DISSERTATION DISSEMINATION

Title:

Exploring the Relationship Between Group Singing and Urinary Incontinence: An Online Survey of Group-Based Singers

Introduction:

Most importantly, thank you to all who participated and assisted in advertising this piece of research.

Here is a summary of the reasons why this research was conducted:

COPD is listed a risk factor for pelvic floor dysfunction (PFD) and it would be beneficial to investigate the impact of living with long-term conditions on quality of life, as well as how lifestyle factors impact pelvic floor health.
To reduce the risk of PFD, the NICE guidelines suggest that pelvic floor muscle training (PFMT) is beneficial, and this is also relevant to those who have COPD alongside PFD. Research (Haukeland-Parker, 2021) has highlighted potential of PFMT in COPD but access to this treatment is difficult.
Singing is a novel intervention used to help treat respiratory diseases, and a service evaluation by Lewis et al. (2018) showed that singers showed improvements in respiratory health and quality of life.
Currently there are no studies investigating the direct impact of urinary incontinence (UI), which is a symptom of PFD, on singers. Based on the points above, singing may have a positive influence on urinary symptoms through improved breath control and muscular tension optimisation (Solomini et al., 2021).
Conversely, singing could place additional pressure on weakened pelvic floor muscles, creating a need for further education on pelvic floor health.

Aim:

To investigate the effects of group singing on UI, considering factors like age; sex; and experience, and explore singing as a potential non-clinical intervention for UI

What We Did:

This was an online survey of UK-based group and choir singers, with the inclusion criteria being aged 18 years and above and having participation in group singing for at least one month.
The research collaborated with 172 singing group leaders to distribute the research advert to their group members. Interested individuals completed the online survey that was linked on the advert by QR code or hyperlink.
There were 137 eligible participants after the screening process.
The survey content focussed on the impact of UI on daily life and singing, and included questions structured in the following order:

1. consent forms
2. demographic questions
3. UI-related symptoms
4. ICIQ LUTS QoL (Quality of life assessment)

To analyse the data collected, the Mann-Whitney U and Kruskal-Wallis were used for statistical tests and thematic analysis was used for any qualitative data collected.

What We Found:

Higher LUTS QoL scores were linked to increased urinary urgency and leakage during singing (p-values ranging from <.001 to .006).
No significant differences in symptoms were found between sexes, age groups or groups with different amounts of singing experience.
Singing more than x3 per week correlated with greater severity in UI symptoms (p = .020).
Qualitative data showed mixed beliefs of UI, with some individuals normalising their symptoms due to pregnancy or age; some individuals believing that their symptoms have improved since starting singing and others noticing that their symptoms have worsened since starting singing.

Why It Matters:

Singing may have a dual effect - previous research has shown that singing is beneficial for lung health and that lung disease is a known risk factor for PFD. However, the current study shows that higher frequency of singing may be linked to worsening of UI symptoms.
This highlights that integrating PMFT in populations who sing, specifically in those who experience UI and/or COPD or other lung diseases, could potentially minimise their incontinence symptoms and improve quality of life.
The current research highlights the need for further research to understand the specific mechanisms of how singing recruits the pelvic floor muscles and data collection on leakage and urgency during singing vs other activities in real time.
Group singing could still be promoted as a public health intervention for lung health, with increased focus on how to manage PFD.

Contact Information:

If you have any questions, please do not hesitate to contact the researcher, whose details are below:

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Definitions & Abbreviations:

- **COPD** – Chronic Obstructive Pulmonary Disease – An umbrella term for long-term (chronic) respiratory conditions that are often related to smoking such as: emphysema, chronic bronchitis, and some cases of asthma.
- **PFD** – Pelvic Floor Dysfunction – When the structures of the pelvic floor (muscles, nerves and connective tissue that support the pelvic organs, bowel and bladder) are not functioning effectively. This could be due to weakness or injury.
- **PFMT** – Pelvic Floor Muscle Training – Exercises used to help strengthen the structures of the pelvic floor which can improve their function.
- **UI** – Urinary Incontinence – Leaking of urine
- **ICIQ LUTS QoL** – The International Consultation on Incontinence Questionnaire Lower Urinary Tract Symptoms Quality of Life module – The standardised questionnaire used in the study to collect data on the impact of urinary incontinence of quality of life.