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Peer Mentoring as a Strategy to Improve Paramedic Students' Clinical Skills

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ABSTRACT

The development of clinical skills and judgment is a key area of learning for undergraduate paramedic students but they typically find translating theory to practice a daunting prospect not least because they practice their developing clinical skills in front of others. This paper documents the rationale and outcomes of a peer mentoring program in which selected third year paramedic students took on the role of mentors within a second year clinical practice subject. The second year students reported that the program had resulted in positive changes, including an improvement in their clinical skills. Mentors reported benefits such as forming effective relationships with their mentees, enhanced positive relationship with the staff and support from their fellow mentors. Comments from staff and future directions are discussed.

INTRODUCTION

Paramedics is a unique field and a growing new university discipline in Australia with eleven paramedic programs either established or under development (O'Meara, 2006). As undergraduates, paramedic students become familiar with ambulance equipment, clinical practice and associated guidelines and ambulance drugs. As part of their training in the state of Victoria, new recruits must complete specified 'on-road' phases and work alongside a Clinical Instructor (CI). CIs work within both the Metropolitan Ambulance Service (MAS) and Rural Ambulance Victoria (RAV) providing leadership and instruction to less experienced colleagues (Ivanov, 2005).

PARAMEDIC CLINICAL PRACTICE SESSIONS

Until the implementation of the program reported in this paper, the presence of mentoring relationships within the ambulance profession in the form of CIs was not mirrored in the Paramedics course at Victoria University (VU). VU students learned their clinical practice skills in clinical practice sessions which in 2007 consisted of approximately forty students and one lecturer (sometimes assisted by a guest lecturer on sabbatical from the ambulance industry). In these sessions, students learn to translate their theoretical knowledge into practice through scenario-based learning in small groups. This involves practical application of such

aspects as approach to the incident, patient assessment, setting up of ambulance equipment, equipment dexterity, treatment options and communication, and may include scenarios with trauma patients or other medical situations.

Learning how to apply paramedic clinical skills in clinical practice sessions is fraught, not least because these skills are necessarily taught in a public and group context in which students' strengths and weaknesses are on show for others to see. Students are also required to critique their peers' performances and develop appropriate and realistic simulated scenarios. In this pressured context, students are often unwilling to ask questions or admit when they do not know how to apply a specific technique. Paramedics teaching staff also observe that students often feel uneasy to touch their fellow students in the process of applying the skills, a factor that decreases the authenticity of the scenarios and is difficult to address without frequent intervention and advice. Formal and anecdotal student feedback confirmed staff concerns and demonstrated that students in clinical practice sessions required more timely and more frequent feedback for the development of their clinical practice skills.

RATIONALE FOR THE PEER MENTORING PROGRAM

The presence of a mentoring relationship between CIs and newly qualified paramedics, was a catalyst for examining the possibility of a similar program within the undergraduate paramedic course. However, the relationship between a CI and a new paramedic professional is based on the more traditional and hierarchical concept of a mentoring relationship in which the mentor has far greater experience than the person being mentored. This was considered an inappropriate mentoring model for newly emerging clinical skills to be fostered. The challenge was to find a way to turn the clinical practice sessions into a less threatening learning environment.

According to Kram and Isabella (1985) a peer mentor is someone who holds a comparable position to the person they are mentoring both in terms of status and experience. Another mentoring relationship is referred to as a 'step-ahead' mentor (Darling, 1986) in which the mentor is one stage further ahead than the person being mentored. The authors therefore anticipated that utilising later year students as student mentors in clinical sessions would help to create a less threatening learning environment as the student mentors would be peers in the sense of being fellow students but a step ahead in terms of year level and clinical skills development. It was hoped that the student mentors' presence would encourage a more open exchange of knowledge whereby a "trusting relationship with a peer who holds no position of authority might facilitate self-disclosure of ignorance and misconception, enabling subsequent diagnosis and correction" (Topping and Ehly, 2001, p. 125). Furthermore, once trust between the peer leaders and other students was established it was anticipated that mentoring in the clinical sessions would improve both mentors' and mentees' confidence and persistence. "Modeling of enthusiasm and competence and the simple possibility of success by the helper can influence the self-confidence of the helped, whereas a sense of loyalty and accountability to each other might help to keep the pair motivated and on-task" (Topping and Ehly, 2001, p. 125). It was also anticipated that the more experienced students, the peer mentors, would benefit greatly from their roles. As Topping and Ehly (2001) state: "[f]or all participants, they might never have truly grasped a concept until they had to explain it to another,

embodying and crystallizing thought into language" (Topping and Ehly 2001, p. 124).

