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RESEARCH ARTICLE

Does a Nursing Associate Programme Team Work and Leadership Module Make a Difference to Student Nursing Associate Self-reported Leadership Skills? A Mixed-methods Study

Graham Williamson[1,*], Beverley Maund[1] and Sandy Knowles[1]

[1]*School of Nursing and Midwifery, University of Plymouth, Plymouth, United Kingdom*

Abstract:

Background:

Leadership is an essential element in the skills of healthcare professionals at all levels. This is true for Registered Nurses as well as Nursing Associates, who are registered professionals with a two-year foundation degree programme as role preparation.

Objective:

This paper reports a study examining potential gains that might accrue from leadership and team-working module in year two of the Nursing Associate Foundation Degree programme at one university in the South West of England.

Methods:

We conducted a mixed-methods study in the summer of 2020, with a pre- and post-module survey using the Student Leadership Inventory – Self, and a virtual focus group on the video conferencing software Zoom ™.

Results:

The survey results showed a statistically significant difference between Student Nurse Associates' scores before and after the module, with a moderate effect size. The virtual focus group confirmed benefits that included growing personal confidence amongst those that attended and that they could identify leadership styles and team dynamics in practice.

Conclusion:

As effective leadership is associated with patient safety and quality of care, we conclude that not only has this module been effective, but also that such preparation for practice can have important real-world impacts beyond the classroom.

Keywords: Leadership, Team working, Mixed methods study, Nursing associates, Nursing and midwifery council, Module.

1. INTRODUCTION

In contemporary healthcare, competence in team working and skills in leadership are fundamental for all healthcare professionals [1], including Registered Nurses (RN) and Nursing Associates (NAs) [2]. The effectiveness of clinical leadership education has been questioned as some newly qualified nurses' (NQNs) leadership skills have been found inadequate [3], resulting in high attrition of newly qualified nurses due to lack of confidence in managing clinical situations and decision-making [4]. Healthcare systems are inherently stressful and demanding environments; chronic workforce shortages [5, 6] coupled with the demands of the COVID-19 pandemic mean that 21st-century healthcare requires effective leadership for optimal patient outcomes more than ever before [7].

In the United Kingdom (UK), there is a perception that there are large gaps in clinical acumen between Registered Nurses (regulated and registered with the Nursing and Midwifery Council (NMC), the professional regulator for nurses and midwives in the UK) and Healthcare Assistants (HCAs, generally unregistered staff with delegated caring

* Address correspondence to this author at School of Nursing and Midwifery, University of Plymouth, United Kingdom; E-mail: gwilliamson@plymouth.ac.uk

responsibilities) [8]. This was recognised in the Francis Report [9] into the care failures at one large UK National Health Service (NHS) trust, and recommendations were made regarding the creation of a new NA role. Nursing Associates are also regulated by the NMC since 2018 [10], and their standards of proficiency require NAs at the point of registration to be able to manage their own workload and recognise where areas of care can be safely delegated to others. The NA role is generic and is not defined by a field of nursing [10], enabling NAs to be 'portable' within NHS trusts and other care providers to meet the demands of the service. Based on their 2018 NMC standards, Nursing Associates will be required to delegate tasks and supervise others, acting as a role model and providing constructive feedback and challenging care delivery if appropriate [10]. However, their clinical pay grading and related responsibilities reflect their two-year foundation degree preparation programme (abbreviated to FdSc), and further promotion through the clinical grading structure would require completion of the full Bachelor of Science degree (BSc) required by the NMC and employers for additional responsibilities and pay associated with RN roles. Student Nurse Associates (SNAs) are typically full time employees working 37.5 hours per week, of which 7.5 hours [one day] is in higher education, with 30 hours a week in their clinical role. All have to complete 460 hours in external placements under direct supervision, providing a breadth of experience, including hospital and community settings, and including child health, mental health, learning disability and adult nursing exposure.

Arguably, the peripatetic nature of this role will require NAs to rely on their team working and leadership skills, even more so than newly qualified nurses, who are generally assigned to one ward area or practice environment. There is a clear expectation that nurse education and practice placements will provide students with the necessary skills to develop their leadership capabilities and understanding of leadership in their future roles [10]. There is, however, an absence of a 'best practice' model, strong scholarship, or an underpinning evidence-based pedagogy for leadership education [4, 11] in regards to NAs, whose programmes of study are comparatively recently implemented.

