

Belongingness in Undergraduate Dental Education

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Abstract

Objective To undertake a detailed educational evaluation into dental students' experience of the concept of belongingness and their development as 'safe beginners' on an outreach placement at the University of Portsmouth Dental Academy (UPDA). **Method** The participants were asked two questions, Did you feel belongingness at UPDA? and When in your year rotation did you feel this? and completed the educational evaluation anonymously in their last week of attendance. The quantitative data was handled with descriptive statistics and the qualitative data was analysed for recurring themes. **Results** A 95% response rate was achieved. 86% of respondents strongly agreed to feeling belongingness and 56% felt it after their first two weeks. Four themes were identified:- *Interaction with the preexisting people environment* 1a) Initial welcoming and warmth 1b) Continued interest in me as an individual; *Developing collegiality* 2a) My group of fellow students 2b) Working with the dental team as a dentist 2c) The team of everyone at UPDA; *In the clinical environment* 3a) Being a dentist with responsibility and respect 3b) The physical environment 3c) Becoming a reflective independent practitioner; and *Leadership*. **Conclusion** Belongingness in dental education should be defined as:- a deeply personal and contextually mediated experience in which a student becomes an essential and respected part of the dental educational environment where all are accepted and equally valued by each other and which allows each individual student to develop autonomy, self-reflection and self-actualisation as a clinician.

In Brief Box

- Explores belongingness in dental education in an outreach environment.
- Offers a definition of belongingness relevant to clinical dental education.
- Discusses how belongingness can be established within the student body.
- Shows that belongingness can be engendered in student groups if it is positively encouraged and opportunities facilitated.

INTRODUCTION

The General Dental Council (UK) (GDC) requires dental schools to qualify graduates as 'safe beginners'. This has been defined as a rounded professional who, in addition to being a competent clinician and /or technician, will have the range of professional skills required to begin working as part of a dental team and be well prepared for independent practice.¹ They should be able to assess their own capabilities and limitations, act within these boundaries and know when to request support and advice.¹ The General Assembly of the Association for Dental Education in Europe has produced comprehensive documentation on the profile and competencies of a graduating European dentist.² Neither document makes any recommendations of where these competencies can be achieved. However, many of these competencies, as well as the detailed learning outcomes that the GDC require, are more easily achieved in an outreach/community setting rather than the traditional dental school.^{3,4} In previous guidance to UK Dental schools, the GDC recommended a period of time in a primary care setting to extend the clinical environment that students could experience.⁵ Outreach education has thus been universally embedded in the UK dental curricula in undergraduate education⁶ and is recognised as being able to give dental students an invaluable experience prior to qualification.^{3, 7-10}

The experiences over the last 5 years at the University of Portsmouth Dental Academy (UPDA) have been well documented.¹¹⁻¹³ Through longitudinal educational evaluation, the concept of belongingness has emerged.¹⁴ This is proving to be a very powerful factor in being able to engage the student body in their final year of study, prior to undertaking paid employment within the NHS as Dental Foundation Trainees (DFT).¹⁵⁻¹⁷ The need to belong is not a new concept as a fundamental human motivation. The belongingness hypothesis is that humans have a persuasive drive to make and maintain positive and significant interpersonal relationships.¹⁸ Belongingness in the international general nursing educational literature has been defined as 'the need to be and perception of being involved with others at differing interpersonal levels which contributes to one's sense of connectedness (being part of, feeling accepted, and fitting in), and esteem (being cared about, valued and respected by others), while providing reciprocal acceptance, caring and valuing to others'.¹⁹ The concept has been considered a pre-requisite for nurses' clinical learning, with a need for strategies to be employed that enhance the students' belongingness and well-being while they are on placement, so that the student focuses on learning to provide optimal patient care. Furthermore students who felt that the environment was welcoming, supportive and receptive enhanced their confidence and allowed them to be self-directed in their learning²⁰ which is an element that is vital for lifelong learning.²¹

The context of this study was the clinical education based at the UPDA which has been discussed in detail previously (see Intended Learning Outcomes).¹³ In brief the model used by the UPDA is that of a residential outreach for 80 final year dental students from King's College London Dental Institute (KCLDI), utilising integrated team care with 20 student dental nurses and 48 dental hygiene/therapy students (HTS) in their second and third years registered at the University of Portsmouth. The dental students attend for 1 week in four (4 days/week) for a total of 10 weeks in their final year.⁵ The clinical care is funded using a live National Health Service England primary care contract (Personal Dental Services Plus contract).¹²