Program Summary

At VU, Peer Assisted Study Sessions (PASS) are referred to as 'subject-based peer mentoring' and students in a peer leader role are referred to as 'mentors' and thus these terms are used throughout this paper. The authors adapted Martin and Arendale's (1993) PASS model to suit the paramedics clinical skills context. Specifically, rather than students attending a voluntary session over and above their classroom contact hours, the Paramedics mentoring program was embedded into the formal clinical practice session.

Mentors for the Student Paramedic Mentor Program 2007 were selected from the existing cohort of third year students. Third year paramedic students were selected and trained to be mentors within weekly clinical practice sessions and participated in a one day training session. The training focussed on communication processes between mentors and mentees, specifically exploring ways to encourage confidence in their mentees' emerging clinical practice skills. The mentors were encouraged to reflect on their experiences of being new to paramedics and their experiences of clinical scenarios.

From a pool of thirteen mentors, up to five were present in any one of the three, four hour, clinical practice sessions. The mentors generally supported the same group of students throughout the semester. One hundred and thirty second year students were enrolled in the clinical practice subject in Semester One, 2007. The cohort was divided into three groups of approximately forty students.

Three groups of mentors prepared for one of three clinical practice sessions per week which ran from 9 am to 1 pm. Mentors also attended a half hour briefing and a half hour debriefing associated with each session. Within the sessions, mentors worked with small student groups to offer advice about the more difficult clinical tasks, to develop credible simulations, to trouble-shoot and to provide instantaneous feedback. Mentors were also given additional leadership roles such as planning the final session (a multiple casualty incident scenario) and taking on the liaison role when groups of students went on visits to externally provided student-focused professional development activities.

Objectives of the Mentoring Program

The Student Paramedic Mentor Program Semester One, 2007 was developed with the major objectives of improving students' clinical skills and judgement and to improve their confidence and use of clinical equipment, skills that can be difficult to develop in typical clinical practice sessions. Additional objectives included the provision of a student leadership role through which later year students could consolidate and extend their learning. It was also anticipated that teaching staff would glean timely feedback on issues and concepts students were finding difficult and therefore be able to respond more quickly to specific issues students were having difficulty with.

The authors also anticipated that the implementation of a peer mentoring program which focused on the development of supportive relationships between earlier and later year paramedic students would not only aid students' learning of clinical skills but would lead to a better understanding of the role of CIs within the

Paramedic profession and improved execution of the CI role if the students chose to take on the role of CI themselves in the future.

EVALUATIONS

Evaluations of the program were conducted to ascertain the effectiveness of the program from the points of view of mentors, mentees and teaching staff. A formal evaluation was received from ten of the thirteen mentors at the mid-cycle of the program. While a summative evaluation was planned, this did not occur due to students receiving job opportunities within the paramedic industry at short notice. Feedback from one hundred and twenty one mentees was obtained at mid-cycle and fifty eight responses were obtained at the end of cycle. Feedback from the two teaching staff was requested formally at the end of the program but was ongoing informally throughout the life of the program.

