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Does training impact upon midwives understanding of implicit bias and care of black, Asian and minority ethnic babies

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Keywords

Midwifery; Equality, Diversity; Health Inequity, Bias

Abstract

Background In the UK, there are huge inequities in maternal and neonatal mortality, yet there appears to be very little training to address this for midwives. This quality improvement project aimed to address this by providing training on implicit bias, stereotyping and clinical assessment of babies from black, Asian and minority ethnic families.

Methods A training package was created and delivered to 67 midwives and students on placement at the Yeovil District NHS Foundation Trust on implicit bias, structural racism and clinical assessment of babies from black, Asian and minority ethnic groups. Pre- and post-training surveys were completed and descriptive statistical analysis alongside thematic analysis was used to analyse the findings.

Results It was evident that midwives benefited from the training, as pre-session surveys noted that many midwives were unaware of the factors influencing the care of women and babies

from black, Asian and minority ethnic families. After the training, they identified a wish to change their practice to be more inclusive.

Conclusions The training package was well evaluated; however, more training and research is needed to improve the safety of mothers and babies from black, Asian and minority ethnic families.

Background

Between 2000 and 2017, the worldwide maternal mortality rate fell by 38% (World Health Organization (WHO), 2019). Despite this welcome decline, it is not spread evenly across the world, with the maternal mortality ratio in low-income countries in 2017 being 462 per 100 000 women compared to 11 per 100000 women in high-income countries (WHO, 2019). Between 2017 and 2019, the UK's maternal mortality ratio was 8.8 per 100 000 (Knight et al, 2021a). The difference in maternal mortality ratio between low- and high-income countries may be expected as a result of inadequate access to care and equipment (WHO, 2019). However, within the UK, there are huge disparities in maternal mortality rates. In 2016–2018, for every 100000 black women who gave birth, 34 died. For every 100000 Asian women who gave birth, 15 died. In comparison, eight white women per 100000 died (Knight et al, 2020). In 2021, a UK report into maternal deaths revealed that there has been no statistically significant change in these disparities since 2014 (Knight et al, 2021b). In the USA, rates are similar, with maternal mortality being three times higher in black women than white women (Saluja and Bryant, 2021). Limb (2021) argued that maternity inequity was likely to increase as a result of the COVID-19 pandemic.

Considering infant mortality globally, 2.6 million babies are stillborn and a further 2.9 million neonates die each year (Cooper, 2016; Blencowe et al, 2017). Again, the highest occurrence is seen in low-income countries (WHO, 2019). However, within the UK, as with maternal deaths, there are huge disparities in infant mortality, with stillbirth and neonatal death rates being the highest in black and Asian families (Draper et al, 2021). Black families are over twice as likely to experience a stillbirth and 43% more likely to experience the death of their baby in the first month of life than white families. Asian families are 60% more likely than white families to experience stillbirth and neonatal death (Draper et al, 2021).

There have been many targeted initiatives to reduce stillbirth and neonatal deaths, such as the Saving Babies Lives Two Care Bundle (NHS England, 2019). However, it appears that interventions have had more of an impact for white families (Draper et al, 2021). The reasons for this are likely to be multifaceted. Within maternity care, the APGAR scoring system is commonly used to assess babies at 1, 5 and 10 minutes after birth (Table 1).

Table 1 APGAR Tool adapted from Simon et al (2021)

	Assessment	Score
Breathing	Infant not breathing	0
	Respiration is slow, irregular, weak, or gasping	1
	Infant crying vigorously	2
Heartrate (assessed with stethoscope)	No heartbeat	0
	Heartrate less than 100 beats per minute	1
	Heart rate is more than 100 beats per minute	2
Muscle Tone	Muscle tone is loose and floppy	0
	Demonstrates some tone and flexion	1
	Active motion with flexed muscle tone that resists extension	2
Grimace Response	No response to stimulation	0
	Grimacing in response to stimulation	1
	Infant cries, coughs, or sneezes on stimulation	2
Colour –most infants will score 1 as peripheral cyanosis is common. Colour also misleading in non-white infants	Infant is pale or blue	0
	Infant is pink, but extremities are blue	1
	Infant is entirely pink	2