The NHS Leadership Framework [12] is a distributed leadership model in which leadership is a shared responsibility of all staff, not restricted to those in leadership roles. Staff are required to demonstrate leadership behaviours in five core domains (Demonstrating Personal Qualities, Working With Others, Managing Services, Improving Services, Setting Direction) to improve the safety and quality of healthcare. However, some students continue to view leadership as a stand-alone role for others, clearly pointing to a lack of theoretical understanding [13] that reflects a lack of explicit evidence of distributed leadership in the NHS, and also that many nurse leaders do not self-identify as leaders [14].

The need to make leadership and team working educationally explicit and practice-focused has informed the development of the team working and leadership module investigated in this study, with the express intention of changing in SNAs' views of leadership and of their own capacities for clinical leadership. A pedagogy of active learning has been central because active learning has been shown to facilitate leadership skills acquisition in nurse education [15]: one study [16] showed positive results from students undertaking a project in which leadership skills were made 'explicit' using the Student Leadership Practices Inventory (SLPI) developed by [17] from extensive research into leadership behaviours and how to improve and facilitate them.

In the context of the need for leadership and team working and the introduction of NA FdSc preparation for practice and registration, it is appropriate to evaluate the impact of the team working and leadership module on SNAs' self-reported skills by conducting a study to answer the following research question: Has the module enhanced students' self-reported leadership skills?

2. MATERIALS AND METHODS

This was a mixed-methods study with two phases. Phase 1 was a quantitative longitudinal survey, pre- and post-module delivery. In Phase 1, and with permission from the authors, an existing valid and reliable measure, the Student Leadership Practices Inventory-Self (SLPI-S) [18], was used to collect data. This is a 30 item Likert scale tool that has been widely used in organizations and educational settings and has been shown to have high internal reliability (Cronbach's alpha 0.7) and strong normative validity in large-scale analysis of leadership attitudes of students. The student inventory was developed from concepts relating to leadership in working populations which have themselves shown to be valid and reliable in many settings related to nursing education and nursing [19]. SLPI-S has successfully been used to evaluate the development of leadership behaviours in undergraduate nursing students in pre- post-test designs [16, 20].

Phase 2 was a Virtual Focus Group (VFG) discussion conducted over the video conferencing software Zoom ™. This virtual focus group via Zoom™ software with volunteer students and was used to add meaning to the SLPI findings. The schedule of questions used for the VFG is shown below in Table **1**.

Table 1. Focus group schedule of questions.

• What is your understanding of leadership in the NHS?
• Would you consider yourselves to be leaders?
• How has the team working and leadership module impacted your leadership skills? What do you do differently?
• What in particular in the module do you feel was useful in developing your understanding of leadership?
• How has the team working and leadership module impacted your team working and followership skills? What do you do differently?
• What in particular in the module do you feel was useful in developing your understanding of team working and followership?
• Have other members of your practice team recognised a change in your team working and leadership skills? What have they noticed?

2.1. Aim

The aim was to investigate whether or not the team working and leadership module has an impact on students' self-reported leadership skills.

2.2. Objectives

(1) To test the null hypothesis that there is no statistical difference in SLPI-S scores before and after the module.

(2) To examine the effect size of any differences in the SLPI-S scores before and after the module, should they occur.

(3) To illicit qualitative data on the module and its perceived impact on students' leadership skills in practice.

2.3. Ethics and Recruitment Ethics

Ethical approval was granted by the Faculty of Health Research Ethics Committee Reference Number: 19/20-1168. In Phase 1, JISC survey software was set to anonymise data at the point of data analysis. JISC promises: 'Online surveys do not use cookies for survey completion and external tracking software such as Google Analytics is not supported on online surveys. Additionally, you cannot access any information about respondents' IP addresses.' Thus students' data cannot be identified or withdrawn once submitted and is also anonymous. This was clear in the consent form and participant information sheet, which were sent in advance of the survey distributions.