The aim of this study was to undertake a more detailed quantitative and qualitative examination into what aspects of the students' experience in outreach at UPDA engaged the feeling of belongingness and their development as autonomous practitioners ready to graduate as 'safe beginners'.¹

METHODS

The study was devised as part of the educational evaluation of outreach provision at the UPDA. Each year cohort (80 students) are asked to complete a comprehensive questionnaire divided into domains that provided both quantitative and qualitative data, that has been reported previously.¹³ For the most recent cohort of students (2014-15) an additional domain was added specifically investigating the students' sense of how their experience of outreach at the UPDA and the concept of belongingness has impacted on their development ready for qualification as rounded professionals, who, in addition to being competent clinicians, will have the range of professional skills required to begin working as part of a dental team and be well prepared for independent practice as dental foundation trainees. The questionnaire was completed anonymously in their last week of attendance just prior to graduation.

The two quantitative questions asked were:- Did you feel belongingness at UPDA? (This was supported with a definition of belongingness) and the second question: When in your year rotation (if at all) did you feel this? (i.e. belongingness). To gain insight into the students' experience of belongingness the qualitative data was derived from the questions:- Can you explain how you felt belongingness at UPDA? and What elements of the "Portsmouth experience" do feel engendered belongingness?

The quantitative data was handled with descriptive statistics and the qualitative data (free text responses) was analysed, coded, with subthemes and themes identified. The two authors read through all the qualitative data independently and used thematic content analysis to identify themes²². Subsequently, they met to combine and refine their findings. These were then discussed at further meetings after which the raw data was re-read to ensure that all themes were identified or not misinterpreted.

RESULTS

76 out of 80 students completed the evaluation (95% response rate). 86% of the respondents strongly agreed (Figure 1) to the question: 'Did you feel belongingness at UPDA?' To the question of when they started to feel belongingness during the rotation, 56% of the respondents felt belongingness after their first two weeks with an additional 21% by the mid-point of their rotation (Figure 2).

Four themes, encompassing eight sub themes, were identified in the analysis of the qualitative data:-

1) Interaction with the pre-existing people environment

- 1a) Initial welcoming and warmth
- 1b) Continued interest in me as an individual

2) Developing collegiality

- 2a) My group of fellow students
- 2b) Working with the dental team as a dentist
- 2c) The team of everyone at UPDA

3) In the clinical environment

- 3a) Being a dentist with responsibility and respect
- 3b) The physical environment
- 3c) Becoming a reflective independent practitioner

4) Leadership

1) Interaction with the pre-existing 'People' Environment

1A) Initial welcoming and warmth

- *Everyone has welcomed us and made us feel at home and thus we now feel the same towards UPDA.*
- *As soon as I arrived, people, knew my name and everyone had friendly faces from the decom team (sic the infection control and decontamination technicians) to the reception staff and everyone was really nice and chatty.*
- *The warmth of the staff, both clinical tutors, nurses and PAT Team (sic the Patient Administration Team). HTS (sic hygiene and therapy students) were also very friendly. The atmosphere is lovely and there is a genuine sense of people wanting to help you and teach you in the most comfortable environment.*
- *We were made to feel welcome straight away and part of the family.*
- *Very welcoming induction week. Could tell right from the start this was going to be a very supportive environment.*
- *Everyone was so passionate and helpful and friendly, I was excited to come back every month.*

1B) Continued interest in me as an individual

- *They knew us personally and made an effort to get to know us at every opportunity.*
- *That everyone around you genuinely cared for your well-being; whether it is from an educational view point, social, personal emotions, etc.*
- *The staff are also much more integrated with the students and it is lovely to see staff members making jokes alongside their "colleagues" rather than distancing themselves from the students.*

Commentary: These subthemes suggested that notions of belongingness previously reported¹⁴ were indeed experienced by this cohort of students surveyed in this report. The 'people' environment is considered a powerful factor in engendering belongingness in the student body.

