the change in how confident they would feel having now attended the training; 'We did the food diary... but I think, if that happens again this year, I'll put it more into practise'. This included supporting young people around their nutritional health when they are under weight or an appropriate weight. This was positive as it highlighted that the training increased confidence in

supporting young people in a variety of different positions and encouraged reflection which is vital to learning and sustained change (Bagay, 2012; Caldwell and Grobbel, 2013; Timmins, 2006).

The focus group was completed two months after the training and the gain in knowledge and particularly confidence had not appeared to decline despite the limited opportunity the focus group members had to utilise this in practice. The participants were keen to agree that the training and resources could be applied and utilised in practice because of their quality. This included the training and resources being described as 'young person centred'. This focus on the child's voice appeared to be a significant positive for the practitioners.

'Barriers going forward'

Both the questionnaires returned and the focus group were able to highlight barriers going forward, which may inhibit the sustained impact on knowledge and confidence discussed above. The most frequently noted concern through all data was time, this is supported by wider literature (Newton et al., 2009; Bastable, 2008; Boudioni et al., 2007; Diekmann et al., 2012; Hyde and Phillipson, 2014; Meyer et al., 2007). This may especially be true as school nursing is currently an ever changing setting which is evidenced to increase time pressures (Boudioni et al., 2007). Participants through all forms of data stated that lack of time and pressures on time were the most significant barriers to their learning as well as to the impact of their learning upon practice. Participants felt concerned that there was too little time to digest the 'intense day' then to be able to implement the training and

resources with young people they meet. This reflects the need identified in literature to have space for reflection (Bonis, 2009). As well as this it was recognised that time pressures have an impact upon the capacity to disseminate the training as 'champion'. There was a feeling throughout discussion of the barriers that there needed to be clear support from management and a learning environment in place to foster the positive and conquer the challenges in practice (Newton et al., 2009; Daft, 1998).

'Areas for improvement'

The focus group supported the questionnaire respondents in discussion of the areas for improvement discussed. The questionnaire highlighted a lower level of confidence within motivational interviewing. This was explored and the focus group members felt that this element of the training could be improved; however, they were mixed in how they felt this should be done. This area of mixed feedback could be as a result of learning approaches which is recognised as a possible barrier due to the great amount of variation found in one training session (Newton et al., 2009; D'Amore, James and Mitchell, 2012).

The area for improvement which the focus group appeared to be most vocal and passionate about was how they were to deliver the training as 'champion'. The participants were evidently very concerned about the practicalities of sharing the knowledge and confidence gained through the training with others. They were anxious about meeting different professional needs including considering staff 'teaching styles'.

The nature of the study means that the aim and the findings do not gain a representative view, rather a range of perspectives from school nurses has been sought on the impact the training has had upon them. The limitations of the methods used revolve around the nature of group dynamics (Marshall and Rossman, 2016). However, the strengths of the methods used to produce this study's findings include the production of a quantity of data in a shorter time period as well as providing participants opportunity to refine and recollect through discussion (Foster-Turner, 2009).

The impact of this research project has already been evident. Due to the nature of action research the collaboration with participants was fundamental in order to gain their lived experiences (Marshall and Rossman, 2016). Participants were very positive about the training and could highlight the areas in which it influenced both their knowledge but particularly their confidence in supporting young people with their nutritional health needs.

Conclusion and Recommendations

There is a wide evidence base, which supports the impact and prevalence of weight issues amongst young people (World Health Organisation, 2016). It both supports the need for evidenced based prevention and intervention including the ideal placement of the school nurse to complete this work (Public Health England, 2014). The school nursing workforce has highlighted that they do not feel confident or equipped with the correct knowledge to promote the nutritional health of young people (Quelly, 2014).

The evaluation of the young people's nutritional health training formulated the three discussed themes. The particular increase in the school nurses confidence was evident

within the focus group which mirrors the link between training and confidence increase the literature evidenced (Atal, Patrick and Wang, 2016; Elgie et al., 2010; Jordan, Mackay and Woods, 2016). There was a feeling that the training 'reinforced' knowledge and therefore in turn increased the school nurses' confidence in practice (Crevacore, Jonas-Dwyer and Nicol, 2016; Crooks et al., 2005; Lundberg, 2008). Unfortunately there is no further funding to continue providing this training and resource pack. However it could be further commissioned and it is hoped the 'champions' will continue to update their local teams.

Both the questionnaires returned and the focus group were able to highlight barriers going forward which may inhibit the sustained impact on knowledge and confidence discussed above. There was a feeling throughout the barriers highlighted that there needed to be clear support from management and a learning environment in place to foster the knowledge gained and conquer the challenges in practice (Newton et al., 2009; Daft, 1998).

The area for improvement which the focus group appeared to be most vocal and passionate about was how to deliver the training as 'champion'. The participants were evidently very concerned about the practicalities of sharing the knowledge and confidence gained through the training with others. Further research would be recommended as although the findings of this study are clear there remain queries regarding the longevity of the training's impact. It is unknown as to how it translates when the 'champions' complete the training within their own teams. Although training was developed from the candidates concerns about being 'champion' it would be beneficial to complete further

research to evidence that the increase in knowledge and confidence is sustained by those who attend their training (Marshall and Rossman, 2016). It would also provide an opportunity to research the extent to which this impact has transferred into the practice setting.

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