Is a biopsychosocial guideline useful as a decision tool selecting neck patients for group-based intervention? A Case – Control Study.

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Background

Neck pain is a widespread and common musculoskeletal disorder in the western world. Guidelines have been developed worldwide in an attempt to optimize treatment strategies, but the implementation of guidelines is often challenging.

Aim

For neck patients at the Spine Centre of Southern Denmark, we:

- **Evaluated an internal guideline as tool for treatment decision making when offering neck patients group-based intervention.**
- **Evaluated the feasibility of group-based intervention for neck patients**

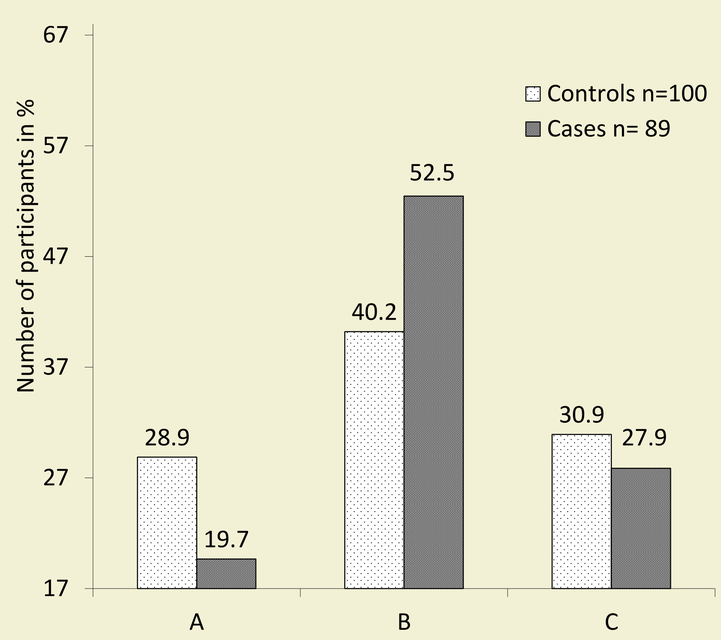
Methods

Design: Case-control quality improvement study.
Cases: 89 neck patients with neck pain with or without arm pain selected for group-based intervention by clinicians at the Spine Centre of Southern Denmark .
Controls: 100 random historical neck patients retrieved from the SpineData Database (SDD).
Intervention: Group-based intervention focused on neck-specific and activity-specific exercises, physical activity and education with a cognitive approach focusing on pain management.
Stratification: The guideline suggest exclusively that neck patients stratified into course program C are offered group-based intervention at the Spine centre of Southern Denmark.
Data processing: Cases are compared to controls after stratification into A,B & C as proposed in the guideline by looking at demographic data and self-reported measures on disability, duration and pain. Feasibility are evaluated by analysing attendance and satisfaction.

Model of stratification into A, B, C & D treatment programs as proposed in the internal guideline:

Course prog. / SpineData	A (NDI <15)	B (NDI 15-24)	C (NDI > 24)	D
Disability	None/minimal	Moderate	Severe	Not relevant
Self care	OK	Less sufficient	Not sufficient	Not relevant
Pain control	OK	Less Sufficient	Not sufficient	Not relevant
Yellow flag	OK	Minor influence	Severe influence	Can be relevant
Red flag	Not relevant	Not relevant	Not relevant	Relevant

Cases vs. controls sub grouped by NDI (Neck Disability Index) score according to internal guideline:



Subgroups divided by preset cutpoints in NDI score:
A: < 15 "Mild", B: 15-24 "Moderate", C: > 24 "Severe"

Results

No statistically significant differences between neck patients selected for group-based intervention and neck patients assessed and treated individually at the Spine Centre, on any of the self-reported outcome measures, pain or duration were identified.

The intervention patients had high degrees of attendance (completion rate 81.2 %, mean attendance 7.2 of 8 possible) and expressed satisfaction and readiness to continue physical exercises following group-based intervention.

Evaluation of feasibility by patient reported outcome measures:

	Not at all	Partly	Very much
Did the course fulfill your expectations?	1/63 = 2 %	16/63 = 25 %	46/63 = 73 %
Did you benefit from the course?	1/63 = 2 %	14/63 = 22 %	49/63 = 78 %
Do you feel ready to proceed exercising?	4/63 = 6 %	11/63 = 17 %	46/63 = 73 %

Patient reported evaluation forms (n=63)	
Readiness to proceed exercising?	**25 %** had already begun further exercising, **46 %** had planned how to continue and **25 %** expressed doubts concerning further exercising. 2 participants (**3 %**) stated either not to proceed exercising or not knowing what to do.
Benefit of intervention?	**41 %** expressed great benefit due to pain reduction and functional improvement. **37 %** had great benefit initiated by meeting other people having equivalent problems. **11 %** stated partly benefit because either the group or the exercises did not fit the person. **3 %** did not benefit because they still did not know what was wrong and **5 %** had too much pain to do exercises.

Conclusion

The implementation of an internal guideline was unsuccessful since the intended patients were not exclusively selected for group-based intervention.

Group-based intervention seems feasible for all neck patients referred to the secondary care Spine Centre of Southern Denmark.

Region Syddanmark

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