Humanism as a neglected driver of improved teaching in resource-limited settings: a journal club intervention

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**Abstract**

We implemented a series of facilitator-led, peer-driven journal club discussions at a teaching hospital in Malawi with over 40 medical interns and clinical officer trainees. Our interest was to investigate whether trainees working in a demanding clinical environment and having undergone classic uniform directive teaching would perceive meaningful change through the journal club experience. Findings indicated the learners showed positive responses throughout all assessments and reported lasting effects on their attitude and practice. Detailed examination of the questionnaire suggested that when teaching courses allowed for opportunities to reflect and criticise, improvements could be seen in student confidence, teamwork, and stress levels. We pose that an opportunity for learner-led discourse on educational and workplace matters could be a valuable component of a radical change in teaching style in low-resource settings.

**Keywords:** Curriculum design; interdisciplinary; self-reliance; journal club; burnout; medical education; team building

**Introduction**

A great part of medical schools and teaching hospitals in Eastern and Central Africa founded in the late 1950s and 1960s originally adopted the British educational system of that time. Building, classroom, and curricular structures were not intended to teach to the individual or promote participatory learning. The main aim was content delivery, mostly in a strictly hierarchic manner. Many of these structures and styles have endured, though the evidence for effective teaching methods has led medical schools in many parts of the world to change their curricula from faculty–oriented (“we know what is best for you”) to student-oriented, from directive, hierarchical methods to participatory methods that invite inquiry.
Following the ideas of the remarkable primary health care conference of Alma-Ata and transferring these into the teaching context, enduring improvements in the African setting can only be achieved if health workers accept approaches to their work which are markedly different from the conventional paradigms of teaching in medicine, going from hospital-based to community-based, from creating dependency to encouraging self-learning and evidence-based decision-making, from post-test evaluation to continuous cycles of improvement and self-assessment (UNICEF, 1978).

To a great extent, postgraduate learners in resource-limited settings are suffering from a loss of freedom and expression of their own reflections, concentrating on coping with an overloaded curriculum and hospital system rather than being equipped with the skills for self-learning that are essential throughout a medical career. Additionally, they face an overwhelming burden of patient care with extremely high patient-to-provider ratios, high mortality rates, and continuous system challenges related to limited resources that can contribute to an extremely difficult workplace environment.

Respecting the learning individual and its own ideas in an ever-changing environment and giving trainees the freedom to express and reflect on their experiences and their working environment—as in classical humanism—might open up ways for problem solving from within the learning community, such that, work-related stress might be reduced, interdisciplinary communication enhanced, and ultimately patient care improved.

**Methods**

In 2017, we implemented a weekly journal club for intern medical officers and clinical officer trainees rotating through the paediatric unit at the largest teaching hospital in Malawi. The meetings were structured around a discussion of literature pertinent to the trainees with topics alternating between current clinical and high burden public health problems in Malawi and Africa, typically with literature derived from Africa. They were facilitated by paediatric consultants, but were discussion based and question oriented. There was ample opportunity for the trainees to share their experiences both with managing patients on the paediatric ward and with working in the resource-constrained Malawian health system. An anonymous survey was sent via email to 38 trainees seven to twelve months after their participation using a Likert scale to solicit their perception of the journal club.

**Results/Analysis**

A follow up survey was sent to 38 trainees. We received 20 responses. Most trainees reported at least some degree of change in their clinical practice and attitude towards their working environment. 65% reported that they almost always or always changed their practice on a topic discussed in the journal club. When asked about long-lasting change, 79% reported almost always or always changing their practice. 85% reported that they experienced improved stress management and reduced frustration and 79% had the perception of improved teamwork secondary to the journal club discussions. 67% reported a moderate to major effect on changing their perspective on the public health system in Malawi and 72% reported a moderate to major effect on the way they approach scientific articles. See Figures 1-3. The trainees were asked to comment on their perception of the journal club. Their responses can be seen in Figure 4.

|                | Never/No | Rare/Almost never | Occasionally/Sometimes | Almost always | Always |
|----------------|----------|-------------------|------------------------|--------------|--------|
| Clinical change| Immediate| 0/20              | 0/20                   | 7/20         | 7/20   |
|                | Short term| 0/14              | 0/14                   | 7/14         | 3/14   |

Table 1: Likert scale responses from trainees.
|                                    | Long term | 0/14 | 0/14 | 3/14 | 6/14 | 5/14 |
|------------------------------------|-----------|------|------|------|------|------|
| Affect perspective on public health system | 0/12 | 2/12 | 2/12 | 3/12 | 5/12 |
| Affect how you read articles       | 1/14 | 0/14 | 3/14 | 5/14 | 5/14 |
| Cope with stress of paediatric rotation | 0/14 | 1/14 | 1/14 | 10/14 | 2/14 |
| Improved teamwork                  | 1/14 | 0/14 | 2/14 | 6/14 | 5/14 |

Note: denominator indicates number of respondants per given question i.e. 0 of 20 responses, as some respondants did not answer every question.

**Figure 1:** Trainee response to questions about clinical change.

|                                    | 0% | 10% | 20% | 30% | 40% | 50% |
|------------------------------------|----|-----|-----|-----|-----|-----|
| During rotation                    |    |     |     |     |     |     |
| Immediately after rotation         |    |     |     |     |     |     |
| Several months after rotation      |    |     |     |     |     |     |

**Clinical Change**

- Never
- Rarely
- Occasionally/Sometimes
- Almost every time
- Every time

**Figure 2:** Trainee response to questions about academic change.

|                                    | 0% | 10% | 20% | 30% | 40% | 50% |
|------------------------------------|----|-----|-----|-----|-----|-----|
| Your perspective on public health in Malawi |     |     |     |     |     |     |
| The way you read scientific articles |     |     |     |     |     |     |

**Academic Change**

- No affect
- Minor effect
- Neutral
- Moderate effect
- Major effect

**Figure 3:** Trainee response to questions about psychosocial change.
Discussion

We discuss implications for curriculum development and interdisciplinary discourse on workplace matters and a radical change in teaching style in low resource settings in Africa.