2) Developing collegiality

2a) My group of fellow students

- *I think it really helps to have had this Portsmouth experience with colleagues who I really get on with and have a lot of fun with.*
- *Cohort of 20 was a perfect size. The smaller groups to King's meant it felt a lot more personal.*
- *Living together, working together, eating together.*

2b) Working with the dental team as a dentist

- *Taking into consideration the full treatment plan and incorporating the DHT (sic hygiene and therapy students) into care - use of our resources.*
- *We work with other team members i.e. HTS, (sic hygiene and therapy students) make referrals and incorporate all disciplines learned at Dental school into our treatment planning and management of patients.*
- *Having the nurses and PAT team (sic the Patient Administration Team) actually work as nurses and reception and doing your books makes such a difference.*
- *Building up our communication, teamwork, admin, (sic patient administration) safeguarding, note keeping as well as clinical abilities: tying it all together.*

2c) Team of everyone at UPDA

- *It is this sense of everyone working together towards a common goal which I believe creates the sense of belonging at UPDA.*
- *Clinical uniform was key in someway.*
- *The fact that our input and feedback is valued.*
- *The fact that I was known, listened to, respected and trusted.*

Commentary: These sub themes of developing collegiality were between both students and staff members, within the different groups of students and within the dental students studying and working away from their base in London.

3) In the clinical environment

3a) Being a dentist with responsibility and respect

- *The respect from tutors when around patients really made you feel like you were in charge and making decisions. This really boosted confidence.*
- *You get to be a dentist at Portsmouth. Your demonstrators (sic Clinical tutors) respect you as dentists, as colleagues and not just students.*
- *I absolutely loved the confidence the tutors have in us as clinicians. They all respect the fact that we know our limitations but allow us to push ourselves to improve our clinical skills. Very different from dental school and much appreciated, this has contributed to my development in the final year from student to DFT (sic Dental Foundation Training) enormously.*

3b) The Physical Environment

- *Having a 'clinical area' rather than a small bay. Well looked after equipment and facilities was also important.*
- *Having my own personal bay and a small team of 5.*
- *It felt that it was something very separate from London which was down to the facilities.*

3c) Becoming a reflective independent practitioner

- *Reflective learning and independent practice was encouraged which helped me to become more aware of what my strengths and weaknesses are.*
- *Becoming familiar with personalities and feeling safe/ never at risk of being undermined emotionally or professionally by anyone - becoming confident in the ability to work independently knowing positive help was there to call on - becoming familiar with the environment and knowing how to find things to get things done and knowing who to ask when I didn't.*
- *All my clinical tutors were keen on me making my own decisions as I progressed week by week. This was made clear to me on week 1 by my clinical tutors especial Dr Y and I could see the transition I made throughout the weeks. Very useful as I became less and less reliant on my clinical tutors especially with care planning.*

Commentary: These three subthemes demonstrate that it is difficult to separate the concept of belongingness from how the students felt that they had developed both in Year 5 and at UPDA as 'safe beginners' and being confident to work independently.

4) Leadership

- *Xs effort to help us all and make us feel at home has been appreciated-he has always been very caring and it helped me feel part of the team.*
- *Can tell X invests personal time into this and his UPDA students.*
- *X has always put his heart and soul into making UPDA the excellent teaching environment that it is at UPDA.*

Commentary: Leadership is a theme that the students expressed very strongly in this educational evaluation but it is under reported in the literature due to the lack of empirical research.²³

DISCUSSION

Belongingness in general lay terms has been defined as 'the quality or state of being an essential or important part of something'²⁴ and 'the human state of being an essential part of something'.²⁵ It can be considered as the human emotional need to be an accepted member of a group (e.g. family, friends, and work colleagues). In the international educational nursing literature, belongingness is considered a deeply personal and contextually mediated experience where an individual feels secure, accepted, included, valued and respected and that their professional and/or personal values are in harmony with those of the group.²⁰ It has been defined as 'the need to be and perception of being involved with others at differing interpersonal levels which contributes to one's sense of connectedness (being part of, feeling accepted, and fitting in), and esteem (being cared about, valued and respected by others), while providing reciprocal acceptance, caring and valuing to others'.²⁰ The results of this study showed that 56% of the students who completed the questionnaire noted a sense of belonging within their first 2 weeks of the placement. Baumeister and Leary (1995)¹⁸ suggested that existing evidence supports the hypothesis that the need to belong is a powerful, fundamental, and extremely pervasive motivation.

Successful groups in different contexts (e.g. religious groups, isolated communities) have ceremonies of initiation (e.g. baptism, ceremonies of adulthood). At UPDA, students are welcomed with four days of induction, introducing them to the teaching and administration staff, the specific culture of

clinical care and to the clinical environment at the UPDA. The students' responsibilities while on placement are very clearly explained and ground rules established. The staff positively try to engender belongingness within the four separate cohorts of dental students and across all the students at UPDA in their interactions with HTS and Dental Nursing students both on the clinic but as importantly, socially. This includes organising professionally guided walking tours of the historical naval city of Portsmouth, provision of team sports equipment, as well as full use of social media. Organising all the Academy students into four clinical teams to deliver care and the establishment of team meetings in the timetabled schedule also gives the students an instant group of colleagues with whom they can identify and if they wish, socialise. This process is clearly not an initiation rite in the accepted sense but the induction does begin to generate belongingness within some of the group at an early stage. For example, students commented:-

Very welcoming induction week. Could tell right from the start this was going to be a very supportive environment.

