The Role of Collaborative Engagement to Facilitate Understanding & Change: Vocal Ergonomics with High Performance Basketball Coaches

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Introduction:

It has become increasingly recognised that workers provide critical insights into health decision-making within their workplaces. However, it may be highly challenging for precarious workers to collaborate on their health at work needs. While in its infancy, vocal ergonomics may provide opportunities for workers to have meaningful input into a specific area of their health at work.

Vocal ergonomics considers work-related vocal health and risk factors for voice disorders. This includes increasing knowledge about improved voice production and speech intelligibility across workplace environments. Indeed, Vilkman (2004) asserts the need to regard vocal health in line with broader Occupational Health and Safety legislative considerations, including:

• Vocal ill-health prevention
• Health surveillance
• Diagnosis and treatment of vocal injury
• Considerations of working environments
• Training
• Person protective equipment
• Broader social and economic aspects

Vocal ergonomics has been considered for a range of occupations, identified as critically relying on their voices for occupational functioning (including teachers, aerobics instructors, performing artists, and sports coaches). Research suggests that workers who critically rely on voice experience more vocal health related issues than the general working public. Interestingly, workers who are not made aware of their vocal health and/or given voice specific health support are unlikely to address their vocal health.

Method:

This study considered sports coaches’ evolving vocal ergonomic experiences during participatory interaction with the primary researcher. It aimed to explore how the sports coaches’ occupational voice use and vocal health can be enhanced through collaborative development, implementation and evaluation of voice support strategies.

The collaborative development, implementation and evaluation of voice support strategies were guided by Vilkman’s (2004) framework of key hazards and risk factors for occupational voice disorders, which highlights:

• Vocal task characteristics that may increase vocal load
• Characteristics of physical & organisational workplace environments
• Personal factors and individual health factors

These factors are all suggested to impact on workers’ occupational vocal health.

Utilising a Case Study Research methodology, participants contributed to the collaborative development of strategies to support their vocal health whilst coaching. 29 basketball coaches from 9 sporting teams participated across an 18-month period. Guided by Vilkman’s (2004) framework, a series of phases were undertaken to complete this research, each engaging multiple data collection methods. Field observations, in-depth interviews, written individual feedback and a voice education session preceded a collaborative focus group between coaches and the primary researcher. Together, they develop targeted voice support strategies that participants used throughout the competition period. This decision-making was facilitated by the primary researcher, but drew heavily on the ideas, opinion and workplace knowledge of coaches. Participants then implemented strategies and engaged in ongoing weekly evaluation of voice performance, followed by a focus group (evaluating voice support strategies), at the end of the season. The primary researcher also kept a field journal, along with conducting informal and formal ‘member checking’ during data collection. Coaches also
completed the Voice Capabilities Questionnaire at both focus groups, to evaluate their experiences of voice symptoms and problems.

**Results:**

Coaches reported this collaborative decision-making process provided new avenues for considering their occupational health. A wide variety of strategies were developed in consultation with coaches, including:

- Targeted coaching behaviors (e.g. frequent postural changes, hydration)
- Using specific communication styles (e.g. key-word usage during excessive background noise)
- Adapting personal behaviors to overcome physical and organisational barriers (e.g. limiting distance between coaches and their communication partners)

Coaches reported that these strategies were implemented to varying degrees. They cited several reasons for not consistently implementing strategies, which included:

- Challenges prioritizing their own health above focusing on players and overall team performance
- Turbulent organizational and inter-coach relationships
- Organisational/ sports league pressures
- Precariousness of their employment status

Further, coaches suggested that while they had task autonomy, they did not necessarily have agency for change.

**Discussion:**

For a group focused on the needs of others, collaborative health decision-making allowed coaches a rare space to reflect on their own needs. The collaborative strategy development allowed participants to meaningfully consider voice and their occupational vocal health. However, continued consideration of vocal health and vocal ergonomic factors were heavily dependent on organizational culture and the game performance of a team over the competition season.

This research provides insight into health promotion with precarious workers, vocal ergonomics in high-pressure jobs and the role of collaboration in decision making for coaches. Further research into how vocal ergonomics can be integrated into a broader collaborative health approach is warranted.

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**Keywords:**

Worker consultation; vocal ergonomics; workplace health; vocal health; sports coaching

**References**