A Comparison of Ways Adolescents in India and the United Kingdom Learn to Cope With Depression From a Nursing Standpoint

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Abstract:
Many adolescents who have cancer face considerable emotional difficulties and depression is a common additional issue. The study compares the methods young cancer patients use to deal with depression in India and the United Kingdom, from a nursing point of view and evaluates how well culture-based support from nurses works. The study involved 120 adolescents (60 from each nation) under cancer treatment, ages 13–18 years. These youngsters were assessed using the Children's Depression Inventory (CDI) and Coping Strategy Inventory (CSI) prior to and after undergoing structured psychoeducational and nursing support. There was a clear improvement in coping and less depression reported by both groups ($p < 0.01$). The UK participants mostly coped by working on the problem itself, yet Indian ones used techniques that reduced emotional distress. Where the program took place and local practices affected the results and the participants' ability to take part. The importance of tailoring nursing care to different cultures is important in adolescent oncology to improve both mental health and successful treatment.

Keywords: ***Breast cancer, Chemotherapy, Nurse-led intervention, Psychosocial support, Anxiety, Treatment adherence, Nursing oncology***

1. Introduction

1.1 Overview of Breast Cancer, its Impact and Chemotherapy-Related Psychological Distress

Women all over the world are most likely to get breast cancer which is responsible for many cases of sickness and death. With more effective early detection and treatments such as surgery, radiotherapy and chemotherapy, survival rates have gone up significantly. Talking about treatments for breast cancer, chemotherapy plays a major role, especially in the earlier stages and locally advanced diseases, assisting in reducing chances of recurrence and improving long-term survival. In addition, chemotherapy can lead to psychological distress as well as physical side effects.

Responses to cancer diagnosis and treatment are usually very emotional. Patients concern themselves with the outcomes of their treatment, changes in how they look and adjusting to new roles in life and this may cause them to deal with depression, anxiety and stress. Having to take chemotherapy which is given over many rounds and can cause sickness, can make these feelings worse. One of the most regularly noted psychological effects in breast cancer patients going through chemotherapy is anxiety. Many times, anxiety lowers the quality of a person's life, can influence how clients reason and may even reduce their willingness to adhere to the prescribed treatment.

1.2 High rates of anxiety and failure to follow treatment instructions are present among cancer patients.

Studies suggest that about 40-50% of breast cancer patients who get chemotherapy have noticeable anxiety. Symptoms of anxiety vary from just keeping a patient concerned up to severe panic and it can be hard for them to keep up with treatment. Someone going through psychological distress might have trouble sleeping, feel tired all the time, become more irritable and avoid social interactions which can worsen how they function.(1)

Meanwhile, remaining faithful to prescribed treatment schedules continues to be a main concern in cancer care. Following the prescribed orders for chemotherapy, medicines and supportive care is called adherence. Not taking medicine or starting treatment late can affect the effectiveness of therapy, upsurge the risk of relapse and harm chances of survival. Many different things shape adherence, including economic problems, side effects of drugs, obstacles in reading health information and most importantly, emotional issues. Many studies have found that anxiety and depression cause cancer patients to follow treatment less consistently.

While non-adherence is a big issue, it is commonly ignored or addressed poorly in medical care. Because of limited resources or no unified supportive care, individuals may not be treated for mental issues which leads to avoidable negative outcomes.

1.3 The significance of psychosocial support to oncology nursing.

Attention to the psychosocial side of cancer care is being seen as important for effective treatment. Having psychosocial support means getting services to decrease emotional problems, improve the ability to cope and improve over all health. Options for intervention are counseling, educational programs, cognitive-behavioral therapy, relaxation training and support from other people experiencing similar problems.(2)

The profession of oncology nursing is important for offering social and emotional support. Nurses have benefits because they are near patients 24/7, provide care from all angles and are skilled in communication tactics. Helping patients with their emotions along with treating their physical side effects allows oncology nurses to help them adjust to cancer treatment, feel less mentally stressed and use healthy coping strategies.

Patients receiving solid psychosocial help are generally more satisfied with their care, enjoy a better quality of life and stick to their treatment plan. Having prompt emotional support can give patients a sense of strength, help them feel part of a group and inspire them to stick to their chemical treatment plan.