The trainees who participated in our journal club reported a subjective change in their clinical practice and health service attitude, affirming the original purpose of the club, which was to impart medical and health system knowledge. What we found even more compelling was the perception of improved stress management and teamwork. The trainees work in a busy African teaching hospital with low resources, facing frequent deaths on the paediatric ward. They face systems-challenges such as electrical blackouts and equipment breakdowns on a daily basis. They are sleep deprived as they regularly take 24-hour calls. A tool to mitigate their stress and improve their teamwork could have a beneficial impact on their wellbeing.

The rates of burnout reported amongst trainees in low and middle income countries (LMICs) are high, often greater than 50% (Ogundipe et al., 2014; Zubairi and Noordin, 2016; Dugani et al., 2018). Burnout is classically reported using the Maslach Burnout Inventory (MBI), which scores separately for emotional exhaustion, depersonalization, and lack of personal accomplishment (Maslach, Jackson and Leiter, 2010). A recent systematic review of factors...
associated with outpatient health care provider burnout in LMICs found an association between lower stress and improved MBI scores (Dugani et al., 2018). Opportunities for professional development (Dugani et al., 2018) and the absence of doctor to doctor conflict were inversely associated with burnout (Ogundipe et al., 2014). A positive workplace climate has been shown to have a mitigating effect on burnout amongst residents (Llera and Durante, 2014). We hypothesize that the improved stress management and teamwork reported by the trainees in this study may have a protective effect against the development of burnout and would advocate for further studies on simple, low-cost methods of improving the workplace environment amongst young doctors in LMICs. The opportunity for these young trainees to gather together and discuss their shared experiences may have a positive impact upon their wellbeing.

We felt that the reported psychosocial benefits were a noteworthy outcome of the journal club. Giving participants an opportunity to step out of their role as an overburdened health worker to reflect on their practice was a new and revolutionary experience for many. They had the opportunity to reflect on a variety of topics:

- Why am I working in this field?
- Do the needs of the population reflect my workstyle?
- What could be the effect of my work?
- How can we work better as a team?
- Is my work and knowledge evidence based?

We saw an increase in self-direction, teamwork, and growth mindset. First, we saw a felt increase in autonomy and self-reliance of the participants in terms of critical thinking, expression of thoughts and reflection abilities or, in practical terms, their perceived autonomy in the workplace. This was reflected in their report of perceived improvements in stress, teamwork and clinical skills. Trainees enjoyed being recognized as an individual learner and being able to use their critical thinking skills to detect service provision gaps or to interpret publications. Second, journal club provided a unique opportunity for different student groups (e.g., different roles, socioeconomic, and educational backgrounds) to learn about the background and perspectives of fellow trainees away from the demands and time constraints of being on the wards. They reported that this led to improved teamwork when they were back in the hospital caring for patients. Third, interaction with seniors and other professionals in a non-threatening and mistake-allowing way was a new experience for many of the trainees, opening up a way of talking about their career development they would not have done otherwise, be it due to high workload or to fear of interacting with seniors in a punitive environment. The journal club meetings opened up intense discussions about quality of clinical management and future of employment, motivating learners to think about change beyond the pure medical facts.

Improving the skills of participants, and thus increasing their metacognitive competence, helps them recognize the limitations of their abilities (Kruger and Dunning, 1999) to a wider extent. This is important in an African setting as some learners get exposure but are not guided due to a lack of trainers, which may lead to learners misinterpreting results and overestimating their own abilities. This can lead to overestimation of competencies and overly favourable views of their abilities (Kruger and Dunning, 1999). However, our results drawn from self-assessments have to be looked at with caution. As in other studies, junior medical officers demonstrated a broad range of competence levels for several common, clinical skills, with some performing at an inadequate level. But there was no relationship between their self-reported level of confidence and their formally assessed performance (Barnsley et al., 2004).

**Conclusion**

Our journal club is a model for delivering and evaluating innovative educational interventions in low-resource settings that creates a safe learning space to discuss evidence-based practice and public health topics while sharing
common experiences. Reflecting about the health system as such and on personal experiences in particular, utilizing peer support and pooled knowledge could be critical elements to reduce frustration and burn-out as well as keeping a humanistic approach toward patients and the working environment despite overwhelming challenges. This group of Malawian learners reported improved teamwork, stress reduction, and changed perspectives toward clinical work and the health system due to a series of reflective, mentor-supported but peer-driven discussions. Our hope is that these experiences might lead to patterns of lifelong learning and self-reflection that will be beneficial to the participants as well as the patients that they serve.

**Take Home Messages**

- Postgraduate trainees in resource-limited settings (RLS) respond well to changes in teaching style enabling reflective practice and self-confidence.
- Establishment of journal clubs may contribute to stress reduction and teamwork building in a highly demanding environment.
- Encouraging trainees to reflect about their working style and the setting in which they work might contribute to an altered approach of delivering health services in RLS.

**Notes On Contributors**

Dr. Andreas Schultz is a senior lecturer and academic coordinator at the University of Malawi, College of Medicine, department of pediatrics. He is a senior medical officer and a consultant in paediatrics, tropical medicine and international public health. Over the last 15 years he had various assignments to tropical countries mostly as head of programs, coordinator or advisor.

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**Appendices**

None.

**Declarations**

*The author has declared that there are no conflicts of interest.*

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