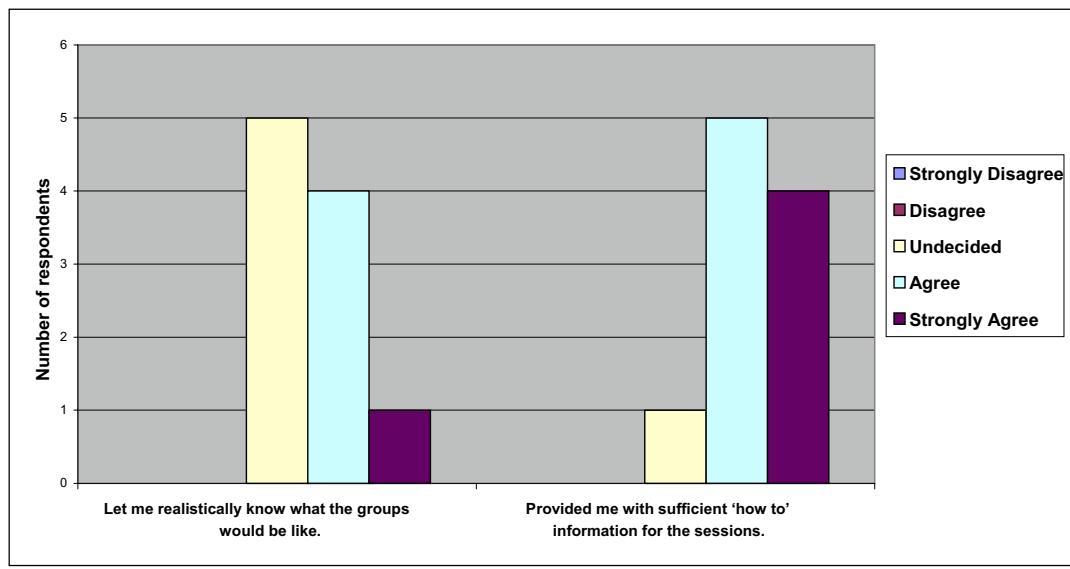
Mentor Feedback

To assist in evaluating the efficacy of the program as a whole, mentors were asked how they now viewed their training; how they experienced working with the teaching staff; the extent to which they felt supported by their fellow mentors during the sessions; and how they saw their relationship with the students in their groups. While mentors were requested to make additional comments none were provided.

Mentor Training

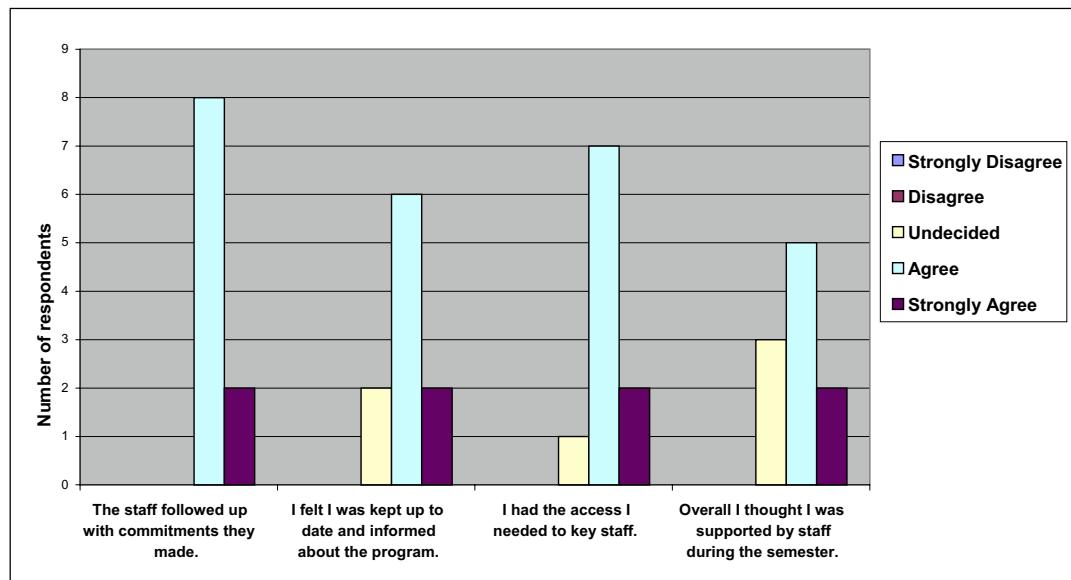
When mentors were asked to reflect upon their training all but one agreed or strongly agreed that the training had provided them with the skills needed for them to engage in mentoring.

Figure 1



The program resulted in strong relationships between the mentors and the teaching staff. This relationship extended beyond the boundaries of the subject. For instance, staff willingly agreed to be referees for students for paramedic-related interviews and offered suggestions and advice on how to conduct themselves during these interviews. This type of assistance was not provided to the mentors' classmates.

