

RESEARCH ARTICLE

Social learning and integration factors affecting first-year medical students: Views of remedial programme students who failed their first year

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Article history: Received 17 October 2022 | Accepted 21 February 2023 | Published 14 August 2023

ABSTRACT

Medical students' transition from high school to university can lead to academic and social challenges, disconnection from university life, and possible drop out. Hence, some medical education institutions use remediation programmes to address these transition challenges. This study used a social learning and integration theory to identify factors that affect the social learning and integration of first-year medical students who had completed a six-month remediation programme. A nominal group technique involving 15 participants was used to collect data. Results revealed under-preparedness, self-management, alienation, confidence, and academic advice as the social learning and integration factors that can affect transition. Self-awareness and self-management were identified as complementary skills to address these factors and promote successful transition. In conclusion, students can make valuable contributions to address social learning and integration factors and enhance successful transition. Moreover, universities must also consider designing programmes that will promote successful transition of especially undergraduate medical students.

KEYWORDS

First-year medical students, medical education, remedial programmes, social integration, social learning, student affairs, transition

RÉSUMÉ

La transition des étudiants en médecine du lycée à l'université peut entraîner des défis académiques et sociaux, une certaine déconnexion par rapport à la vie universitaire et éventuellement un abandon. C'est pourquoi certains établissements d'enseignement médical utilisent des programmes de remédiation pour aborder ces défis de transition. Cette étude a utilisé une théorie d'apprentissage social et d'intégration pour identifier les facteurs qui affectent l'apprentissage social et l'intégration des étudiants de première année en médecine ayant suivi un programme de remédiation de six mois. Une technique de groupe nominal impliquant 15 participants a été utilisée pour recueillir des données. Les résultats ont révélé que la préparation insuffisante, l'autogestion, l'aliénation, la confiance et les conseils académiques sont des facteurs

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d'apprentissage social et d'intégration pouvant affecter la transition. La prise de conscience de soi et l'autogestion ont été identifiées comme des compétences complémentaires pour aborder ces facteurs et favoriser une transition réussie. En conclusion, les étudiants peuvent apporter des contributions précieuses pour aborder les facteurs d'apprentissage social et d'intégration et favoriser une transition réussie. En outre, les universités doivent également envisager de concevoir des programmes visant à promouvoir une transition réussie, en particulier pour les étudiants de premier cycle en médecine.

MOTS-CLÉS

Apprentissage social, éducation médicale, étudiants de première année en médecine, intégration sociale, œuvres estudiantines, programmes de remédiation, services étudiants, transition

Introduction

Students who enter the university environment for the first time often experience anxiety, confusion, fear and helplessness (Bojuwoye, 2002; Pandey et al., 2021; Yardley et al., 2018). Transition from high school to university is difficult and many first-year students feel isolated and uncertain (Heirdsfield et al., 2008). A number of factors in the new educational environment may be responsible for these feelings, including leaving home for the first time, managing one's own finances, making new friends and assuming greater responsibility for oneself (Bojuwoye, 2002).

Universities should provide students with nurturing educational and social environments that focus on developing principles of caring, professional attitudes and healthy interpersonal relationships (McLean & Gibbs, 2009). Social integration, as theorised by Tinto (1975), requires the establishment of new social networks and friendships, and contact with academic staff members to ensure successful transition. When students are connected to the academic and social life of the institution, they are more likely to remain enrolled at an institution (McLean & Gibbs, 2009).

Major transitions during university study were reported to occur in specific areas such as knowledge, understanding and skills application, development of autonomy, changes in approaches to learning, social integration and students' self-concept (Whittle, 2018). Experiences resulting from multiple transitions, such as transitioning into medical education directly after high school, then into the remedial programme and later back to the main programme to repeat the year, may affect student's social integration into the university, academic success and ultimately may influence the decision to remain at university (Bojuwoye, 2002; Kebaetse et al., 2018; Tinto, 1975; Whittle, 2018). Moreover, social learning may also be affected by these experiences in the new educational environment, consequently limiting students' learning from each other through observation, imitating and modelling, because of academic struggles (Bandura, 1969). For the purpose of the study reported in this article, the social integration theory (Tinto, 1975) and social learning theory (Bandura, 1969) were combined in a novel social learning and integration theory to identify factors that affect the social learning and integration of first-year medical students who participate in a remediation programme. This novel *social learning and integration theory* is defined as interaction, through

institutional experiences, that can influence how individuals learn from each other through observation, imitation, modelling and persistence.

