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ORIGINAL RESEARCH

A Small Group Interview Evaluating the Impact of a Widening Access Programme on Student Confidence and Their Medical School Applications

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Background: In the United Kingdom, individuals from deprived backgrounds are under-represented in the medical workforce. Widening participation seeks to address the barriers they face. This study examined Lancashire Access Medics: a widening participation programme in the North-West of England led by junior doctors and medical students for Year 12 and Year 13 pupils.

Materials and Methods: The programme used an outcome-based curriculum with regular online group and individual sessions to support pupils. The programme was supported by a local medical school's widening participation team. A small group interview was conducted, using thematic analysis, to explore the experiences of the pupils on the programme.

Results: Positive findings include the continuous pastoral support, supportive learning environment, and overall session structure, which contributed to pupils developing key skills ideal for medical school applicants. The support with personal statement development and interview preparation was commended. However, participants requested more support with their aptitude tests and expressed a preference for in-person sessions.

Conclusion: The programme provides a low-cost model for widening participation, which can reach high-priority areas and can be replicated by other groups. Widening participation initiatives should consider the use of an outcome-based curriculum, with sound session design and opportunities for addressing individual pupil needs. Whilst the virtual learning environment may make such work more feasible to deliver, pupils may find it more difficult to engage compared to being in-person.

Keywords: widening participation, social mobility, widening access

Introduction

The workforce of doctors should reflect the communities they serve; therefore, it is crucial for universities to train doctors from diverse backgrounds.[1] In the United Kingdom (UK) there has been an increase in medical school entrants from disadvantaged backgrounds, however, more still needs to be done to bridge the gap.[2] Widening participation (WP) schemes in medicine are initiatives to tackle this underrepresentation.[3,4]

The aims of such programmes are to raise awareness, provide support, and to remove barriers to make applying to medicine a realistic option. Barriers include lacking confidence in their abilities, lacking medical role models,[5,6] seeing medicine as a career for those from affluent backgrounds, and not seeing themselves as doctor material.[7]

WP schemes face many challenges in addressing these barriers. Medical schools identified funding as a limitation for WP work, reducing resources that could be devoted to these programmes.[8] Similarly, one student-led WP programme identified restricted time commitments by volunteers that led to participants feeling unsupported. Despite this, the programme demonstrated positive outcomes and improved participant confidence and understanding of the medical career.[9] According to interviews with teachers, small schools are particularly reliant on university outreach programmes,

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and access to transport to these schemes may represent a further barrier to students in rural areas.[10] This study discusses one approach to managing these barriers to widening participation.

Some of the authors of this paper were involved in Manchester Outreach Medics, a student-led widening participation group. Their activities improved participants' self-perceived understanding and overall confidence in key areas needed to successfully apply to medical school.[11,12] However, the methods used did not explore how these positive outcomes were achieved. This study's primary aim was to explore the experiences of pupils who successfully completed a WP access programme, Lancashire Access Medics (LAM), particularly exploring its impact on their confidence and influence on their applications to medical school. The authors used a qualitative small group interview approach, to enable richer insights than previous studies.

Materials and Methods

Intervention Design

Lancashire Access Medics was founded in 2021 by junior doctors working in North-West England: BR, AL, and SA. In 2022, the team expanded to nine volunteers, two of whom were medical students and the others junior doctors. They were supported by the University of Manchester Medical School's Widening Participation team, particularly EH. They delivered regular sessions, via the online meeting platform Zoom, to small groups of year 12 pupils. To be eligible, applicants had to live in or attend a school in Lancashire, a recognised cold spot for medical school outreach work.[13] They also needed to meet all the other criteria for admission onto the Manchester Access Programme.[14] This inclusion criteria ensured pupils from WP backgrounds enrolled on the course. The team updated their curriculum in 2022: BR created an outcome-based curriculum with three phases, as shown in Supplementary Material Item 1.