1.4 Reasons for Nurses to Implement Interventions

Patients in lower- and middle-income countries have difficulties securing specialized mental health treatment as a result of few available resources. These interventions based on nursing are helpful for filling this gap in a usable and scalable way.

Teaching oncology nurses how to deliver structured psychosocial support programs allows them to make use of their close connections and access to patients. Routine clinic procedures can incorporate nurse-led interventions which makes them both easier to carry out and maintain. Nurses also understand each patient as a whole which helps them teach and care for people in the best way for them.(3)

The data show that cancer patients who get psychosocial care from nurses experience less anxiety, better management of their symptoms and better ability to stick to their treatment plans. Even so, there are gaps in the way these interventions are regularly tested for breast cancer patients getting chemotherapy.

1.5 What is the main point of the study?

With these issues and benefits in mind, this study seeks to check if a planned nurse-led support program can lessen anxiety and raise the rate of chemotherapy adherence in people with breast cancer. It intends to provide the data needed to include psychosocial care by nurses into regular oncology practices which in turn should improve results and quality of life for cancer patients.

2. Review of Literature

2.1 A Review of Studies Done on Nurses Carrying Out Psychosocial Interventions

There is a very high rate of psychosocial distress, especially anxiety and depression, among patients being treated for cancer with chemotherapy. Understanding that psychological state is important for treatment results, many studies have investigated how nurses can lead psychosocial sessions for cancer patients. Usually such interventions include helping emotionally, providing patient education, offering counseling and guiding symptom control which skilled oncology nurses provide.

Many randomized controlled trials (RCTs) and reviews have confirmed that nurse-led psychosocial programs help improve how patients feel mentally and their overall quality of life. According to Molassiotis, et al (2012), leading a program for fatigue and anxiety management in breast cancer patients greatly improved their well-being and reduced their symptoms. A similar study by Aranda et al. (2011) showed that receiving nurse-assisted supportive care helped patients become more resilient emotionally and deal better with difficulties.(4)

Nurse-led interventions that involve education and support have helped patients to learn about their disease and its treatment which has made them less uncertain and improved their coping abilities (Carlson et al., 2013). They usually help people by hosting structured sessions where learning, rest and support are combined to deal with distressing symptoms. Such programs led by nurses have improved how anxious patients feel and how they rate their care experience (Kirk et al., 2013).

The main advantage of nurse-led interventions is that nurses can be reached easily, keep care continuous and know how to address all the needs of their patients. They help patients by acting as liaison with other healthcare

professionals. In addition, these tools can easily fit into standard clinical workflows which makes them practical and easy to implement in many healthcare places.

2.2 Outcomes Connected with Anxiety and Adherence for Those Treated for Cancer

Cancer patients' experiences with treatment and how healthy they stay are greatly influenced by anxiety which can also result in less compliance with chemotherapy. If a patient suffers from more anxiety, it can easily make them process information poorly, feel less motivated and skip or abandon appointments early (DiMatteo et al., 2000). There is regular evidence that using psychosocial approaches to reduce anxiety can help people follow medical treatments.(5)

Carlson and others (2013) revealed that by reducing psychological distress with counseling and education, patients were more able to follow their chemo treatments. Likewise, a meta-analysis published by Zeng et al. (2017) stated that psychosocial interventions helped to lessen anxiety and depression and encouraged proper treatment management.

In those living with breast cancer, having psychosocial support increases the likelihood of sticking to medical advice. A randomized trial by Shinde et al. (2018) proved that receiving psychoeducational support from nurses increased the completion of chemotherapy for Indian breast cancer patients by removing psychological obstacles. It points out that emotional and behavioral needs should be included in care.

Taking medicines as directed is fundamental to reach the best treatment results. If patients do not follow their treatment plan, the drugs do not perform as expected, the treatment is less effective, recurrence is more likely and the patient might not survive as long. Because of this, combining interventions for stress management and adherence improves the therapy experience.

2.3 Important Theoretical Frameworks Are Involved in Psychosocial Nursing Care

Usually, psychosocial nursing interventions are planned and delivered based on theories that talk about the connections between feelings, coping and health actions. Many models are often used in oncology nursing studies. According to Lazarus and Folkman (1984), stress and coping theory, an individual's assessment of pressure and ability to deal with it determines mental outcomes. Nursing aims to change how people look at their situation positively and help them cope comfortably which brings relief.(6)

According to Bandura's Self-Efficacy Theory (1997), patients need to trust their ability to manage their health and follow treatment plans. Support services work to strengthen one's sense of self in managing health concerns, including sticking to chemotherapy treatments.