This study aimed to identify factors that affected the social learning and integration of undergraduate medical students who had failed the first year of study.

Context

The acceptance of first-year students into the medical programme at the University of the Free State (UFS) is based on academic (National Senior Certificate and National Benchmark Test results) and non-academic (including leadership, sport and cultural activities) achievements (University of the Free State, 2022). Upon admission into the medical programme, the Division Student Learning and Development (DSLDD) provides students with academic, social and psychological support in order to enhance academic success. In addition, students do a credit-bearing module that facilitates the acquisition of generic skills and graduate attributes, such as problem solving, critical thinking, time management, study methods, test and examination techniques, professional and ethical behaviour, and writing and oral communications skills (UFS, 2022). Medical programme management monitors students' academic progress, and students identified as at-risk academically (those who achieve below 50% in assessments during their first semester of study) are advised to seek support from the DSLDD.

Despite these attempts, not all first-year students accepted into the UFS undergraduate medical programme successfully complete the first academic year (Jama, 2016; Kridiotis & Swart, 2017). Students who qualify by only failing two of the six modules are then admitted into a six-month learning development programme (LDP), a remediation programme offered in the second semester of the first year. The LDP offers learning and teaching activities in a smaller group setting focusing on reinforcing students' generic skills and graduate attributes and promotes self-regulation and self-reflection. Modules in the LDP include medical terminology, language skills, biophysics, basic human anatomy and physiology, integrated anatomy and physiology and lifelong learning skills (UFS, 2022). Students who successfully complete the LDP may repeat the first year of the medical programme.

Methods

The nominal group technique (NGT) was used in this study to obtain relevant and reliable qualitative information from a group of participants in a focus group setting (Harvey & Holmes, 2012; Vander Laenen, 2015). The main feature of the NGT is structured face-to-face group discussions. Ideas emerging from the discussion are prioritised, thereby enabling a clear outcome to be reached, which provides a sense of achievement for participants (McMillan et al., 2016; Vander Laenen, 2015). By using this formal consensus development method, equal participation is facilitated and all opinions are allowed and considered respectfully. The influence of dominant personalities and one particular viewpoint is minimised and a variety of ideas are prioritised to highlight the most pressing issues (McMillan et al., 2014). The technique used in this study capitalised on the experiences of medical students who had not completed the first semester of

study successfully, and had subsequently completed the LDP, with a view to identifying areas of consensus and establishing priorities for change (Harvey & Holmes, 2012).

Nominal groups can involve between two and 14 participants. However, a maximum of seven is recommended per group (McMillan et al., 2016). For this study, all registered undergraduate medical students who had entered the medical programme directly from high school and had failed their first semester, successfully completed the LDP in the second semester and were allowed to repeat the first year, were recruited to participate in the NGT.

Fifteen registered medical students (seven Black males, six Black females, one male of mixed ancestry and one White male, with a mean age of 20 years) who fulfilled the inclusion criteria participated in the NGT. No limitations were set on gender, ethnicity, home language, living conditions, year of birth and relationship status (Engelbrecht et al., 2020). Two questions were put to participants prior to the meeting (McMillan et al., 2016). The technique comprised four key stages. Stage 1 commenced with the participants being introduced to the topic and invited to engage in a silent generation of ideas for approximately 5–10 minutes. Stage 2 required each participant to share one of their ideas with the rest of the group in a round-robin format. Ideas might be elucidated at this stage to enable their listing, although no discussion was to take place at this point. Each of the ideas were recorded and displayed by a facilitator on a flip chart, until all ideas had been listed. In Stage 3, ideas were discussed for the purpose of clarification, categorisation and removal of duplicates. Finally, Stage 4 involved the participants voting on and ranking the ideas listed by the group (Cunningham, 2017; Mullen et al., 2017; Rankin et al., 2016).