Twenty pupils signed up to the programme. Approximately 12 pupils regularly attended sessions. Sessions were typically 60 to 90 minutes long and used Gagne's nine events of instruction to inform the lesson plans.[15] Further information on session plans is available in Supplementary Material Item 2.

Pupils were invited to make appointments with volunteers outside the timetabled group sessions, to address individual learning needs. This included personal statement support and interview practice. Two volunteers were present to ensure none had one-to-one contact with pupils. All project activities had written risk assessments, with a corresponding safeguarding policy and code of conduct for volunteers. All volunteers received bespoke training on facilitating sessions, safeguarding, code of conduct and had Disclosure and Barring Service checks.

Study Design

A study was devised to gain an understanding of the pupil experience on the programme, how it impacted them, and areas for improvement. Initially, this was designed to be a focus group study. Due to small numbers of participants, the evaluation was closer to a small group interview. The facilitator, EH, used a topic guide to ensure key areas of the LAM programme were explored. This is available in Supplementary Material Item 3. This included pupil experiences of:

- Enrolling
- LAM sessions
- Support received outside sessions

The facilitator then explored different ways the LAM programme impacted pupils, including:

- Confidence
- Components of the medical school application process
- Key skills for medical students and doctors

Ethical approval for this study was obtained through the University of Manchester Proportionate Ethics Committee, reference number 2022–14135-24163.

Participant Recruitment

Pupils registered on the LAM 2022 programme were invited via e-mail to join the study. All pupils on the LAM programme were aged 16 to 18 years old, had widening participation flags, and lived in the Lancashire area. They were provided with information sheets and consent forms for both themselves and a parent or guardian to complete. They were invited to send back signed consent and parental consent forms to the research team, who then stored the data in a secure repository.

Data Gathering

Two pupils attended the group interview and could only access the session via a password protected Zoom link. The online group interview took place on 15th March 2023. The audio of the discussion was recorded on Zoom and the recording stored in a university encrypted storage system. The recording was then sent to a university-approved transcription service. The transcription was reviewed and anonymised by the research team and stored in the university repository.

Data Analysis

The transcription was thematically analysed independently by two of the researchers using NVivo. The two researchers then met to triangulate the thematic information. Both their findings were congruent, so a third researcher was not required. The researchers were aware of their personal characteristics during the thematic analysis, and how it could influence the data interpretation: BR was a general practice trainee with an interest in widening participation, the project leader of LAM, and former project leader of Manchester Outreach Medics; EH was a general practitioner and widening participation lead for Manchester Medical School, having supported LAM and many other WP projects.

Results

There were two participants in the group interview, one male and one female, both between the ages of 17 to 18 years old. The following themes were generated from the discussion:

1. Organisation of the programme
2. Supportive learning environment
3. Quality of the sessions
4. Preference for in-person sessions
5. Impact on pupil confidence
6. Developing skills needed to study medicine
7. Application process support
8. Areas for improvement

Theme 1: Organisation of the Programme

The pupils commented on various aspects of the LAM programme. They were positive about the clarity of the application process and the ease of applying to LAM.

> I think the application process was pretty simple. All the questions were very relevant … it was pretty simple to complete.

However, they felt that LAM lacked an online presence, with no website for pupils to access further information when considering applying. They contrasted this with a neighbouring and more established access programme.

> I think the partner programme for Manchester, that was easier to find online … because obviously there was a website.

Pupils were positive about the quality of communication from the organisers, particularly reminding them of upcoming activities.

> I think the regular e-mails, they were quite useful, reminding you of each session

They also commented positively on the organisation of LAM, both from a structural aspect, as well as BR's individual approach to co-ordinating all activities. They felt that having one co-ordinator and point of contact was helpful.

> I think it was very organised, especially with XXXX just co-ordinating it all and ensuring that there was always different people throughout the sessions who were able to talk to us and help us.

Theme 2: Supportive Learning Environment

Pupils reported positively on the small group size for each activity, which helped the facilitators to tailor each session to address each attendee's personal learning needs and answer their questions.