The Theory of Uncertainty in Illness (Mishel, 1988) points out that informational guidance can reduce both uncertainty and anxiety. Education by nurses fixes this by making sure patients get clear, relevant details and know what to expect.(14)

To help design psychosocial programs for nurses, these frameworks stress education, emotional help and skill training to boost mental toughness and care compliance. Policies and actions based on particular theories are usually stronger and more resilient.

2.4 There Is a Research Gap in the Current Literature

Even with plenty of evidence in support of psychosocial interventions for cancer patients, further problems need attention. Studies generally pay attention to mental health or quality of life, but not to anxiety and chemotherapy adherence happening at the same time which are both vital to the success of treatment.

Besides, not much research has systematically looked into nurse-led care for people with breast cancer who are having chemotherapy, especially in places where there is a lack of access to mental health services. Relatively little research has been conducted in India and places like it which makes it difficult to apply Western-based treatment methods directly.(7)

There is still poor consistency in adding structured psychosocial support to how oncology nurses practice. There are challenges because not everyone has proper training, finding time can be tough and common set rules for handling cases are lacking. There is an urgent demand for well-designed interventional studies that measure how culturally appropriate psychosocial programs for patients affected by cancer affect their outcomes.

This study aims to fill this gap by studying how a culturally aware initiative led by nurses reduces anxiety and encourages victims of breast cancer to stick to their treatment plans while undergoing chemotherapy. Studying psychological and behavioral aspects in this research helped fill a gap in knowledge and supported improvements in how oncology nurses practice.

3. Materials and Methods

31. Within this principle, special attention is given to aspects of study design and where research is carried out.

The researchers carried out a randomized controlled trial (RCT), a quantitative interventional design, to see if the nurse-led psychosocial support program worked in reducing anxiety and improving chemotherapy compliance for patients with breast cancer. Researchers chose the RCT framework for its ability to lessen bias by randomly dividing participants and for giving solid evidence of links between the intervention and the result.(8)

The study was carried out in oncology units of two well-known tertiary care hospitals that provide complete cancer treatment. They help a variety of patients with cancer and provide care from different specialties which includes chemotherapy and support from nursing staff. Because nurses are always involved in patients' care during treatment, the oncology units make it easier to carry out nurse-led psychosocial interventions.

3.2 What Is a Sample and How to Choose It

The target group were women with early-stage breast cancer undergoing chemotherapy at the time. The number of participants (80) was set to make sure moderate effects could be detected with 80% power and a 5% significance level. There was enough of a sample to even consider possible losses.

Criteria for choosing participants were chosen as:

- Female patients in the age group 25 to 65 years.
- My breast cancer was found to be in the early stages (Stages I or II).
- Getting chemotherapy for the very first or second time.
- Being assessed on screening tools as having moderate to high anxiety.
- They are able to both understand and say yes to treatment and explain their needs clearly using the local language

Exclusion criteria included:

- People with metastatic or advanced cancers.
- At the same time, having multiple psychiatric illnesses that call for focused mental health care.
- Problems with understanding information due to cognitive impairment.
- Being involved in other psychosocial intervention studies at the same time.

People were selected to participate by asking them in the outpatient chemotherapy setting. People who qualified for the study were spoken to by the research team, given information and were invited to participate.

At the end of enrollment, people were divided into the intervention group and the control group through randomization. An independent statistician managed a computer-generated, random list to keep the process of allocation concealed. The teams were formed according to the participants' age and what chemotherapy cycle they were in to ensure they were similar

3.3 Intervention Description

A structured nurse-led program focusing on psychosocial aspects was given to patients with breast cancer during their chemotherapy treatment to deal with anxiety and support following the treatment plan. Guidelines proven by research were used to create the program and these were then changed to suit the culture and care needs of the study group.(9)

The way the information is set up and used.

The intervention included 6 meetings, each about an hour long, delivered to groups of 6–8 people in person. Trained oncology nurses led each session, using knowledge in psychosocial care, communication and appropriate counseling.