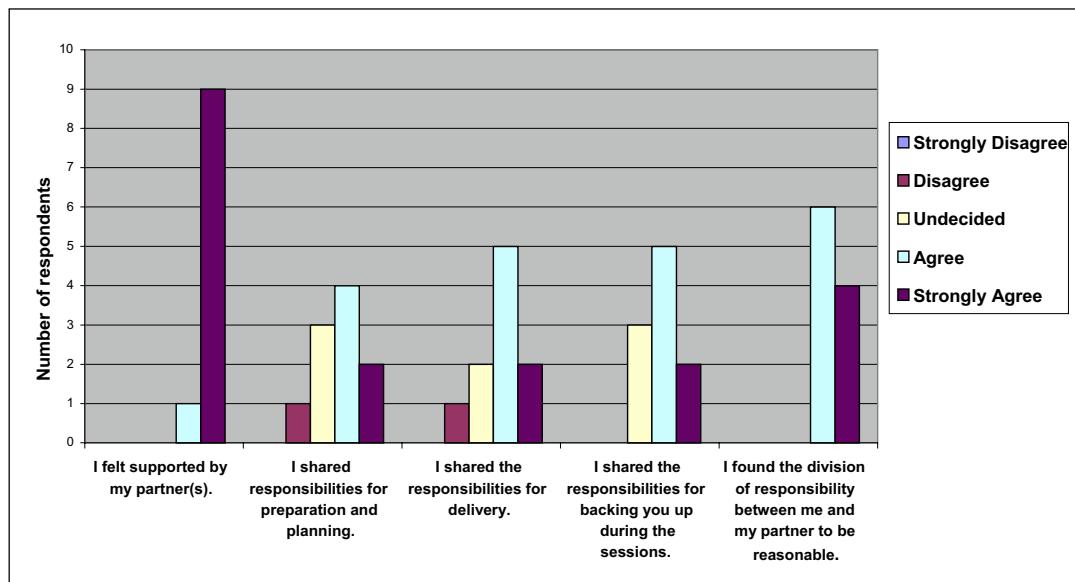
Figure 2



Mentors relationship with their teaching staff

The near universal endorsement of the support the mentors provided each other is consistent with how they shared their work within the sessions. The three questions that looked at preparation, delivery of material and backing up displayed large variability. Discussion with the mentors after administration of the survey found that there was ambiguity in these three questions. Some mentors understood these questions to refer to their fellow mentors while others understood them to refer to teaching staff.

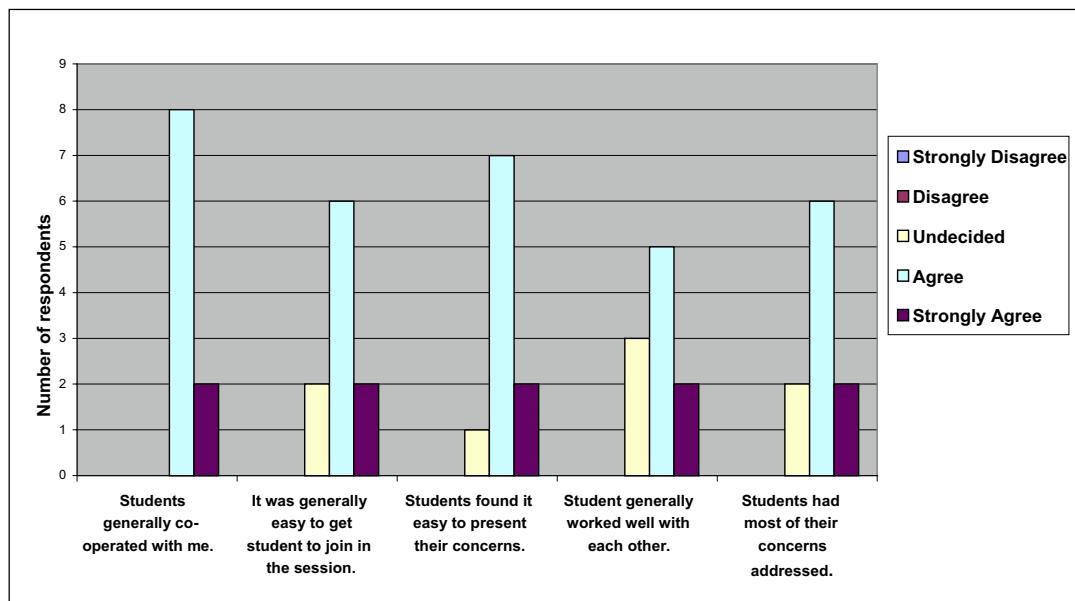
Figure 3



Mentors views on their working with each other

There was a convergence of views between how the students saw the mentors and how the mentors viewed the students they were assisting. Essentially, the mentors believed that they created a working space within which they engaged with the students and formed productive working relationships, where students found it easy to approach them and where students were able to have their concerns addressed.