A score of 7–10 is considered okay, while 4–6 is moderately abnormal and 0–3 is deemed low (Simon et al, 2021). It is noteworthy that the word ‘pink’ forms part of the assessment. Although it is recognised it may be misleading in babies that are not white, it remains the most used assessment tool to identify concerns for all babies. Despite recognised maternal and infant mortality across ethnicities, there is little training to mitigate this. Less than one in three UK health trusts provide training on clinical signs for deterioration for black, Asian and minority ethnic women and babies or any cultural competency training (Ledger et al, 2021). Most of the training, textbooks and guidelines have pictures of exclusively white skin (Mukwende, 2021), as does the APGAR tool. This can potentially affect midwives’ and healthcare professionals’ ability to recognise, assess and care for women and babies from black, Asian and minority ethnic groups. Within the authors’ local trust, there are no neonatal

or adult/pregnant resuscitation mannequins reflective of black women or babies and no training addressing cultural sensitivity, implicit bias or stereotyping. The authors were interested to the degree to which this was reflected nationally and, as such, contacted the regional chief midwife to disseminate questions relating to this. A total of 14 UK Trusts responded, of which only one Trust used mannequins that reflected black women and babies. There were no Trusts that identified specific training for midwives.

Leading on from this, the authors undertook a quality improvement project that aimed to design, implement and review a training package that would address the issue of assessment of babies from black, Asian and minority ethnic groups using appropriate resuscitation mannequins. Implicit bias, stereotyping and inequalities were also discussed.

Methods

The training package created during this project aimed to bring to the forefront the inequity faced by mothers from black, Asian and minority ethnic groups by enabling midwives to reflect on the possibility of their own biases. Included in the session was implicit bias, stereotyping, jaundice, assessment of perfusion at birth and beyond and reviewing 'red flag' advice for parents upon discharge. New black resuscitation low-fidelity mannequins were purchased and used in the training. The training was delivered face-to-face and online, enabling staff to join from home and combating the number of staff isolating because of COVID-19. At the time of the training, 85 midwives worked at the Trust, 67 of whom completed the training (79% of midwives).

The training was developed with the Equality and Diversity Lead for the Trust and a black mother who shared lived experiences for inclusion in the training. Training was delivered by two midwives and the Equality and Diversity Lead covering implicit bias, structural racism, clinical care and differences between skin colour and assessment. The delegates left with links for further understanding

Data collection

Anonymous pre- and post-training surveys for attendees were designed by the team with advice from the Trust Clinical Governance Department. The post-training survey included

questions from the pre-training survey for comparison and additional questions to establish how the training may affect the midwives' practice. Time to complete the survey was provided during the training session for the ease of those attending. The surveys were not sent to the midwives prior to the training, so they could not identify the topics covered in the session, to ensure that the baseline survey reflected their current knowledge. Survey data were collated by the Trust Clinical Governance Department. This was explained to staff in the session as was their anonymity, so their consent to participate was informed, and to encourage the midwives to feel comfortable to give honest answers. However, even with this in place, it cannot be ignored that there was the potential for participation bias to affect the results (Westerman and Rosse, 1997).

As the surveys were anonymous, both pre- and post-training surveys included brief biographic information such as number of years qualified and if the midwife had a bank or substantive contract. The remaining pre-training questions established midwives' baseline understanding of inequality and bias. After training, this was reviewed and staff were asked to evaluate the usefulness of the training on a scale of 1–5 and if they learnt anything new within the session. For ease of completion, the survey was kept as simple as possible, with closed 'yes or no' questions, rating scale questions and free text spaces so midwives could expand on their answers and add comments.

Data analysis

Simple descriptive statistics were collated. For the free text comments, thematic analysis using Braun and Clarke (2006) was used which included identifying initial codes, categories and then themes. Two midwives completed this analysis independently looking for themes and trends, these were then shared across the whole project team to mitigate bias.

Ethical considerations

As the project sought to address midwives' understanding pre- and post-involvement in a Trust Quality Improvement project with no patient involvement, the Trust research and development team advised that formal ethical approval was not required. Informed consent from the midwives was sought

Findings

A total of 67 staff undertook the training, including seven students on placement, with 62 (92.5%) completing the pre-training survey and 55 (82.1%) completing the posttraining survey, equating to 76.1% of midwives in the Trust. Of the students on placement, only two had any resuscitation training with a black mannequin at their university. When asked, only 9.1% (n=5/55) of staff who attended the training stated they had received any specific training regarding caring for black, Asian and minority ethnic mothers and babies. Instead, they relied upon clinical experience, colleagues and self-teaching in order to provide care. Only 12.7% (n=7/55) of staff felt they had enough training regarding the care of black, Asian and minority ethnic families.