Two nominal group meetings were carried out simultaneously. Participants were split into two groups of seven and eight participants, respectively. The division into two groups required further comparative analysis, as each group generated a different list of items. A third nominal group meeting including all fifteen participants was scheduled to develop a set of prioritised items derived from each of the two separate group meetings. All participants could vote on both sets of the top five ranked statements derived from the initial group meetings (Vander Laenen, 2015).

The nominal group meetings were facilitated using a guide containing the following open-ended questions:

1. What affected your social learning and social integration during your first year of medical studies in the faculty of health science at the University of the Free State?
2. Kindly determine what set of social learning and social integration skills you used or did not use to help you adapt during the transition process from high school to medical education.

The NGT yields data that can be analysed both quantitatively and qualitatively. In this study, analysis was performed as described by Van Breda (2005) and McMillan (2014). The quantitative data were analysed first. Immediately after the nominal group meetings, an overview of the ideas of each group was compiled, including the ideas with the highest scores and the number of participants who scored a specific idea.

The researcher collected qualitative data from the discussions of statements through text data transcription captured on the flip charts and whiteboards used to record the participants' feedback.

Approval for the study was obtained from the Health Sciences Research Ethics Committee (HSREC; ethics approval reference number HSREC-UFS-HSD2018/1300/2711) of the UFS.

Results

The scores for each statement were obtained according to how participants voted for a statement by assigning points from 5 to 1 (from most to least important) to a selection of five of the listed ideas. The statement with the highest score was regarded as the most important one, with the others ranked according to the number of points allocated.

Table 1 summarises the top five ranked statements indicating factors that affected students' social learning and integration. Five themes were identified during the analysis of the data in response to Question 1.

Table 1: Top five ranked and themed statements pertaining to Question 1: What affected your social learning and social integration during your first year of medical studies in the Faculty of Health Science at the University of the Free State?

Ranking	Theme	Statement	Score
1	Under-preparedness	Learning skills – the time is important and limited, navigating the textbooks and workloads. High school spoon-fed, now suddenly you must take initiative.	39
2	Self-management	Studying long hours ('imitating') using stimulants like other students but not grasping the work.	25
3	Alienation	Feeling like being the only one having problems.	22
4	Confidence	First exposure/poor adaptation – self-sustaining lifestyle. Overwhelmed by all new things on campus, in the course, people, etc.	18
5	Academic advice	Not knowing whose advice to use/too many different resources (books/slides/notes)	16

Table 2 represents the top five ranked statements indicating social learning and integration skills that the students used or did not use to adapt as they transitioned from high school to university education. Two common themes (self-awareness and self-management) emerged from the analysis of the data in response to Question 2 of the study.

Table 2: Top five themed and ranked statements pertaining to Question 2: Kindly determine what set of social learning and social integration skills you used or did not use to help you adapt during the transition process from high school to medical education.

Ranking	Theme	Statement	Score
1	Self-awareness	Ability to identify own study skills.	37
2	Self-management	Inability to self-manage/not able to say 'no'.	34
3	Self-awareness	Coping mechanisms (unhealthy)/support system that understands your struggle/spiritual.	25
4	Self-awareness	Not recognising the need for help/ too independent.	21
5	Self-awareness	Preparing for class.	20

Discussion

Hayes et al. (2015) assert that successful transition into higher education comprises two pillars: first, changes of the personal context, and second, transitions related to institutional settings. Personal context factors include language barriers, goal aspirations and self-efficacy. Meanwhile, the institutional setting entails students' expectations, social issues and separation from past life experiences. The social learning and integration theory allowed the researcher to address both these pillars concurrently. Hence, of the top five ranked statements derived from the participants, 80% of the challenges experienced during transition referred to personal context changes, rather than institutional context changes. Students' goals, aspirations and self-efficacy appeared to have been the prominent personal context factors highlighted among the participants, which also contribute to determining the success of the transition from high school to university (Bolt & Graber, 2010).