Phase 2: in the Zoom™ VFGs, participants were able to identify each other. We established ground rules that issues discussed in the VFG were not to be disclosed outside of the VFG. For the VFGs, participants were able to re-consider their participation and withdraw during the VFG or their data up to five working days after the session by emailing the researcher (none did so). This was clear in the consent form and information sheet, which were circulated in advance of the VFG. We did not require the return of signed consent forms but instead repeated the participation information sheet and gained verbal consent before the Zoom™ VFG began, whilst also allowing participants to consider their continued participation before commencing. Identifying details were removed at the point of data analysis, and we did this by asking participants not to use names. The recordings were locked so that only the three members of the research team could access them. Recruitment

This School of Nursing and Midwifery runs two FdSc programme intakes per year, with a total of approximately 100 students. Prior to the module commencing, using cohort email addresses, students were invited in May 2020 to complete the SLPI-S survey, which was circulated using JISC survey software. Students were asked to complete it a second time on completion of the module in June 2020. Students were also asked to volunteer for a Zoom™ virtual focus group which took place in June 2020. This was a Zoom™ event because it took place during the COVID-19 pandemic, which made physical meetings impossible.

2.4. Data Analysis

Phase 1. Objective 1. In order to test the null hypothesis that there is no statistical difference in SLPI-S scores before and after the module, we ran the non-parametric tests for statistical significance Wilcoxon signed ranks test, which is a frequently used non-parametric test for paired data such as studies like this where pre- and post-measures are administered to the same subjects [21].

Objective 2. To examine the effect size for any differences in the SLPI-S scores before and after the module, we calculated effect size r (where r=Z /n) and interpreted this in the context of mean values. It is necessary to present effect sizes to avoid misinterpreting results by overestimating the importance of statistical significance, which is common in hypothesis testing [22].

Statistical analyses were undertaken using SPSS version 24 for the hypothesis testing and calculated manually in an Excel spreadsheet for the effect size.

Phase 2. A single VFG lasting 40 minutes interview was undertaken with students who volunteered to attend (n=3). It was recorded and analysed by repeated listening using the recognised qualitative approach from the 'Framework' Method. This involved the following steps [23]: familiarisation and construction of initial themes or concepts; indexing, labelling, and tagging the data to construct links between categories by sorting them according to levels of generality and employing a hierarchical structure so that themes and subthemes start to emerge; followed lastly by descriptive analysis, where the themes are refined, finalised and agreed between the research team.

3. RESULTS

Phase 1. Objective 1: The survey was sent to 52 students before and after the module. Thirty-one responses were received to the survey before the module, and 22 responses were received when the survey was redistributed after the module. This represents a response rate of 59.6% pre-module and 42.3% post-module.

There was a statistically significant difference between the scores before and after the module. For the Wilcoxon signed ranks exact test p=0.035 (Z = -2.092), indicating that the null hypothesis should be rejected and there was a difference in the SNAs' self-reported leadership practices [based on SLPI-S measure] before and after the module, meaning that the leadership module did improve the SNAs' self-reported leadership practices.

Objective 2: There was a moderate effect size r = 0.31 based on Cohen's 'rule of thumb' categorisation of effect size interpretation [22], which also corresponds to the moderate improvement of pre- and post-test mean scores from 110 to 117.

Phase 2. Objective 3: the themes that emerged from the qualitative data also indicate the module's perceived impact on students' leadership skills in practice and their identification of others' skills. Two major themes emerged from the virtual focus group. These were Growing Personal Confidence and Leadership Styles in Practice. Table **2** shows the themes and subthemes that emerged from the VFG. In the following quotes, 'P' followed by a number indicates which participant was speaking, taken in chronological order.

Growing Personal Confidence for this group of NAs indicates that they believed that the module had improved their confidence in acting as leaders in clinical practice.

Table 2. Themes and subthemes from the virtual focus group.