The survey highlighted that training in universities using mannequins representing black or Asian women and babies occurs more now than it did 5–10 years ago, as two midwives who trained 5–10 years ago (18%, n=2) were trained using black mannequins compared to eight midwives who trained less than 5 years ago (44%, n=8). Midwives that had trained most recently (within the last 2 years) were also more likely to have heard of the term implicit bias (91%, n=11), compared with just over half of midwives (58%, n=19) who trained more than 10 years ago. A complete breakdown of when midwives completed their training is shown in Table 2.

Table 2 Time Since completion of midwifery training

	Frequency (%)	
Years since completion training	Pre training (n=55)	Post training (n=48)
0-2	12	11
2-5	8	7
5-10	10	11
More than 10	25	19

Prior to the training session, 53% (n=29/55) of midwives felt that maternity guidelines were supportive and inclusive for all families. Following the training session, nearly all midwives (96%, n=46/48) stated that guidelines did not support and include all families. When discussing guidelines following the training, 96% (n=46/48) of midwife participants felt that the APGAR scoring system was not the most appropriate way to assess all babies at birth. All

the midwife participants (100%, n=48) indicated that trusts should be doing more to ensure their guidelines are fully inclusive and felt that health care settings were impacted by bias. Positively, 98% (n=47/48) of the midwives stated that the training equipped them with new knowledge and 98% planned to change their clinical practice following the session through improved documentation, care planning, discussion, hands-on care and safety net advice. When asked to rate how useful the training was, 83% (n=40/48) scored the maximum 5/5, with no score below a 3/5.

In terms of the free-text answers in the survey three themes were identified: 'shocked about inequality and impact of bias', 'positive about change' and 'not ready to accept'.

Shocked about inequality and impact of bias

Midwives who had some knowledge before training expressed concern about their colleagues and their level of understanding

> *'I don't feel midwives are aware of this - I only learned about this via a leadership course.' Midwife 1*

This concern appears correctly placed, as the most common comments from midwives were about their shock at the levels of inequality and inequity, and the impact of implicit bias.

> *'I didn't realise there was so much inequality.' Midwife 2*
>
> *'I wouldn't have thought this before the training at all.' Midwife 3*
>
> *'I did not understand the differences before the training today.' Midwife 4*

Positive about change

Reassuringly, there were comments after the training that demonstrated understanding of implicit bias and stereotyping, as well as a commitment to change not only their practice but to also challenge others.

> *'Implicit bias affects all of us and until we recognise this and start to work to reduce our bias, we will not improve outcomes for women.' Midwife 5*
>
> *'Found it really useful and will change my practice in a positive way. I feel passionate about this care change.' Midwife 6*
>
> *'I now feel braver to challenge bad care/racist comments.' Midwife 7*

Making sure I challenge stereotypes every time.' Midwife 8

Another area of practice that midwife participants shared the training had impacted was around language and use of the words pink, blue and white to describe the colour of babies.

'Consider colour - baby may not be "pink, white, or blue".' Midwife 9
'Baby may not be pink.' Midwife 10
'Different methods of assessment and less bias documentation are required.' Midwife 11

This theme was further highlighted with 96% (n=46/48) of midwives stating the APGAR scoring system was not the most appropriate method for this reason.

Not ready to accept

There were some midwives who appeared not to be ready to accept that they may have bias or that they needed to make changes to their practice, feeling that bias was an inescapable part of midwifery practice.

'I don't think I personally would.' Midwife 12
'As a mainly white British group, it's inevitable due to lack of experience of other ethnic groups.' Midwife 13

Discussion

Despite pressures on midwives because of a staffing crisis and the ongoing COVID-19 pandemic (Royal College of Midwives, 2021), the uptake of training and completion of the surveys were high, indicating that the midwives were interested in these issues. Over 75% of midwives from within the Trust attended and the training was well received. It was evident that the majority of those attended identified that they had learnt something, highlighting worrying gaps in midwives' knowledge on issues related to race, diversity and health inequities before training. Worryingly, only three midwives had prior knowledge gained from formal training, highlighting that gaps in education remain despite welldocumented health inequities in maternal and neonatal outcomes (Knight et al, 2021a, b). While the number of

students who took part was small, it is concerning that not all of them had heard of implicit bias or trained with resuscitation dolls that reflected different ethnicities, and this is worthy of further exploration and research.