The sense of being welcomed from day one by all the staff to the new placement is clearly important in generating this sense of belongingness. The continuity of that response was also of critical importance as students commented:-

That everyone around you genuinely cared for your well-being; whether it is from an educational view point, social, personal emotions etc.

It is apparent that the sense of belongingness is generated by all the staff and University of Portsmouth students at the Academy, not only clinical teaching staff but administration, technical and dental nursing staff.

The warmth of the staff both, clinical tutors, nurses and PAT Team (sic the Patient Administration team). HTS (sic hygiene and therapy students) students were also very friendly.

Developing collegiality (Theme 2) amongst the dental student body was also considered a critical element in belongingness. Dental students attend in groups of 20 at UPDA, from within a year group of 160 at KCLDI.

Cohort of 20 was a perfect size. The smaller groups to King's meant it felt a lot more personal.

Living together in a hall of residence also clearly generated this sense of developing collegiality and belongingness. In the clinical environment, one student identified that wearing scrubs was key to that sense of belongingness. Everyone wearing the same 'uniform', together with the ownership of their clinical area, appears to assist the development of togetherness and team working.

In contrast, or perhaps coming out of the security of belonging, the results of this study showed that students valued highly the clinical experience that allows them develop autonomy (Sub theme 3c). This is encouraging as this is one of the main objectives of outreach education. The respondents also felt that the outreach rotation allowed them to develop a sense of becoming a 'complete dentist' as a 'safe beginner' (Sub theme 3a).

I absolutely loved the confidence the tutors have in us as clinicians. They all respect the fact that we know our limitations but allow us to push ourselves to improve our clinical skills. Very different from dental school and much appreciated this has contributed to my development in the final year from student to DFT (sic Dental Foundation Training) enormously.

Whilst the students identified an integrated approach to care and learning, they also realised the importance of leadership to strategically manage their education. Comment about the Clinical Studies Lead such as 'putting his heart and soul' into the experience, and 'investing his personal time' recognised the commitment required to lead a clinical team and work to integrate the dental students. These personal characteristics identified by the students are aligned with the finding of Bryman (2002)²³ in his review paper on effective leadership in higher education. He identified that being considerate is indicative of relationships of trust, warmth and mutual respect between leaders and followers as an important aspect of leadership in higher education. Interestingly Bryman also found that creating a sense of 'departmental collegiality' was a common characteristic of an effective leader.²³

Xs effort to help us all and make us feel at home has been appreciated-he has always been very caring and it helped me feel part of the team.

Due to the intensity of dental clinical education, it is a highly understandable desire for students to develop trusting relationships with staff on the clinic and thus feel supported in undertaking the precise, invasive surgical and restorative dental treatment that is intrinsic to dental education. This nature of clinical education has some parallels with nursing placements and so would account for this concept of belongingness being considered as a prerequisite for students to optimise the educational benefit from working in a clinical environment.¹⁹

The staff are also much more integrated with the students and it is lovely to see staff members making jokes alongside their "colleagues" rather than distancing themselves from the students.

The importance of belongingness to the education of nurses,^{19,20} and dentists¹⁴ has also been recently documented. However, this sense of belongingness in dental education was identified in a

specific location and the concept has not been previously researched and discussed. We would argue that belongingness is an emotional need to be an essential and important part of something greater than themselves, and to feel accepted within that. We therefore propose to define belongingness in dental education as: **a deeply personal and contextually mediated experience in which a student becomes an essential and respected part of the dental educational environment where all are accepted and equally valued by each other and which allows each individual student to develop autonomy, self-reflection and self-actualisation as a clinician.**

The term 'the dental educational environment' is adopted to include both physical (clinic, teaching and social spaces) and human resources (clinical teachers, clinical staff and administration). The term self-actualisation is defined as 'the achievement of one's full potential through creativity, independence, spontaneity and a grasp of the real world'.²⁶

Although this study focused on belongingness, belongingness only was detected when the nebulous concept of the outreach experience of the dental educational environment at UPDA (termed the 'Portsmouth experience') was researched in greater depth.¹⁴ Elements of belongingness have always been present in UK dental education. For example this is often witnessed at professional meetings where delegates will exchange anecdotes about their *alma mater*. Further all UK dental schools have students' dental societies that engender both social and professional interaction with some dating back to 1894.²⁷ Belongingness during dental education is a new concept and needs to be highlighted as an important key aspect of any successful programme.