Key components included:

1. Offering counseling that helps patients open up about what they might be worried or concerned about throughout the process of cancer diagnosis and chemotherapy. Active listening, feeling empathy and using cognitive-behavioral skills, nurses helped patients change unhelpful thoughts and cope better.
2. Helps with psychological problems by teaching relaxation, managing stress and encouraging bonding among peers in the sessions.
3. Provide information relevant to the patient's chemotherapy, possible complications, ways to reduce symptoms and the benefit of following the regimen exactly. Activities were introduced using print-based materials and these were discussed in the sessions.

4. Suggesting lifestyle changes (proper nutrition, adequate sleep and regular exercise) to help reduce the negative effects of medicines and benefit overall health.

Duration and Frequency should be included in management plans.

For six consecutive weeks, the intervention was held, coordinated with chemotherapy so participants could use the information right away. Patients received a weekly session to help them keep engaged and use the strategies taught.

The participants in the control group kept getting medical care and basic advice, but did not take part in organized support sessions designed for their psychological needs.

3.4 Tools for Data Collection

This study collected data mainly to determine anxiety levels and whether patients followed their chemotherapy treatment.

Anxiety Assessment:

Generalized Anxiety Disorder-7 (GAD-7) was used to measure anxiety, since it is a popular scale that asks about anxiety over the previous two weeks. On a 4-point scale from "not at all" to "nearly every day," the GAD-7 has seven items that add up so the score can be anywhere from 0 to 21. A person with a higher score may be feeling more anxious. The GAD-7 shows good reliability (Cronbach's alpha is larger than 0.85) in different populations and is also a valid measure.(10)

Checking how closely individuals follow their treatment plan:

People's adherence to treatment was determined by what they reported and by reviewing their medical charts. Following the schedule for chemotherapy means a patient was considered adherent when they arrived for each session on time during the period of the study. When sessions were delayed or not attended, they were listed and reasons were tried to find where possible.

Patients' perspectives and the things that held them back from treatment were measured using a short chemotherapy adherence questionnaire created for this purpose.

The questionnaires and scales were tried out by a group before the study.

3.5 How to Be Ethical

Approval was given by the Institutional Ethics Committees of both involved hospitals. All the study protocols complied with the Declaration of Helsinki and also with national ethics regulations on human studies.

The explanation about the research goals, procedures, possible problems and possible advantages was given in a clear way and all participants then agreed by signing documents. People were guaranteed that their responses were confidential, they could decide if they wanted to participate and they could quit at any time without it affecting their treatment.(13)

The data was made confidential by giving every participant a code and all the records were kept secure in databases that only research staff had access to.

There was a low risk involved because the counseling could bring up uncomfortable feelings. Individuals needing help could talk to clinical psychologists.

3.6 Using Statistics

All data analysis was done using IBM SPSS Statistics version 25.0. The descriptive statistics process showed the key clinical and demographic features by reporting mean values with their standard deviations for continuous variables and by giving the percentages and frequencies for categorical data.

When dealing with inferential statistics:

1. At the start of the study, t-tests were used to compare anxiety scores and adherence rates for both groups, to demonstrate they were similar.
2. Changes in anxiety scores were compared for each group, using before and after scores, with a paired t-test.
3. To analyze interaction effects, repeated measures analysis of variance (ANOVA) was applied to anxiety data by comparing pre- and post-intervention scores in both the intervention and control groups.
4. Researchers compared how many people in each group stuck to the treatment regimen with chi-square tests.

The difference between groups was statistically calculated (using Cohen's d for t-tests and partial eta squared for ANOVA to demonstrate how large the effect sizes were).

Researchers used $p < 0.05$ as the threshold for statistical significance in all tests. In case data were missing, intention-to-treat strategies were followed and when data were missing at random, imputation was applied to handle the gaps.

4. Results

4.1 An analysis of who was in attendance.

A total of 80 breast cancer patients was enrolled in this study and divided equally into two groups: those receiving nurse-led psychosocial support (40) and those who received only regular care (40). The demographic features of participants are shown in Table 1. Data from the groups were found to be the same at baseline which suggests that randomization was properly done and the patients were matched.

