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# Dealing with Academic Difficulty in Medical School: A Pilot Study

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**Abstract:** Some students struggle through medical school and do not have the confidence to seek help. This pilot study sought to explore the challenges and needs of medical students experiencing academic difficulty. Semi-structured interviews and online surveys were used to collect data from an academic advisor and thirteen medical students who had experienced academic difficulty. Unexpected academic failure and the loss of self-efficacy contributed to students hiding their academic difficulty and avoiding available support systems. Despite the sampling limitations, the findings of this pilot study have value in giving direction to future research. Programs that will change the current attitudes to academic difficulty, normalising access to support and encouraging early intervention, are needed to build the capacity for excellence among these students.

**Keywords:** academic difficulty; medical students; rural; academic support

## 1. Introduction

It has been widely acknowledged that medical school can be a stressful experience for many students, especially for those from socially diverse backgrounds [1]. Studying medicine requires a developmental change to adequately deal with a series of psychosocial challenges encountered in medical school [2]. In addition, the level of scholarly and social integration into an academic environment can determine success or failure [3]. Most students are able to make the transition into tertiary studies and medical education, while others struggle and may experience academic difficulties [4]. Evidence suggests that the reasons that some medical students experience academic difficulties include poor time management, inability to integrate large amounts of instructional information, and poor test-taking skills [4,5].

Some researchers have reported that medical students with academic difficulties often experience inadequate support [6]. Conversely, others have reported that the enormous time and effort expended by faculty on monitoring students with academic difficulty far outweighs the current observable benefits or outcomes [7]. A study by Quinn et al. among first-generation students from working-class backgrounds showed that more than half of these students were reluctant to approach faculty staff, while others found the lecturers inaccessible [8]. Students could be informed of student services but may be unaware of available and beneficial support services. Consequently, failing to gain academic support has been attributed as a reason for withdrawal [9], while dissatisfaction with the quality of teaching and the lack of interaction with academic staff contributed to students feeling isolated in their academic environment [10,11].

An active support program is offered to students enrolled in the first three years of the undergraduate MBBS (Bachelor of Medicine, Bachelor of Surgery) program at James Cook University

(JCU). Small home groups are created with an average of nine students and the groups are facilitated by experienced staff and senior students. These groups meet weekly, and academic or personal difficulties are often identified through this home group program within the first few weeks of the year or the first invigilated test that students undergo during the first semester of study. The senior students are similarly supported by their year-level academic advisors.

The academic advisor meets with students who obtain poor results to discuss their approach to study, their learning skills, and challenges associated with their study. During these meetings, significant personal issues may be identified, and these students are referred to the appropriate support services both within and outside the university.

In spite of this effective academic support system, about 16% of the students in the JCU MBBS course experience academic difficulty, while 3% of these students fail and exit the program [12]. Therefore, there is a need to understand the characteristics and functioning of the failing medical students to better support them. This study aimed to explore the challenges and needs of medical students experiencing academic difficulty, the causal triggers, and the possible ways that these can be mitigated and/or minimised.

## 2. Materials and Methods

### 2.1. Participants

The study was conducted between September 2014 and July 2015. First- to fifth-year medical students enrolled in the MBBS program at James Cook University who had experienced academic difficulty (at least once before) were identified using the faculty's enrolment database and invited to participate in this study. In addition, the College Academic Advisor was invited to discuss the challenges she encounters in the process of engaging students experiencing academic difficulty. For the purposes of this study, students with academic difficulty were defined as those who had been required to repeat an entire year of study. Ethics approval was obtained from the Human Research Ethics Committee (HREC Project Number: H5802).

### 2.2. Study Design

Both qualitative (individual interviews) and quantitative (surveys) data collection and analysis [13] were utilised in gathering data from two perspectives (the students' and that of the academic advisor).

### 2.3. Student Engagement Process

An email invitation was sent out to 35 prospective participants in September 2014. Three weeks later, only 2 of them had responded. To increase participation and, consequently, the reliability of the study, a second invitation was sent out in March 2015. Fourteen prospective participants expressed interest and signed the consent form, but only 4 of them made appointments and only 2 of them were eventually interviewed.