Figure 4



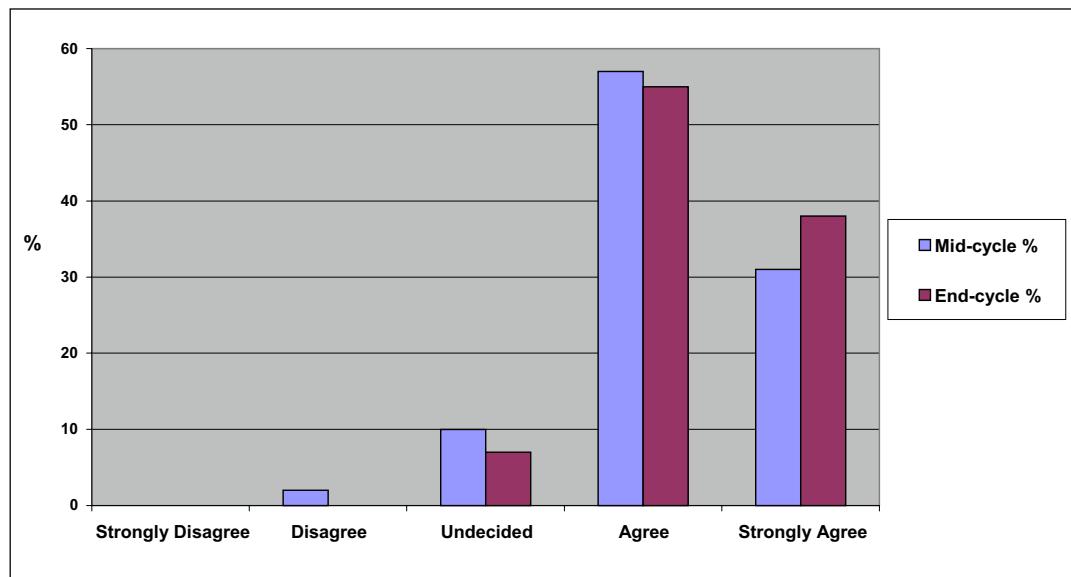
Mentors' views on how students reacted to them

Mentee Evaluations

Improvement of clinical skills

The team of staff involved in the program wanted to know if the program had helped students to improve their clinical skills. The responses indicate the program did impact on nearly all students' skills in a positive way.

Figure 5

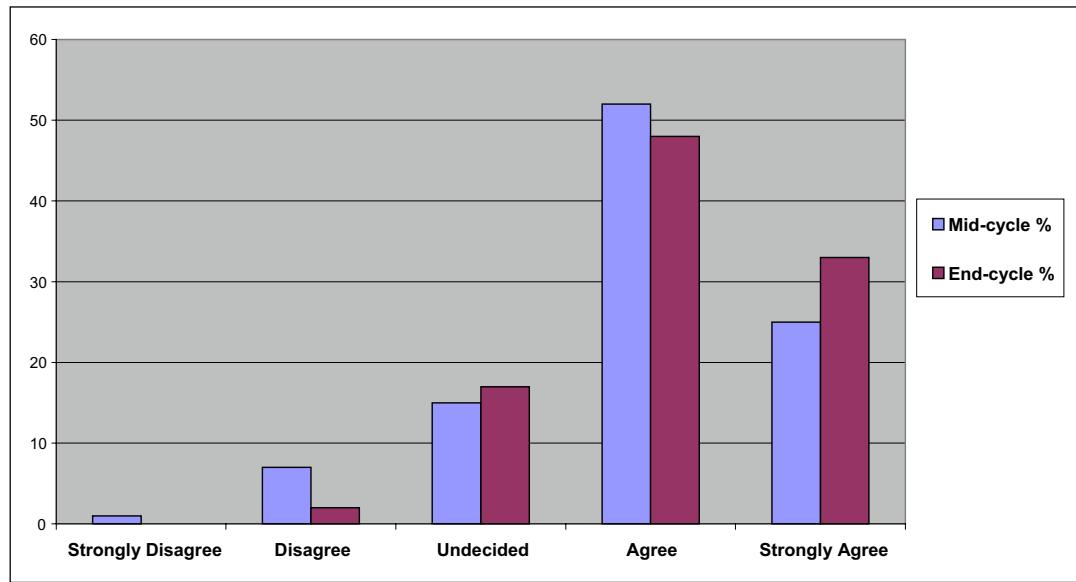


Mentees' views on how the mentors had helped their skill acquisition

Different ways to perform clinical skills

One issue when teaching undergraduate paramedics is students' reluctance to execute a skill in more than one way and still be within clinical guidelines. Students are often reluctant to try a different method. Student responses demonstrate that the program helped many of them to overcome this particular hurdle.