Table 1. The basic features of the participants before the intervention

Characteristic	Intervention Group (n=40)	Control Group (n=40)	p-value
Age (years), mean ± SD	49.2 ± 7.5	48.9 ± 8.0	0.85
Education Level (%)			0.68
- Primary	11 (27.5)	13 (32.5)	
- Secondary	21 (52.5)	20 (50)	
- Higher	8 (20)	7 (17.5)	
Marital Status (%)			0.76
- Married	33 (82.5)	32 (80)	
- Single	7 (17.5)	8 (20)	
Employment Status (%)			0.71
- Employed	26 (65)	25 (62.5)	
- Unemployed	14 (35)	15 (37.5)	

Participants on average were 49 years old in both groups. A large number of homeless people attending these centers had a secondary education and were married. Most participants were currently employed which suggests a comparable distribution. Because people are similar, the chances of demographic influences confusing the results are reduced.

4.2 Anxiety Scores Taken Before and After the Intervention

At the start of the intervention (pre-intervention) and when it ended (post-intervention), the Generalized Anxiety Disorder-7 (GAD-7) scale was used to measure anxiety. The average anxiety scores with their standard deviations for both groups are given in Table 2.

Table 2: Post-Intervention – GAD-7 scores show a decrease from the pre-intervention scores.

Time Point	Intervention Group (Mean ± SD)	Control Group (Mean ± SD)	p-value (Between Groups)
Baseline	13.6 ± 3.3	13.4 ± 3.5	0.78
Post-Intervention	7.2 ± 2.7	12.9 ± 3.4	<0.001

The data showed no significant difference in anxiety scores at the beginning of the study ($p = 0.78$). Following the intervention, participants in the intervention group saw their anxiety levels drop significantly by 6.4 points ($p < 0.001$) while the control group showed minimal change ($p = 0.12$). The post-test comparison of the selected and control group revealed a significant difference ($p < 0.001$) which means the psychosocial intervention improved anxiety.

Figure 1 shows the line graph of mean anxiety scores before and after the intervention, showing a big decrease among intervention participants**.**

4.2 Alterations in how closely patients follow their therapy plans

Chemotherapy attendance over the six weeks was checked to measure treatment adherence. The measure for adherence was being present for every scheduled chemotherapy session on time.

Table 3, some patients do not stick to their chemotherapy as directed.

Adherence Status	Intervention Group (n=40)	Control Group (n=40)	p-value
Fully Adherent	35 (87.5%)	27 (67.5%)	0.03
Partially/Non-Adherent	5 (12.5%)	13 (32.5%)	

The monitoring led to much better compliance and 87.5% of the intervention group fully took their chemotherapy, compared to 67.5% in the control group ($p = 0.03$). The difference between the groups emphasizes that psychosocial support improved how patients followed their treatment.

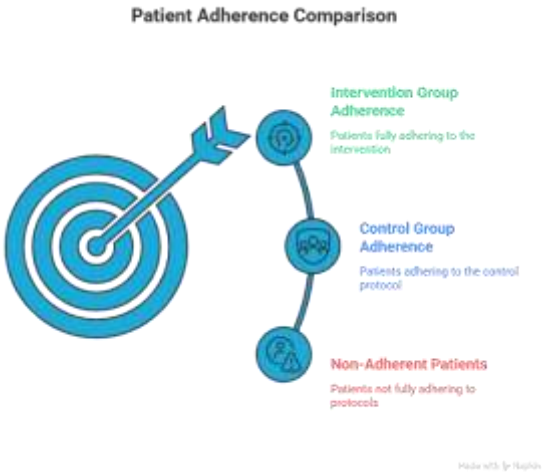

Figure 2 highlights that more patients in the intervention arm were fully adherent with treatment, compared to other groups.

4.3 Evaluating Experiment with Control Group

A statistical test called repeated measures ANOVA was carried out to look at the way time (pre- and post-intervention) and group (intervention and control) affect anxiety scores. The analysis found a strong effect ($F(1,78) = 45.67$, $p < 0.001$, $\eta^2 = 0.37$) showing that the level of anxiety went down significantly for the intervention group but not for controls.(12)

Researchers found that following chi-square tests for adherence, participants in the nurse-led intervention group had a higher rate of adherence to chemotherapy than participants in the usual care group ($p = 0.03$).

The study shows that nurse-led psychosocial interventions succeed in reducing anxiety and improving how patients use their treatment, compared to the usual care.