Levett Jones et al (2009)²⁸ identified similar positive themes within nursing educational outreach placements:-

- Receptiveness of nursing staff 'made to feel welcome',
- Inclusion 'involved and included' and 'informal socialisation'
- Legitimation of the students' role 'a valid and valued role'
- Recognition and appreciation 'trusted and valued'
- Challenge and support 'pushing the boundaries'.

However, the concept of belongingness is embedded in the context of the environment and although nursing clinical education and dental education have parallels particularly with the education offered at Portsmouth, a different emphasis is appropriate. Although these themes identified by Levett –Jones et al (2009)²⁸ were similar to themes analysed in the present study, they are distinct. Clinical nursing education is delivered by placement in a service environment and UK nursing students in practice are supervised at all times but they assume supernumerary status.^{29,30}

This differs from education of dental professionals in the UK as in clinical dental education the service and patient care is provided directly by the student body. This is even more the situation in outreach dental education centres.¹²

From the nursing literature it has been suggested that longer placements encouraged a greater feeling of belongingness with some placements as a block extending up to 12 weeks, 5 days a week.³¹ UPDA is a ten week placement of 4 days a week delivered longitudinally to students in their final year. In this current study to the question-- When in your year rotation (if at all) did you feel this? (i.e. belongingness), 56% of student felt belongingness after the second week with another 21% at the mid-point in the rotation. However, these figures should not be used as evidence to support shorter rotations as the students knew the commitment before applying to attend UPDA. Further as the course is delivered longitudinally over ten individual weeks over a year both staff and more importantly students have sufficient time to reflect on their development.

All my clinical tutors were keen on me making my own decisions as I progressed week by week. This was made clear to me on week 1 by my clinical tutors especial Dr Y and I could see the transition I made throughout the weeks. Very useful as I became less and less reliant on my clinical tutors especially with care planning.

The bias of the study and the bias of the authors should be recognised. The questions asked of the students were directed at establishing whether they could identify both belongingness as well as independence as 'safe beginners' so some element of acquiescence bias has to be recognised. Both the authors have worked at the Academy since the inception of the outreach element in 2010 and therefore strongly support the culture that has developed.

CONCLUSION

In conclusion, within the limitations of this educational evaluation, belongingness in dental education has been explored and is believed to be a strong factor in the positive student experience as expressed by the students on outreach at the UPDA from KCLDI. It is concluded that due to the different environmental set up in dentistry, rather than nursing, belongingness in dental education should be defined as:- a deeply personal and contextually mediated experience in which a student becomes an essential and respected part of the dental educational environment where all are accepted and equally valued by each other and which allows each individual student to develop autonomy, self- reflection and self-actualisation as a clinician.