Figure 6

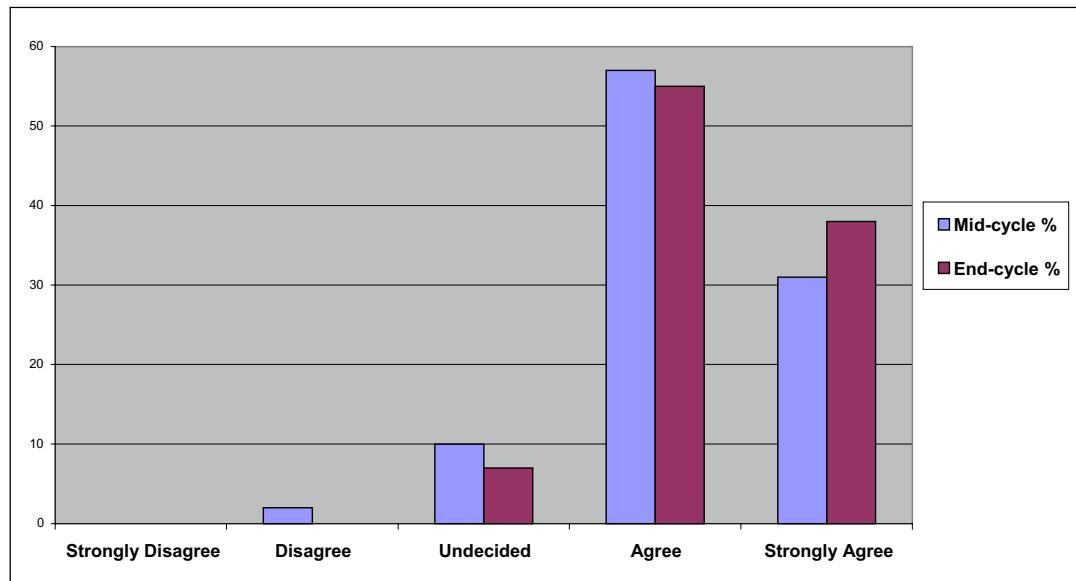


Mentees' views on the extent to which mentors had shown them different ways to perform skills

Knowledge of the subject

Although the program focused on the students' clinical practice skills, the staff wanted to know if the program had also helped students to improve their knowledge of the subject. Again the student responses were very positive.

Figure 7

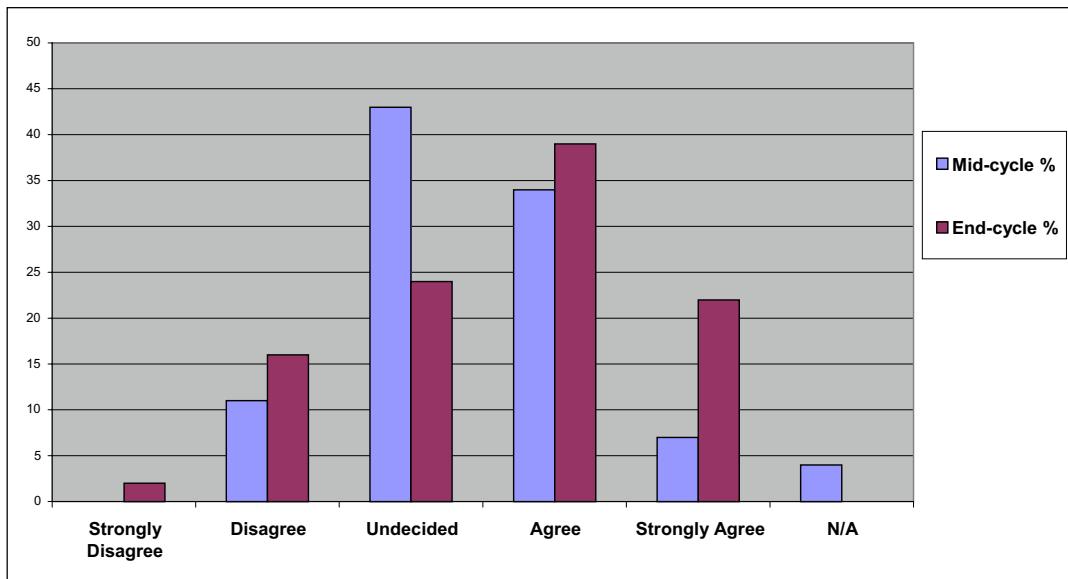


Mentees' views on the extent to which mentoring had helped their gaining knowledge in the subject

Increasing friendship networks

Although the focus of this program was to improve clinical practice and confidence, the team also wanted to know if working with more senior students helped them make more friends. The responses suggest this was the case.