As a result of the low response rate for the interviews, the data collection process was adjusted to include an online survey. The aim of the survey was to aid the validation of the findings from the qualitative interviews. An invitation to complete an online questionnaire was sent out in May to all prospective participants (excluding those who had already been interviewed). The survey questions were developed to further explore barriers and enablers with specific questions about the usefulness of the support system and also about possible personal/family issues that constrained the students.

### 2.4. Individual Interviews

Interviews took place in informal classrooms, were audio-recorded, and lasted between 45 and 60 minutes. To preserve professional boundaries and exclude bias from prior knowledge, interviews were conducted by investigators who were not directly involved in the academic experiences of the participants.

## 2.5. Online Survey

A questionnaire was administered to increase participation and to triangulate the data from the interviews. In the first part of the questionnaire, five-point rating scales were used to record participants' views about their adaptation to academic life and coping strategies. The second part of the questionnaire used open-ended questions to explore students' views on available institutional support systems and comments on possible improvements.

## 2.6. Data Analysis

Recordings of the individual interviews were transcribed and coded. A process of line-by-line descriptive coding was undertaken by two researchers and verified by the research team. The open-ended survey responses and the interview data were thematically analysed. Emerging themes were identified using a constant comparison process, as advocated by Strauss and Corbin [14]. Illustrative quotes were reported verbatim to support the findings. Likert scale items from the questionnaires were analysed using descriptive statistics and frequencies in SPSS [15].

## 3. Results

### 3.1. Students' Perspective

All of the students who participated in the study were those who had repeated an academic year of study—that is, 13 out of the 35 (37%) prospective participants, with four interview and nine survey participants. The participants were representative of the prospective participant group—more females than males (eight females and five males), as well as more domestic and younger students (three out of four interviewees).

#### 3.1.1. Interviews

One academic advisor and four students participated in the interviews—one first-year female student, one first-year male student, one second-year female student, and one fourth-year male student. While we recognise that this is a small sample, medical students experiencing academic difficulty express challenges in admitting their problems [7] and sharing them with others. It is therefore not surprising that only a few students agreed to be interviewed for this study. Three major themes were identified: dealing with failure, wanting structural support to manage workload and self-regulation.

- Dealing with failure

The participants confirmed that medical students experiencing academic difficulty were not open to sharing their problems with others:

*“I know another repeating student, and that person hates people knowing that they're repeating.”*

Interestingly, all of the students indicated that the existing support system is quite adequate. However, they acknowledged poor uptake of support and attributed this to the fact that they came to medical school with no expectations of failure.

*“I think when you come into medicine you, never think that failing is something that might happen (a possibility) because it's never been a possibility before now. You don't really think about it and therefore find it hard to admit and share your problems with others.”*

All of the participants acknowledged that they had low self-efficacy, and this was because *“once you struggle once you doubt yourself in other assessments and have decreased confidence to do better in the next examination”*.

- Wanting structural support to manage workload

All participants indicated that they were overwhelmed by the enormous workload required of them in the MBBS program and that it was very difficult for them to sift out what they needed to learn. Therefore, they wanted more structured learning activities. They also mentioned that the absence of constant supervision from teachers and parents led to poor time management; this made it difficult for them to adapt easily to the learning environment:

*“I think that just when you come from high school, both my parents are teachers so they always knew exactly what was going on and then, not that I needed that much supervision and stuff, but just they knew what was going on when I had assessment, they were always there as backup if I wasn’t doing any work. Whereas now that wasn’t there, it was all on me.”*

In addition, a few of the participants who were first in their respective families to go to university reported that even though they got a lot of emotional support from their parents, they missed out on parental academic support because their parents did not have the capability to offer such support:

*“I feel like it’s just me, I really would have benefited if my parents had been to uni.”*

These participants felt that the medical school could help by identifying this group of students early in the program and providing support networks and workshops.