> I think how it was a small focus group … it actually felt really personalised … each week we would be asked what we wanted to do; we were able to ask them questions.

A highlight of LAM was the opportunity to arrange additional individual sessions with the team. This reinforced the emphasis on individual support for participants in the programme.

> So they would send out these slots and you would be able to book on and speak with one of the doctors and do like a mentoring session … so it was definitely very useful.

Pupils valued the high level of support from these individual sessions, and the desire to offer the best learning experience for them from the team.

> Just to have that mentoring and that support, especially towards the end with my interviews, the lengths that XXXX went to support me … he even found someone who'd previously done an interview at that university, so it was more tailored to my sessions. Just going above and beyond.

Pupils also acknowledged the positive role modelling from the volunteers.

> It almost inspired you to want to become a doctor because of how much support he gave us and how much insight he gave into his career path as well. It was just like, you make this career path seem so exciting and fun, so this is definitely something I want to do.

Theme 3 – Quality of the Sessions

Volunteers had training on session design and had a template based around Gagne's nine events of instruction.[15] Cognitive load theory was applied to the production of presentation slides, to make it easier for pupils to process the information.[16] Pupils commented positively on the quality of the teaching material, and the interactivity of the sessions.

> I think the presentations were really well thought out and very thorough.

> There was also a lot of questions, and since they got to know us, they could ask us a question that they thought we might know or we might struggle on, and then actually it helped me to improve and process a lot.

Theme 4 – Preference for In-Person Sessions

Sessions were delivered over the online video meeting service, Zoom, with pupils from multiple schools attending the sessions.

Participants found that they would have been more comfortable working with other pupils if the sessions were in-person, rather than virtually.

> I think the only missing component from an online session is that face to face connection … I think it would be a lot easier and less connection issues … I feel like the team building activities, I feel like if we were able to do that in person, we would be a lot more comfortable with each other.

I just think having that opportunity to meet in person and get some hands-on experience would have been beneficial, but it wasn't essential, just something extra.

Theme 5 – Impact on Pupil Confidence

Participants found that the LAM programme improved their confidence for the application process. This was achieved through regular feedback, which participants found increased their confidence despite it often focusing on areas for improvement, and through pastoral support.

Yeah, they definitely helped with my confidence … I think just the constant reassurance that you can do this, and just the constant feedback that they were able to give us, it definitely helped to improve your confidence.

… that really gave me hope throughout the whole medicine process and it has been a really stressful process … his constant reassurance and helping me with my personal statement … that's just really increased my confidence in actually becoming a doctor.

Pupils also reported being more confident undertaking their A-level assessments.

I think the constant reassurance they had allowed me to have the confidence to organise myself saying, I can do this … I feel like that's just made me more prepared to do my exams in general …

I think he definitely believes in us, and it reassures you that, you know what, if I try my hardest, I think I will be able to get these grades. I would definitely say that it has a positive impact on my A-levels.

Theme 6: Developing Skills Needed to Study Medicine

Pupils commented that the programme improved their teamworking, leadership and communication skills. These sessions were in Phase 2 of the programme and aligned to key skills needed to succeed as a medical student.

I think the PBL (problem-based learning) sessions … they encouraged us to take the lead. So, I think that's very useful and think it definitely prepares you for med school as well… it does help you feel more confident and more like 'I can do this'…

I feel like talking, especially through this screen, before I was really uncomfortable … I wasn't able to communicate anything properly or confidently, but now I can structure myself … that's just really helped me position myself and know what my strong and weak points are

Even in the small exercises … through that, we were able to co-ordinate ourselves and I think that emphasised on teamwork… I think that really improved the teamwork of us in general.

Theme 7: Application Process Support

Phase 1 and Phase 3 of the curriculum focused on preparing the pupils for different components of the application process. Participants reported that this had a positive impact on their personal statements and interviews, and they felt that the programme made them more likely to successfully apply to medical school.