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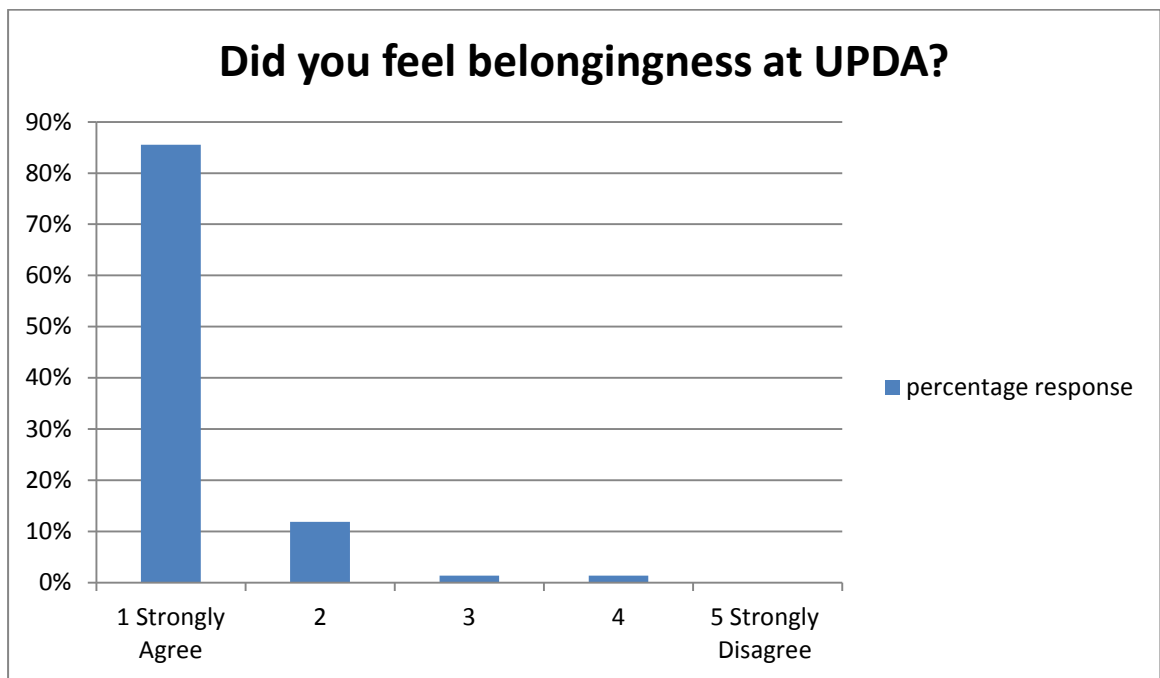
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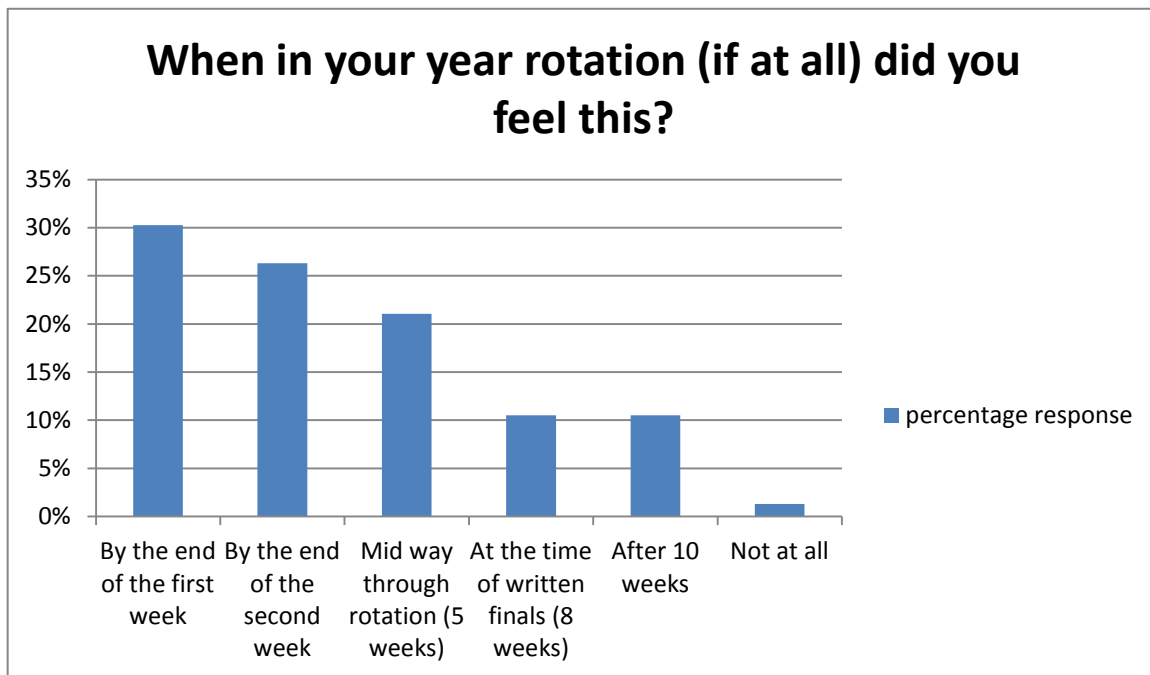
Figure 1



	Percentage response
1 Strongly Agree	86%
2	12%
3	1%
4	1%
5 Strongly Disagree	0%

Fig. 1 Percentage scores of whether the participants felt belongingness at UPDA

Figure 2



	Percentage response
By the end of the first week	30%
By the end of the second week	26%
Mid way through rotations (5 weeks)	21%
At the time of written finals (8 weeks)	11%
After 10 weeks	11%
Not at all	1%

Fig. 2 Percentage scores at what stage during the year long, 10 week placement, participants felt the notion of belongingness.