Effects of progressive muscle relaxation on anxiety among patients with schizophrenia: an evidence based review

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Abstract

Background: Prevention and management of anxiety in patients suffering schizophrenia who received progressive muscle relaxation (PMR) are challenging issues for mental and psychiatric health care professionals in psychiatric institutions.

Aim: The aim of this article is to provide information about current knowledge of the effectiveness of progressive muscle relaxation on anxiety among patients who suffer schizophrenia.

Methods: The evidence based review used databases Cumulative Index of Nursing Allied and Health Literature (CINAHL), OVID, and PsycINFO form 2009-2013 to retrieve the published evidence on the topic by using appropriate key words.

Results: The result of this article emphasized the effectiveness of (PMR) on reducing anxiety in patients suffering schizophrenia, PMR is easily applied by patients at any time.

Conclusion: Progressive muscle relaxation is an effective method for decreasing and managing anxiety among patients who suffer schizophrenia.

Key words: progressive muscle relaxation, anxiety, schizophrenia, evidence based practice
Introduction
Schizophrenia is a serious psychiatric disorder generally; typically its onset is in early adulthood (Chen, et al., 2009; Vancampfort, et al., 2013). Schizophrenia is listed as the fifth leading cause of loss of Daly's worldwide in the age group 15-44 years (WHO, 2008).

The cause of schizophrenia is still vague. No single theory substantiates a clear-cut explanation for the disease. Schizophrenia probably results from a combination of factors including biological, psychological, and environmental factors (Townsend, 2011). Sixty percent of patients living with schizophrenia are reported to have concomitant anxiety (Chen, et al., 2009); in schizophrenia, an increase of subjective anxiety and stress results in an increased negative effect (Vancampfort, et al., 2011).

Relaxation techniques, including progressive muscle relaxation have been considered as an adjunctive therapy for dealing with stress and anxiety. In addition, studies of progressive muscle relaxation as an intervention in treating trait anxiety in people with chronic schizophrenia have been performed since the early 1980s (Vancampfort, et al., 2011). However, prevention and management of anxiety and stress among patients with schizophrenia are challenging issues for mental health nurses in the psychiatric setting.

PICO Questions
1. Does progressive muscle relaxation (PMR) prevent or decrease anxiety in patients with schizophrenia?
2. What is the difference between patients who received progressive muscle relaxation intervention and patients who did not receive progressive muscle relaxation intervention?

Methods
This evidence is an initial evidence based review and will be expanded to use databases; Cumulative Index of Nursing Allied and Health Literature (CINAHL), OVID, Pubmed, Science Direct and PsycINFO to retrieve the published evidence on the topic.

Multiple words were used to search for literature on progressive muscle relaxation effect on anxiety on patients with schizophrenia. The following words were placed in the online indexes individually and in combination with one another: progressive muscle relaxation, relaxation techniques, anxiety and schizophrenia.

Findings
A search in databases from 2009 to 2013 was completed. Searching in databases resulted in 30 articles; after analyzing these articles based on the study purpose, objectives, design, major results and conclusion, the selected articles were 3 articles which matched the previous inclusion criteria. (See Table 1 next page)

Recommendation and Conclusion
Based on the previous analysis of the studies, and after comparing the result of the studies with consideration for the level of evidence and the significance of the statistical measure, we recommend incorporating progressive muscle relaxation in the routine care of anxiety and stress among patients with schizophrenia.

This recommendation depends on the exponent conducted in the previous research, which was adequate, logical as it repeats itself, and there was no contradiction in the result as the progressive muscle relaxation can be used as a
Table 1: This table summarizes the results obtained from the three research articles

<table>
<thead>
<tr>
<th>Name of articles</th>
<th>Acute effects of progressive muscle relaxation on state anxiety and subjective well-being in chronic Bulgarian patients with schizophrenia</th>
<th>Effects of progressive muscle relaxation on state anxiety and subjective well-being in people with schizophrenia: a randomized controlled trial.</th>
<th>Efficacy of progressive muscle relaxation training in reducing anxiety in patients with acute schizophrenia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name the design</td>
<td>Randomized controlled group design</td>
<td>Randomized controlled trial</td>
<td>Experimental Randomized controlled trial</td>
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<tr>
<td>Sampling strategy</td>
<td>Sixty four consecutive patients with a diagnosis of schizophrenia. Excluded from the study: (a) having a psychiatric co-morbidity (anxiety disorders and/or depressive disorders, substance dependence), (b) exhibiting musculoskeletal problems that might affect PMR training, (c) not being able to concentrate for 25 minutes duration at a time, (d) not being able to complete the questionnaires within 5 to 10 minutes without difficulties and with minimal instructions, (e) having received previous PMR training.</td>
<td>Sixty-four out of 88 eligible patients with schizophrenia. 18 voluntary participants, A small representative sample of volunteers with a diagnosis of schizophrenia. Inclusion criteria were as follows: (i) diagnosis of schizophrenia; (ii) a Beck Anxiety Inventory (BAI) score of more than 7 prior to recruitment; (iii) the patient was in receipt of inpatient treatment in the acute psychiatric ward; (iv) no history of substance abuse or organic brain disease; and (v) the patient was willing to accept treatment with a limited number of atypical antipsychotics.</td>
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<td>Main result</td>
<td>The results of the study provide scientific evidence for the utility of PMR in the chronic psychiatric settings for patients with schizophrenia.</td>
<td>Only within progressive muscle relaxation, participants (n=27) showed decreased state anxiety, psychological stress and fatigue and increased subjective well-being. Between-group differences in post scores were found for state anxiety, subjective well-being and psychological stress, but not for fatigue. The effect size favouring progressive muscle relaxation was 1.26 for subjective well-being and _1.25 and _1.02 for respectively state anxiety and psychological stress.</td>
<td>The results of this study: The degree of anxiety improvement was significantly higher in the progressive muscle relaxation training group than in the control group after progressive muscle relaxation training intervention</td>
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<tr>
<td>Level of the evidence</td>
<td>II</td>
<td>II</td>
<td>II</td>
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complimentary measure to reduce level of anxiety as indicated by all Studies reviewed previously.

We will use this evidence in our practice in the near future at the clinical area giving actual training and experience as to how patients with schizophrenia will respond to progressive muscle relaxation. There is good evidence that this recommendation will improve important health outcomes and concludes that benefits substantially outweigh harm.

The intervention is mainly cheap, easy to conduct, and easily comprehended for both nursing stuff and patients or patient health care providers so it is feasible from the theoretical point view, and direct contact, which requires attention from the male /female cultural point of view, which must be taken into consideration while planning to incorporate this measure in routine nursing care for anxiety and stress among patients with schizophrenia.

References