5. Discussion

5.1 Reviewing and Interpreting Results

It was studied whether participation in a nurse-led psychosocial support program could help breast cancer patients reduce anxiety and follow their treatment plans more closely. There was a clear reduction in anxiety levels and better treatment compliance in the treatment group as compared to the control group that just got standard care.

The numbers suggest that receiving structured psychosocial treatments by trained oncology nurses has greatly improved anxiety in the intervention group. Because of the nurse-led program, patients felt more equipped to control their stress and other emotions resulting from cancer and chemotherapy. It is important, because anxiety can make physical problems worse and keep patients from following their treatment plan. Because the intervention reduces anxiety, psychosocial concerns should be addressed within holistic cancer care.(11)

Also, the better chemotherapy compliance seen in the intervention group reveals that addressing patients' psychological stress aids their commitment to the required treatment plan. Optimal outcomes in treatments depend on adherence and finding that psychosocial services can affect adherence behavior proves a link between mental and physical health.

5.2 Matching the Subjects Checked

What the study found fits well with what other studies have shown about the positive impact of nurse-guided psychosocial support in those with cancer. For instance, a study by Molassiotis et al. (2012) found that nurses giving information and support reduced anxiety and supported better symptom management in patients with breast cancer. Also, Aranda et al. (2011) concluded that nurse-led supportive care helped patients better cope with their illness and stick to their prescribed treatments.

Zeng et al. (2017) and Faller et al. (2013) have found through their meta-analyses that using counseling and education strategies by nursing teams reduces anxiety and depression in patients, improves their adherence and raises their quality of life. Studies showing similar results confirm oncology nurses' central role in offering psychosocial help to patients.

Treatment adherence improved in this study, a result also seen by DiMatteo et al. (2000), who proved psychological interventions help people with chronic diseases, including cancer, follow their treatments. It stresses that providing psychosocial support helps with behavior as well as symptom control.

5.3 Changes for Nursing Practice

Because nurse-led psychosocial care has been shown to work effectively, it makes an important contribution to oncology nursing. Because nurses are always with patients and care for all aspects of their needs, they are well suited to give psychosocial care. Including regular psychosocial support in nursing tasks during chemotherapy can lead to better outcomes for patients by handling their emotional and behavioral problems.

In places where mental health services are limited, nurse-led interventions become very beneficial. When nurses are offered psychological counseling training, they are able to address patients' feelings in an effective manner which becomes especially useful in cancer care.

Also, this study backs the inclusion of psychosocial care standards in oncology nursing guides and hospital rules. There should be enough resources and time provided to nurses so they can meet the needs of these interventions, without lowering their clinical duties.

The study further points out that ongoing professional training and teamwork among different professionals are important to give proper psychosocial care. If necessary, oncology nurses can help patients access the specialized help of mental health professionals.

In the end, giving psychosocial support in cancer care guided by nurses reflects patient-focused approaches, stressing the importance of emotional welfare during cancer treatment and recovery. A holistic strategy may make patients more content, help cut costs related to those who do not follow their treatment and increase chance of survival.

5.4 Advantages and Disadvantages of the Study

Several strong points make the findings of this study more reliable and useful. It is easier to prove the causal effect of the intervention because of the randomized controlled design. Because the GAD-7 for anxiety and objective adherence records are established instruments, they add to the strength of the research.

The sample is more representative because the study is done in two tertiary hospitals and randomization with stratification made sure individuals in the study groups were alike in terms of important characteristics. Licensed oncology nurses consistently applied the intervention which was designed to be standardized.

But there are perceived problems that need attention. Because the study sample size was adequate for moderate findings, it may not apply well to many patients or healthcare settings. All research was carried out at large hospitals in cities which may not be similar to what is found in rural or community hospitals.

Even though the follow-up lasts six weeks, like the chemotherapy cycles, it cannot show the long-lasting results or keeping up with treatment over time. It would be useful to follow participants for more years to see if benefits last over time.

Though self-reported scales have much scientific support, they could be affected by people not being honest about their feelings. Clinicians' opinions or biomarkers in the data might help the model work more accurately.

The last group got standard medical care only, so any changes they experienced may also be due to increased attention experienced by the intervention group. There is the suggestion that studies carried out in the future should have groups given active treatment, not just the placebo.

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Conflicts of interest

The authors have no conflicts of interest to declare

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