Moreover, 80% of the ranked and themed statements highlighted factors related to social and not academic integration. This finding confirms Tinto's (1975) statement regarding students dropping out due to insufficient integration into the social life of the institution. Note that dropping out in the context of this study refers to dropping out of the main programme to enrol into the remedial LDP, and not necessarily dropping out of the medical programme. Pritchard and Wilson (2003) point out that the major causes of attrition of first-year students involve emotional rather than academic factors, and that emotionally and socially healthy students have a greater chance of succeeding in an education environment.

In this study, all five themes identified, as summarised in Table 1, underlined negative social learning and integration factors that were experienced by medical students during the first year of medical studies. According to social learning and integration theory (as described by Tlalajoe, 2021) that refers to the interaction through institutional experiences, influencing how medical students learn from each other through observation, imitation, modelling and persistence. Students who could not interact with each other due to alienation did not experience the institution positively

because they lacked the confidence to engage in campus activities. They could not learn from each other through observation, imitation or modelling and could not persist because of poor self-management, alienation and lack of confidence to interact with peers, and did not know where to get academic advice (Tlalajoe, 2021).

Under-preparedness was ranked the highest among factors influencing medical students' success in the first year of study. This finding highlights that first-year medical students who entered medical school directly from high school could lack the skill set and emotional tools required to adapt in their new education environment, as asserted by Swaminathan et al. (2015) and Kridiotis and Swart (2017). The participants in this study confirmed being underprepared for university life and academia, which was also observed by Hamid and Singaram (2016). The participants emphasized rapid adjustments required of them and indicated that at school they had been spoon-fed. On the contrary, in the new educational environment, they had to take initiative and master learning skills. When students transition from school to university, they expect teaching methods to be comparable to those applied in high school and are not prepared for a different mode of teaching (Bolt & Graber 2010; Hennis, 2014). Furthermore, Bolt and Graber (2010) confirm that students who were successful at high school but lack the skill of learning independently, do not flourish in the university setting, or do not perform as well as they did in the high school environment (Bolt & Graber, 2010).

The theme ranked second in importance was self-management. The participants found themselves imitating others by using stimulants to study for long hours. Regardless, they could not grasp the content. Although imitating others is encouraged according to the social learning and integrated theory (Tlalajoe, 2021), when students imitated misguided behaviour, it did not yield positive outcomes. Better understanding of oneself leads to improved self-management. Imitating from a distance does not necessarily give a true representation of the actual situation. Hennis (2014) asserted that student's success would depend on their autonomy to acquire new study habits, or to adjust their study skills to suit the demanding semester model in a less intimidating setting.

Alienation was ranked third of five themes. Poor self-management may lead to self-pity, alienation and students believing they are the only ones with general and academic problems. Such alienation may be typical of students who experience problems that they are incapable of solving and do not receive help from other students, leading to both homesickness and loneliness (Othman et al., 2012).

Confidence was ranked fourth, described as students experiencing feelings of lacking confidence on first exposure to the new educational environment and surroundings, including the city, campus, faculty and the medical programme. They experienced the new education environment as overwhelming and reported struggling to develop an independent lifestyle. Participants reported on their institutional experiences as everyday activities with extreme academic demands, leaving them with little or no time for social activities (McLean & Gibbs, 2010). Similarly, Al-Sowaygh (2013) reports students feeling overwhelmed and experiencing stress because of the demands of the medical education environment, and perfectionism, fuelled by past academic achievements

and current high academic demands. This stress leads to students failing to find the information needed for decision-making and early adjustment to the new educational environment of the university, which later poses threats to students which could lead to poor academic progress (Bojuwoye, 2002). Consequently, it is understandable how an individual who struggles with a lack of confidence can battle with self-doubt or timorousness. Hence, the development of behaviours such as not being aware of the requirements of the new educational environment, along with the imitation of study approaches from other learners, or even the paralysing fear of speaking up when facing challenges and wallowing in self-pity.