Figure 8

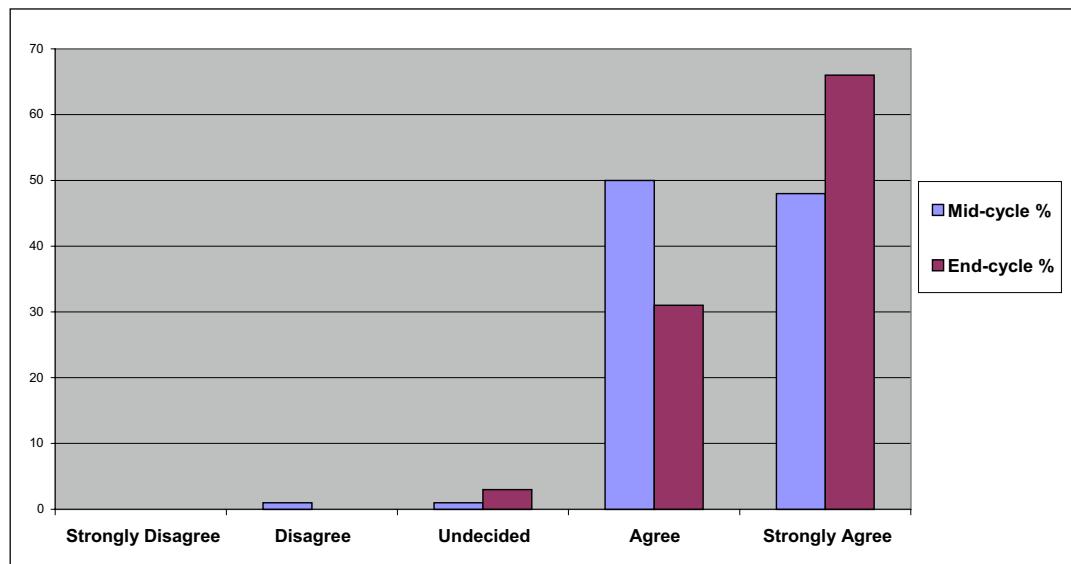


Mentees' views on the extent to which the program had increased their friendship networks

A Positive Experience

Nearly all the students responded very favourably to the program as a whole.

Figure 9



Mentees' rating as to how positive the experience of mentoring had been

The mentees were asked to state what they felt the best three things were about the mentoring program. All students responded positively. Some selected quotations are below.

"A very valuable point of view from people who understand what it is like to be a student."
 "They understood being a student. Provided a relaxed environment."
 "More confidence to discuss treatments."
 "Able to ask questions to own age group confidently."

The Lecturers' Feedback

At the end of the program the two teaching staff were asked for their feedback in the form of an email. Consistent with the mentees' quantitative evaluations, where the benefits to students of extra and additional attention were commented upon, the staff witnessed a high level of engagement between the mentors and the mentees. In these engagements mentors could devote considerable time to ensuring that students understood the complexities of the scenarios and had effective strategies to learn from them.

"I was pleasantly surprised with how seriously they took their role, how enthusiastic they remained throughout the weeks, and the fact they stuck with it for the entire semester. I had worried initially that I was asking too much of the mentors to commit to up to five hours per week every week of the semester, but they seemed happy to oblige." (Lecturer comment)

Staff described mentors who overcame their initial trepidations and as they matured within the program become increasingly confident within their role of mentors.