Clark and Clark (1939) discussed the danger of unchecked and unchallenged bias in society and despite that research being conducted over 80 years ago, the present project identified that 38% (n=18) of midwives had not heard of implicit bias before training. Although the more recently qualified midwives had heard of implicit bias, over half of them still reported that maternity guidelines were supportive and inclusive of all families before the training. This indicates that while they have heard of implicit bias, they were still not able to identify bias within policies, guidelines and training that do not include all women and families. Therefore, it could be argued that their biases were unchecked and unchallenged. All midwives reported after training that guidelines were not inclusive, highlighting the positive impact of training to fully understand bias. This was further supported by the free text comments, where shock about inequity and impact of bias was observed. Continued poor awareness of implicit bias and its subsequent effect on patient safety must be understood to provide families with safe and personalised care (Parker et al, 2011; NHS England, 2016) and work to reduce unacceptable disparities.

Having due regard for advancing equity involves removing and minimising disadvantages as per the Public Sector Equality Duty (Equality and Human Rights Commission, 2021). In this, midwives have a responsibility to provide equal opportunities, eliminate discrimination and foster open and honest communication about equitable and equal access to healthcare (Government Equalities Office, 2015). One step towards addressing inequities would be for midwives to be aware of and address their personal biases. In addition, across the country, less than a third of healthcare Trusts provide cultural competency training or training to understand clinical signs in black, Asian and minority ethnic women and babies (Ledger, 2021). This was echoed in the present project, as only six midwives had received training like this before.

This significant oversight in training could be described as institutionalised racism. Institutional racism is defined as racism that occurs in policies, procedures, operations and/or

culture of public or private institutions (Institute of Race Relations, 1998). Recent reports and research suggest evidence of institutionalised racism and/or bias within healthcare. Knight et al (2021a; b) discussed microaggression and bias as factors contributing to poor outcomes in the UK. In the USA, Suliman (2021) suggested that disparities occur as a result of racism within the care that is provided and not because of the race of mothers and their babies. Moreover, Sigurdson et al (2019) describes disparities existing at all levels – structure, process and outcome – within neonatal units that disadvantages black babies. It could be argued that using the APGAR score perpetuates a culture that does not recognise or see babies from black, Asian and minority ethnic groups. As such, the 'colour' aspect needs adapting to appropriately assess colour in all babies. Following the death of a 3-month-old baby, a Healthcare Safety Investigation Branch (2021) report recommended that the Chair of the NHS system-wide paediatric observations tracking programme should ensure that resources are produced to include examples of black, Asian and ethnic minority children demonstrating signs of serious illness. This is because, despite the mother's concerns, important clinical signs, including assessment of colour and rash, were missed in this case (Healthcare Safety Investigation Branch, 2021).

The authors believe this, alongside the implementation of a training package addressing the issue of assessment of black, Asian and minority ethnic mothers and babies, will improve outcomes for these families. While it was not possible to identify the long-term impact of the training, Vincent and Amalberti (2016) emphasised that targeted initiatives can have a fast and effective impact, which is what is required. However, more formal research is required in this area to ensure that the training has the biggest and sustained impact on midwifery practice. While the authors recognise the reasons for inequity are multi-faceted, ensuring midwives assess their own biases and are aware of the potential for institutionalised racism is crucial.

Conclusions

This quality improvement project highlighted that training covering implicit bias, stereotyping, jaundice, assessment of perfusion and 'red flag' advice encourages midwives to reflect on and change their practice. It is also important that nationally used assessment tools are revised to reflect all skin tones and not just those of white mothers to address health

inequities experienced by black, Asian and minority ethnic families. Trusts should invest in training to help mitigate the gaps in knowledge and support midwives and healthcare professionals to acknowledge and challenge bias and stereotypes by responding with cultural sensitivity.

Key Points

1. Infant and maternal mortality of women and babies from black, Asian and ethnic minority groups is higher than for that of white women and babies.
2. Colour assessment in the APGAR tool used to assess babies is not appropriate for assessing babies from black, Asian and ethnic minority groups.
3. Midwives require training regarding the need to adapt assessment tools to ensure they reflect darker skin tones.
4. It is important that midwives are exposed to training on the assessment of black, Asian and ethnic minority babies and mothers/parents as well as implicit bias training.

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