I think LAM really improved my interview technique.

It was just how quick that they get to things, and even with the personal statements, how thorough the feedback was. I definitely think it's been a crucial part in getting an offer for medicine.

Theme 8 – Areas for Improvement

Pupils felt the programme lacked enough opportunities to improve on the UCAT and BMAT.

One part I wish I had more of us was the UCAT practice. They did go through the UCAT practice. but I wish we had more practice steps instead of just like going through the practice questions …

They also commented on wishing the programme had a work experience element to it.

> The work experience, they are connected to Manchester schools, and maybe if there was anything they could hook us up with, because it was absolutely terrible to find work experience through COVID and the resulting years.

Discussion

The aim of this study was to evaluate the impact of an innovative widening participation programme developed and delivered by junior doctors. Through group interview, the authors noted that this virtual programme positively impacted pupils with WP flags wishing to study medicine. One participant felt that the programme was a "crucial part" in getting an offer for medicine.

As a continuous intervention, the pastoral support and mentoring improved participants' confidence in their abilities. This reflects Vygotsky's Zone of Proximal Development,[17] in that the pupils gained confidence in their ability through the ongoing support of LAM volunteers. Participants commented that being on the programme helped them with their A-levels, instilling in them confidence and motivation to study. This was not a planned outcome but seemed to be facilitated by the positive attitude and the values of the volunteers, as they supported pupils. "I can do this" was stated twice by participants in the interview, reflecting the positivity of the hidden curriculum on their confidence.[18] Access programmes should consider the influence of the attitudes and values of their organisation, and the impact this can have on the hidden curriculum.

Participants found that they developed key skills from LAM, which mapped to the Medical Schools Council (MSC) guidance on qualities needed to become a medical student.[19] This included communication skills, leadership skills, and teamwork skills, covered in phase 2 of the curriculum. The use of an outcome-based curriculum, which was descriptive and specific about what a pupil should be able to do by the end of a session, may have helped achieve this.[20] Volunteers carefully tailored learning opportunities to work towards these outcomes and involved the pupils in these plans at the start of each session. This suggests that access programmes could consider the use of such approaches in their curricula, to guide both teachers and pupils towards a shared goal.

Pupils commented on the student-centred approach to the programme, with the opportunity for individual appointments with LAM volunteers and small class sizes.[21] This facilitated a more personalised experience, catering to the diverse needs of participants. Access programmes should consider having opportunities to identify and address individual learning needs and to better support pupils to achieve the outcomes of the curriculum. However, it requires more time, which may be difficult if LAM develops in scale.[22]

Pupils commented positively on the simple application process to join LAM and the regular communication regarding programme activities. This likely made it easier for pupils to engage with the various learning opportunities. However, a lack of online presence made it more difficult for pupils to learn about the programme. Access programmes should consider having a clear online marketing strategy, highlighting their work and the application process. Other widening participation initiatives have used a strong online presence to improve the marketing of their work.[23]

The virtual learning environment enabled the delivery of a low-cost programme, allowing pupils to attend from different areas of Lancashire. The only cost was an annual Zoom subscription. Virtual learning became more common after the COVID-19 pandemic, including in widening participation initiatives.[24] This may improve the accessibility of such initiatives and make it more feasible to reach medical outreach cold spots. However, participants would have preferred in-person activities as engaging with the virtual activities was more difficult. The LAM volunteers agreed that it was more difficult to engage pupils virtually, compared to in-person initiatives. Another key area missing from virtual learning is the opportunity for rapport building between pupils on the programme. Furthermore, some pupils struggle to find an appropriate space in their home environment to contribute to sessions through video and microphone without distraction. This suggests that access programmes should be delivered in-person where possible. However, the resource, cost, and space implications for changing the programme to in-person must be considered.