"Not only did they increase in their level of technical knowledge within the subject, which they enthusiastically shared with each other, they became adept at engaging students in learning tasks, discussing with each other as to how to engage specific students, and then

exchanging successful strategies after each session. They were increasingly active in the briefing and debriefing meetings and eventually were collectively given responsibility for planning the major event of the semester, the Multiple Casualty Incident [MCI]. The mentors liked the challenge that the MCI presented and managed that session successfully." (Lecturer comment)

As would be expected, there is a difference between organising and conducting a session with two highly experienced staff and planning a session where the two staff dovetail their activities with three or four mentors. The staff reported an increase in the overall work load and a shift in its distribution. More time was spent preparing for the sessions, conducting the briefing and the debriefing after each session. However, during the sessions there was less overall pressure on staff time and they could engage in assisting students with more complex situations and concerns. The staff commented that the mentors did not require as much support as was anticipated and feared and the mentors readily and appropriately approached the teaching staff for assistance when required during the sessions. The staff were impressed that mentors volunteered for the program which involved weekly attendance at a half hour briefing session, a four hour practical class followed by a half hour debriefing session. Some students travelled an hour each way to devote five hours of their time. In addition to their program contact time, students spent varying amounts of time preparing for the sessions.

The staff observed that as individuals the mentors grew in confidence as the semester progressed. The mentors became more adept at delivering support and working with their groups. By the end of the semester the mentors had become more comfortable and at ease in their interaction with students and in assisting them in the clinical sessions:

"The biggest (and probably most obvious) change was their level of confidence. They made comments like "I actually knew the content better than I thought" and grew in ability to be able to deliver scenarios with changes to suit a target audience. In addition, I saw a change in all the students' abilities to interact with peers. They developed confidence in asking each other for opinions and assistance, the "competition" with each other as students was removed." (Lecturer's email comment)

and

"A lot of positive feedback was received from the class about the program - with the class feeling very supported. Often class members were able to direct questions to the mentors that they may have been otherwise embarrassed to come to the lecturers with. It was also great to see the mentors grow into their roles and see the positive changes in their abilities and confidence." (Lecturer's email comment)

Overall Impact

The total impact of the program can best be summed up in the words of one of the teaching staff:

"Overall I found it an extremely positive program from my point of view. The hard work was all worth it to see improved confidence in each of the mentors and improved interactions between peers. I felt it brought structure to my classroom and I really trusted my mentors to act appropriately and safely. Just the added interaction with a small group of students made me feel like I had achieved a little more than usual. When you teach a group of 140

students it can be a little impersonal, so to have a small group to really develop and work with so closely complimented the 'everyday' teaching." (Lecturer comment)

DISCUSSION

The pilot program resulted in significant benefits for all who participated in it and are similar gains to those referred to by authors such as Kram (1988), Goodlad (1998), and Zachary (2005). Generally these benefits mirror each other. For mentors these gains include assistance with projects, revitalised interest in work and increased self-confidence. Mentees reported increases in their learning and development, increased personal support and an increase in confidence. Specifically, the program achieved its major of improving students' clinical skills and judgement and improving students' confidence and use of clinical equipment. The program also achieved its objective of providing students with a leadership role in which they could consolidate and extend their learning. Future iterations of the program could focus more specifically on student leadership development for the mentors, especially as it relates to the Clinical Instructor role in the Paramedic profession. The appropriate year level of the mentors also needs to be re-examined as one staff member commented: "the groups utilised may have been too close in educational understanding to see maximum benefit. It may be more appropriate to utilise third year students in first year classes, or maybe a different type of program for the second year cohort". Staff did not comment specifically on changes they made to their curriculum or teaching practice as a result of the mentors being present in the clinical sessions. This needs to be examined in future programs.

The mentor training received a positive response from participants but all of the staff involved agreed that improvements could be made. The development of a workbook with instructional material for mentors would be useful especially during briefing and debriefing sessions. It was felt that the training could be improved through the development of a mentor training DVD which shows footage of mentors engaged in the process of mentoring in Paramedics. This is a way of capturing existing mentor expertise and passing it on to the next cohort of mentors. The production of such a DVD for use in future paramedics programs is currently underway with the intention of trialling it in mentor training in 2009. Easily identifiable name tags for mentors would also be beneficial both for ease of recognition within sessions and as a tangible gesture of their special role.

CONCLUSION

Working in small groups on clinical scenarios with a valued peer improved student learning and student satisfaction. Staff also reported gains in their own satisfaction levels as teachers and pride in the student mentors for carrying out their roles so well. The high levels of satisfaction led the team to implement a similar program in 2008 in which first year undergraduate students act as peer mentors for students in the Non-emergency Ambulance Course in the Further Education (FE) sector of VU. The longer term plan is to include peer mentors in paramedic clinical sessions across both the FE and undergraduate Paramedic courses at VU.

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