- Self-regulation

Participants’ reported self-regulatory strategies included developing good study habits, perseverance, and actively seeking support in study groups, as this helped them to learn more and better manage their study time. The available support system was found to be very useful, although the respondents confirmed that they did not use the support until they had experienced academic difficulty. In addition, the respondents were also able to learn from failure, as the experience helped them to reflect and change behaviour in diverse areas to bring about positive outcomes:

*“What was really good was that I almost turned failing into a positive experience. It obviously isn’t the ideal to fail and if I had it over again, I wouldn’t fail again but at the same time, I learned a lot from it.”*

### 3.1.2. Survey

Nine students (three males and six females, comprising two second-year, three third-year, three fourth-year, and one fifth-year) participated in the online survey. There was congruence between the survey responses and the interview data. Adapting to the new environment, issues including peer pressure ( $n = 4/9$ ), poor time management ( $n = 8/9$ ), and managing the expected workload ( $n = 9$ ) were the major challenges for these students. The respondents indicated that they were mostly constrained in their academic adjustments by poor time management, too much freedom, and feelings of isolation. They also indicated that they were stressed by assessments and the heavy academic workload. Four out of the nine (44%) of the respondents had considered withdrawing from the MBBS course. They also pointed out that psychological problems like sleep deprivation, low self-efficacy, depression, and stress had a negative impact on their ability to overcome academic difficulty. Interestingly, financial difficulties and the need to work part-time were not issues for any of the respondents. Only two of the nine (22%) respondents were the first in their families to go to university, and they reported that they had difficulty in adapting to university lifestyle and effective study requirements. Consistent with the interview data, these students who were the “first in family” were disadvantaged by the lack of academic support from their parents and had to rely on friends or support offered by the medical school academic advisor.

In relation to coping mechanisms, the respondents stated that their main de-stressing strategies were taking time off from studies to talk to family, engaging in sporting activities, and going out with

friends. The major support systems used by respondents included friends and peers, MBBS academic advisors, parents, and siblings. Talking to family was rated as highly useful by all but two respondents, who were the first members of their immediate families to attend university. Most respondents were highly satisfied with the currently available academic and pastoral support program. However, they indicated that early interaction with academic support staff will facilitate better engagement with available support services. In their advice for new first-year medical students, the respondents suggested that new students should start studying early in the semester, study smart, prepare well for exams, have a balanced life, and use all available support services.

### 3.2. Academic Advisor Perspective

Data from the academic advisor reflected many of the issues and strategies identified by the students, including adaption to university life, the support deficits experienced by those who were the first in their families, knowing how to study, and sifting out what to learn. The unique problems experienced by students from rural locations, such as the transition from year 12 classes of twenty-something students to a university class of 200 plus and the subsequent loss of familiar relationships with teachers, create additional challenges when adapting to university life. The advisor reported that students shared comments like:

*“There are more people here than ever came to a meeting in our school”; “The staff were really supportive in high school - it’s just been such a change and we’re struggling with it”.*

When reviewing assessments, written assignments, or exams, the advisor identified that *“the common problems experienced by students with academic difficulty include a poor knowledge base, framing answers incorrectly, and not understanding the questions.”* The advisor stated that there are two main groups of students who experience academic difficulty. The first group is comprised of those who are disorganised, for whom the experience of failure triggers the ability for readjustment. The second group includes those who are either too young to understand what the medical course entails or those who are not intrinsically motivated to study. The advisor also mentioned that medical students who experience academic difficulty are often not willing to withdraw from the medical course because of family pressures: *“They are locked in and so have no say in the matter.”*

In concluding, the advisor remarked, *“those who succeed are those who take responsibility and stop fault finding and resentments.”*

This implies that the experience of failure brings about the right attitude in these students and helps them to overcome the initial academic setback.

## 4. Discussion

This pilot study has provided insight into the reasons for low uptake of academic support by medical students who experience academic difficulty in the early years of their undergraduate degree. It has uncovered the notion of unexpected failure in medicine and the ways students hide their difficulty.