Theme	Subtheme
Growing Personal Confidence	Leading unconsciously Situational leadership New skills in practice
Leadership Styles in Practice	Awareness of others' leadership skills Team dynamics

A first subtheme was that of Leading Unconsciously, meaning that students had now become aware that, in fact, they had been leading but had been unaware that they had previously been doing so:

'It wasn't until I did this module that I realised I had been leading unconsciously...I am responsible for my patient...I've been dealing with some very complex patients, and I will...feedback back to the team, delegate (and refer to other professionals)...and I've been doing this for the last three or four years'. P1

A sub-theme of Growing Personal Confidence was that of Situational Leadership, by which participants indicated that they had become aware of their leadership roles and the need to delegate:

'I don't consider myself a natural leader, but in certain situations, I think I do naturally take that position...(at least) in my own base but not really on placement. P2.

Another participant reported:

'I am starting to take much more responsibility for my patient and so being able to manage our workload' P3.

It was clear that along with highlighting to the students that they had in fact previously acted as clinical leaders, the module had helped them develop New Skills in practice [a third subtheme]:

'I don't think it was necessarily *during* the module, but the module gave me the tools to put into practice, and that gave me the confidence that "oh yeah, certain things do actually work" and gave me an awareness (of leadership). P3.

Another participant responded:

'In the last couple of months, very experienced HCAs have been asking for my advice, and they wouldn't have done that before the course… a patient on the ward was choking, and I just took leadership of that [delegating], and I don't think I would have done that previously. It's not so much the knowledge as the confidence to go and do that. It needed strong leadership…previously, I would have looked to the trained staff (meaning the RN, to lead in this clinical emergency)'. P2.

The second major theme was Leadership Styles in Practice, and the first subtheme was Awareness of Others' Leadership Styles:

(The module) 'gives you an awareness of different leadership styles and approaches…it's made me aware of others' leadership styles…I always knew my manager was a fantastic leader and really motivating…she is aware of people's strengths and weaknesses…I always knew she was a good leader but I never knew how. She's really transformational'. P2.

Clearly, that participant's comments reflect theoretical material from the module, confirmed by another participant:

Interviewer: 'So the things she was doing, you wouldn't have been aware of, but the module has given you the underpinning theoretical skills?'

(Agreement)

'My manager, he's brilliant, he's a bit *laissez-faire* … before the module, I didn't realise what was what and the differences between the leadership styles but since doing the module, I can recognise that he uses a mixture of different styles when he needs to'. P1

The last subtheme was Team Dynamics. This was mentioned by participants in terms of how different leadership styles and traits could affect the practice area:

'When someone is a confident and stronger leader, followership is the natural progression isn't it? …When the nurse in charge of a team makes a plan…to have that to start with everyone has a better focus, and I see that now than I did before I had an understanding of the theory behind that'. P3

Another participant agreed:

'I see that. I have been on a shift where we have had two leaders - and that's been very tricky - when you've got two quite strong characters…it could get out of hand and you could end up with no leadership…and it's the whole team dynamics when you've got two leaders…you haven't got that overall goal; because people aren't working together'. P2.

4. DISCUSSION

The aim of our study was to investigate whether or not the team working and leadership module in our SNA FdSc programme had an impact on students' self-reported leadership skills. Our findings indicate that indeed the module did make a positive difference to the knowledge and skills of the SNAs who undertook it. More specifically, regarding objectives 1 and 2, there was a statistically significant difference between their scores before and after the module, showing a self-reported improvement in leadership skills on the SLPI-S [18] with a moderate effect size. Regarding objective 3, the qualitative data from the VFG indicated that participants identified growth in confidence in their own leadership skills; that they were more willing to see themselves as leaders; more able to identify clinical leadership and team dynamics in their clinical practice, and more likely to use appropriate terminology and behaviours associated with the concept of leadership.

This study is important and significant in clinical practice because clinical leadership is such an important component for patient safety in current healthcare [24]. It is clear that this module can be acknowledged as adding leadership skills, at least self-reported skills, which should ensure that these SNAs are well equipped to tackle these challenges in their own clinical practice [2].

Indeed, as these students will remain clinically-focused in their roles, as opposed to developing their careers away from the bedside into management, clinical specialism, or education, their clinical leadership practices on a daily, shift-by-shift basis

should materially benefit patient safety [1] and quality of care [25]. Identifying leadership behaviours in others is also necessary so that they can view them as role models and continue to grow as professionals. Our participants discussed this in their focus group. Although they did not themselves identify the relationship between leadership, safety, and quality, they did discuss transformational leadership in senior colleagues. This has been shown to benefit high performance in nurses by establishing a sense of self efficacy and workplace engagement [24, 26]. By implication [because we have not measured this], effective leadership education for SNAs such as this module appears to provide should improve patient safety and quality of care.