The final (fifth ranked) theme was academic advice. Students shared their frustrations and confusion about receiving advice from a large variety of academic resources. For example, they reported not knowing who to listen to regarding navigating their academic material, as too many different resources were available. The acquisition of knowledge, skills and professional behaviours and attitudes required of healthcare professionals entails participating in a curriculum of lectures, simulations, supervised practice, mentoring, hands-on experience, and the ability to employ academic resources successfully (Eva et al., 2015). Some aspects of the training process have unintended negative consequences for medical students' physical and emotional health (Asani et al. 2016; Dagistani et al., 2016; Kaufman et al., 2009; Shankar et al., 2014). The negative emotions expressed by the participants serve as an example of some aspects with unintended negative consequences. Holland (2016) reports that despite support systems and professional help being available, students who are struggling and are most in need of assistance, often fail to seek it.

In addition to identifying factors that affected students' social learning and integration, participants reflected on the social learning and integration skills they used or did not use to adapt as they transitioned from high school to a medical education environment. Self-awareness and self-management were identified as themes maturing into a shift in mindset among the participants. These are positive accomplishments and realistic skills needed to successfully transition into a new educational environment.

With reference to Table 2, themes 1 and 3–5 represented self-awareness, indicating that students realised the importance of acting with self-awareness. The statement in theme 1 showed that students became aware of their own study skills. According to the statement in theme 3, they realised the importance of having healthy coping mechanisms such as support systems they could rely on, even on a spiritual level. Regarding the statement in theme 4, they grasped the importance of obtaining help from peers. In the statement in theme 5, they realised the need to initiate their learning by preparing for class. These findings allude to the importance of being aware of the requirements needed to adjust to a new educational environment, such as new study skills, coping mechanisms, recognition of assistance and the importance of initiating one's learning by preparing for class. Moreover, the students realised that they need to act timeously to attend to the requirements, which would possibly lead to positive outcomes in their transition from high school to medical education (Ibañez et al., 2022).

Theme 2 reflected the lack of self-management in this context. The statement in this theme showed that the participants lacked the ability to say 'no' to participating in certain activities, which might stem from wanting to fit in in the new environment. The first year of study for most students is challenging and accomplishing even simple tasks, such as making friends, can prove difficult. Not only is the university perceived as challenging with most students focusing on their academic rather than their social life. However, when some students have trouble with their academic responsibilities, they tend to find comfort in their social setting, thus losing the balance between the academic and social life aspects (Bowles et al., 2014).

Conclusion

The findings of this study emphasize that challenges resulting in unsuccessful transition may emerge way before students are subjected to academic integration. Indicators such as assessments evaluating the performance of students should point out the necessity of intervention measures if there is a need. In fact, the top five ranked themes in Table 1 clearly accentuated a golden thread of various factors that interlinked and eventually reflected their negative effects through assessment outcomes. Consensus among the participants emphasized under-preparedness, self-management, alienation, confidence levels and academic advice as social learning and integration factors that affect transition among first-year medical students.

Moreover, upon reflecting on the skills required to counteract the social learning and integration factors, the participants leaned strongly towards self-awareness. This could mean that universities should consider deeper investigation of the impact of personal context when setting up support strategies to enhance successful transition. There is a need for quantifiable indicators from a social learning and integration aspect that will allow early intervention in providing support in a new educational environment.

Acknowledgements

The authors would like to thank the students who participated in this study and Dr Daleen Struwig, Faculty of Health Sciences, and Mrs Annamarie Du Preez, library manager at the University of the Free State.

Ethics statement

The authors ascribe to the highest standards of ethical conduct in all their research. The study was approved by the University of Free State Health Sciences Research Ethics Committee (HSREC-UFS-HSD2018/1300/2711).

Potential conflict of interest

The authors report no conflict of interest. The authors alone are responsible for the content and writing of this article.

Funding acknowledgement

Nokuthula Tlalajoe-Mokhatla would like to thank the National Research Foundation for Black Academics Advancement Programme for funding.

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How to cite:

Tlalajoe-Mokhatla, N., van der Merwe, L. J., & Jama, M. P. (2023). Social learning and integration factors affecting first-year medical students: Views of remedial programme students who failed their first year. *Journal of Student Affairs in Africa*, 11(1), 65–76. DOI: 10.24085/jsaa.v11i1.4271