Based on participant feedback, LAM will review their online presence and accessibility to a wider audience. They will also consider a hybrid model, with an in-person introductory event for participants to meet each other. This would be followed by online sessions and individual meetings, with an in-person mock multiple mini-interview at the end of the

programme. The team will also review the support they offer for aptitude tests. The use of focus groups will be considered in the future, to evaluate the impact of these changes on the learner experience.

Strengths and Limitations

A key strength of the study was the use of a group interview to evaluate the impact of the session. Compared to other research on widening participation interventions that some of the authors have contributed towards, this has provided a deeper understanding of the pupil experience.[11,12] Another strength was the thematic analysis of the data. The authors obtained university proportionate ethics approval and then analysed the anonymised transcriptions using NVivo. They then independently themed the data and triangulated the information.

A key limitation was the small number of participants in the interview. Although participant numbers are not critical in qualitative research, it reduced the generalisability of the collated information. Participant recruitment difficulties have also affected previous evaluations of LAM: a small group interview was attempted to evaluate the LAM programme for the previous year. However, this was not delivered as only one participant consented to take part. This highlights the difficulty the researchers have faced in recruiting participants and reflects the low numbers of participants in this study.

There was also likely an element of bias in which pupils choose to engage: pupils more grateful for the programme may have been more likely to participate. Gratitude from participants may have also led to bias, by making them reluctant to share honest opinions about what they thought needed to be improved.[25] Finally, the data analysis may have been biased by the researchers. They were both advocates for widening participation and helped to create the LAM programme. In this sense, they may have preferentially placed more weight on data, which validated their prior views or decisions they made.[26] The study would have been better analysed with an independent facilitator and data analyser.

Despite these limitations, this study was successful in exploring the impact of the LAM programme and identifying key areas where the programme excelled. The LAM programme provides a replicable template for others to deliver low-cost access programmes in other regions. In fact, the authors are in discussions to reproduce the programme in other high-priority areas.

However, it does not answer the question of what access programmes should achieve from a broader perspective. Some may argue that the intensive and regular support that pupils received on personal statements, aptitude tests, and medical school interviews disrupts the validity of these assessment tools used by medical admissions teams: one study suggests that aptitude test score is affected by the level of support a student receives.[27] National guidance on what access programmes should seek to achieve could allow for the establishment of more widening participation initiatives, whilst also ensuring that they do not affect the fairness and validity of the admissions process.

Conclusion

Participants found the virtual access programme, LAM, benefitted them in numerous ways. This was facilitated by a supportive learning environment, continuous pastoral support, and well-designed learning opportunities and curricula. From the pupils' perspective, LAM could have been improved by providing more support for aptitude tests, by having an online presence, and by arranging in-person sessions. This model of widening participation could be adapted by other groups. However, the question as to what access programmes should aim to achieve from a broader perspective remains to be answered. National guidance on this could help create more widening participation initiatives, which do not interfere with the fairness and validity of the medical school admissions process.

Abbreviations

WP, Widening Participation; LAM, Lancashire Access Medics; BR, Ben Ryan; AL, Amy Leggett; SA, Sukainah Aamir; EH, Enam Haque; SR, Saba Rashid; SB, Shreya Belgamwar; UK, United Kingdom; UCAT, University Clinical Aptitude Test; BMAT, BioMedical Admissions Test; MSC, Medical Schools Council; PBL, Problem-Based Learning.

Data Sharing Statement

The data that supports the findings of this study are available from the corresponding author on reasonable request.

Ethics Approval and Consent to Participate

The University of Manchester Ethics Committee approved this study, reference number 2022-14135-24163. The authors confirm there was no potential harm to participants, anonymity of participants was guaranteed, and informed consent of participants and their parent or guardian was obtained for publication. Informed consent of participants and their parent or guardian included publication of anonymized responses and quotes. The study complies with the Declaration of Helsinki.

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Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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Disclosure

All the authors have an interest in widening participation, which may be viewed as a non-financial competing interest. The authors declare that they have no other competing interests in this work.

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