4.1. Limitations

This study represents findings from one University School of Nursing and Midwifery, with a limited response rate to the survey phase and only three students attending a VFG. Email surveys typically have poor response rates [27], and although our response rates are better than the 'average', we still make no claims to the generalisability of the findings. Potential participants probably did not respond due to busy clinical responsibilities. We must interpret the statistical results with caution because of the small sample size and the focus group with even more caution because it is likely that the three individuals who attended were positive and enthusiastic people rather than critics. Virtual FGs via Zoom™ also have a different dynamic with less interaction than might be the case in face-to-face settings. However, given the relative novelty of SNA programmes and the scepticism with which some view the implementation of NAs' foundation degrees and work roles [28], this study is likely to be interesting and relevant to others working in similar fields, and so we claim transferability to the extent that findings resonate with others' experiences at a level commensurate with qualitative research applications [29].

We must also acknowledge that the findings all rest on self-reported data. Self-report data has been criticised for potential response bias; that is, people over- or under-representing issues [30]. Self-report data is useful here because it allows these SNAs to report the improvements in their leadership practices accruing from the module, which otherwise would be difficult to quantify. Some authors argue that biases are likely to be less in post-test compared to pre-tests (so called 'response bias shift)' [31], meaning the effect size we report for the SLPI-S data may underestimate the size of the impact on their students' skills.

CONCLUSION

Our findings indicate that this SNA leadership module made an improvement to the knowledge and skill of these FdSC SNAs who undertook it. There was a statistically significant difference between their scores before and after the module, showing a self-reported improvement in leadership skills [18] and moderate effect size. The qualitative data from the VFG indicated that participants identified growth in confidence for themselves in their own leadership skills, that this growth in confidence had an impact on the clinical teams in which they worked, and that they were more readily able to interpret leadership behaviours and team dynamics in

colleagues. We must interpret the findings with caution, but despite the limitations of sample size and 'response shift bias', we conclude that targeted leadership education for SNAs should make a difference in clinical care. We recommend that further research be done to explore and quantify this. Another fruitful avenue for research could be potential differences in leadership skills and readiness for registrant practice between BSc-prepared RNs and FdSc-prepared NAs. It would be important to investigate this immediately at the point of registration as well as longitudinally to examine known correlations with occupational indicators such as stress, rates of attrition, and intention to leave employment [4 - 6].

LIST OF ABBREVIATIONS

BSc	=	Bachelor of Science.
FdSc	=	Foundation Degree.
HCA	=	Healthcare Assistant.
NHS	=	National Health Service.
NQN	=	Newly Qualified Nurse.
NA	=	Nursing Associate.
RN	=	Registered Nurse.
SNA	=	Student Nurse Associate.
UK	=	United Kingdom.
VFG	=	Virtual Focus Group.

AUTHORS' CONTRIBUTIONS

GW and BM contributed to the conception and design of the work. GW and BM were responsible for the acquisition, analysis, and interpretation of data. GW, BM, and SK drafted the work or substantively revised it. They have approved the submitted version and have agreed to be personally accountable for the author's own contributions and to ensure that questions related to the accuracy or integrity of any part of the work, even ones in which the author was not personally involved, are appropriately investigated, resolved, and the resolution documented in the literature.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Ethical approval was granted by the Faculty of Health Research Ethics Committee Reference Number: 19/20-11687.0.

HUMAN AND ANIMAL RIGHTS

No Animals were used in this research. All human research procedures were followed in accordance with the ethical standards of the committee responsible for human experimentation (institutional and national), and with the Helsinki Declaration of 1975, as revised in 2013.

CONSENT FOR PUBLICATION

Informed consent was obtained from all the participants.

AVAILABILITY OF DATA AND MATERIALS

The SPSS output file for the survey in Phase 1 is available here: http://hdl.handle.net/10026.1/16868.

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