Secondary school students who aspire to become medical doctors are usually those who have experienced academic success over several years of schooling. Being accepted into medical school is a confirmation of their ability to succeed. Unsurprisingly, when students in our study were confronted by the possibility of academic failure, they “hid” being unable to cope with the notion of failure. In other studies, failing medical students avoided peers and were reluctant to seek help for fear of being identified as a “problem” student [7,16]. The promulgation of a culture of seeking support early may have staffing implications in the short term but could lead to fewer students experiencing the extremes of academic difficulty. This, in turn, would reduce the longer-term consequences for struggling students and the wider implications for funding incurred when students fail and drop out in the later years. For this cultural change to succeed, it would need the support of teaching staff, mentors, and student clubs to validate early support-seeking behaviour.

We accept that some students enter medical programs for external reasons rather than from intrinsic motivation and, therefore, failing may be their exit option. However, for others, the transition in learning styles between secondary education and tertiary education, overlaid with the workload in a medical degree, causes unexpected levels of stress in a student who is used to success. The findings from this pilot study suggest that academic workload, in addition to inadequate study skills, contributed to the academic challenges experienced by the respondents.

This study also highlighted the challenges for those who lack essential family support because they are first in their family to study at university, as well as the difficulty of moving from rural locations and smaller schools to the large classes and distant relationships with academic staff. The increasing participation in tertiary education, including the promotion of social diversity, together with increasing industry demands for tertiary qualifications, has led to a generation of students who are the first members of their families (FIF) to enter university. Reflected in our data and other studies, these FIF students, often from rural and remote areas, may be among those who attain a place in medicine after completing their secondary education locally, thus entering an environment that is far removed from their own [17]. Consistent with previous work, our current study indicated that this group of FIF rural-origin students, together with their parents, have little idea about university life and learning styles.

The shortage of medical doctors in rural and remote locations and the likelihood that students from these origins will return to these locations to work [18,19] supports the need for specialised support programs to nurture these students. University experience programs during secondary school and small group academic and social activities in the first year of university may assist these students to build supportive communities and promote a sense of belonging, increasing engagement with staff and students [20].

Our study also indicated that increasing self-efficacy for success following failure needs to be addressed among students experiencing academic difficulty. Self-efficacy, as first described by Bandura in the 1980s, is foundational to models of health-behavioural change, where it is linked with the ability to succeed [21,22]. Importantly, self-efficacy arises from experience, perception of personal competencies, reaction to persuasion, and response to the present situation. All of these factors were apparent for these students who had failed some assessment, especially an exam. Their experience of failure was coupled with difficulty in believing that they could achieve success the next time that they encountered a similar type of assessment, mirroring the first two contributors to low self-efficacy. However, positive self-efficacy can be built through support systems that respond confidently to the situation and use persuasion to change attitudes and study behaviour. At the same time, the failure experience can be turned into a learning tool, building the resilience and confidence necessary for future medical practice [23,24]. Although our sample size was small, the limited evidence from this pilot study has identified potential areas for intervention and highlights the need for further research work to develop means of helping “at-risk” students identify their need for support without stigmatising them and further reducing their self-esteem. Future studies could consider utilising a phenomenological qualitative approach to provide in-depth understanding of medical students’ lived experiences of academic difficulty. Inclusion of a strengths-based framework may foster better participation and promote successful academic outcomes through the development of enriched remediation and support programs with long-term benefits.

### *Study Limitations*

The major limitation of this study is the small sample size, which implies that the results may not be generalisable to other settings. Additionally, this study reports the perspectives of students and staff from only one medical school, and their perspective may not be representative of experiences at other medical schools.

## 5. Conclusions

Difficulties in adjusting to university life and the workload required to study medicine are accentuated for students who are the first in their families and/or come from small rural locations. These and other stresses that contribute to failure, as well as its effect on self-efficacy, highlight the need for specific support programs that will enable a heterogeneous student body to graduate as competent doctors. Further work is needed to develop programs that will change the current attitudes toward academic difficulty, normalising access to support, and encouraging early intervention.

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