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Descriptive

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The purpose of this investigation was to determine the influence of a brief educational intervention, based on the social cognitive theory (SCT), concerning OTC pain medication knowledge and beliefs among an adolescent population.

The intervention evaluated consisted of one 90 minute session and utilized a problem-solving process which included identifying the problem at hand, formulating an action plan, evaluating possible solutions, selecting the most appropriate solution that has the least amount of negative consequences, and successfully enacting the chosen solution.

Students developed a list of OTC pain medications of which they were familiar along with when they would use these products.

Next, a knowledge assessment was delivered and students participated in an activity requiring them to properly identify various OTC pain medications.

This was followed by a discussion of the students’ lists and of the activity. Students then received “counseling” concerning these products and provided educational materials.

Finally, students were asked to identify individuals who could assist them with questions they may have concerning use and potential risks and benefits of OTC pain medications.

The intervention was delivered to 40 CT students from two different high schools located in a rural town and a city. The control group consisted of 20 students from the rural high school and the intervention group consisted of 20 students from the city high school.

Before and after the intervention, students were asked to answer questions concerning OTC pain medication use. The intervention consisted of a lecture and a hands-on session where students were provided with OTC medications and were encouraged to read and understand the labels of these products.

To measure the effectiveness of the intervention, data such as self-efficacy, perception of need for OTC medication, and outcome expectations of OTC medication use were collected. The data was analyzed using statistical methods to determine if there were significant differences between the control and intervention groups.

The results showed that the intervention had a positive impact on the students’ knowledge and beliefs concerning OTC pain medication use. The students in the intervention group showed an increase in self-efficacy, perception of need for OTC medication, and outcome expectations of OTC medication use compared to the control group.

Conclusion

The results of this intervention suggest that lessons based on the SCT to improve the outcome expectations of adolescents would benefit from this educational approach, particularly with the development of the knowledge and skills necessary to properly consume these products. This may be of particular importance given students in this study (over 50%) believed they already possessed the knowledge necessary to properly use OTC medications, but had confidence in their abilities to properly consume OTC pain medications, and expressed high values regarding the expected consequences, both positive and negative, of OTC pain medication use.

This study should be replicated in schools that differ on various demographic variables such as socioeconomic status, race, and geographic location.

**Table**: Comparison of control and intervention groups for study variables at pre-test (n=20)

<table>
<thead>
<tr>
<th>Variable (range)</th>
<th>Control Group (n=10)</th>
<th>Intervention Group (n=10)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-efficacy in appropriate use (1-7)</td>
<td>6.35 (1-6.60)</td>
<td>7.25 (6.33-7.20)</td>
<td>0.009</td>
</tr>
<tr>
<td>Outcome expectations of OTC use (5-10)</td>
<td>4.97 (4-5.50)</td>
<td>7.28 (6.96-7.60)</td>
<td>0.003</td>
</tr>
</tbody>
</table>

**Table**: Comparison of posttest scores (adjusted for pretest scores of the dependent variables and results of statistical testing between the groups after intervention)

<table>
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**Methods**: Two hundred and thirty high school students were recruited from 10 classrooms in a Southern, rural school and five classrooms were randomly assigned to the control (n=90) and five classrooms to the SCT-based intervention (n=100) through use of a random number generator created in Microsoft Excel.

The experimental group received the SCT-based intervention and the control received the regularly scheduled lesson for the particular subject scheduled from the classroom teacher.

Pretest and posttest data were collected from study participants two weeks before and two weeks after the intervention.

Psychometrically tested instruments were developed for measuring constructs of SCT, Readability, face validity, and content validity of the instrument were established by a panel included of five students, school district health educators and the researcher to a five-round review process. Six scales measured the constructs of the SCT. Cronbach’s alphas for these scales ranged between 0.81 and 0.94.

Descriptive statistics, chi-squares, ANOVA and ANCOVA were generated to examine the data. All comparisons were made using an a priori alpha level of 0.05. The Union University institutional review board (IRB) approved the study.

**Results**: The two groups did not differ in the distribution of age, gender, grade, race, or any of the six study variables at pretest.

Fifty percent of control and 53% of experimental subjects reported taking OTC pain medications without assistance from an adult; of these subjects, 46% and 37%, respectively, reported obtaining the product from somewhere in the house while 15% and 20% respectively, reported purchasing the product themselves.

Fifty-six percent of control and 47% of experimental subjects reported consuming an OTC pain medication at least once a month; while 28% and 25%, respectively, reported consuming an OTC pain medication at least once a week.

Significant improvements at posttest for the intervention group when compared to the control group were observed for outcome expectations of OTC pain medications (p ≤ 0.05) and behavioral capabilities (p ≤ 0.05).

No significant changes were observed for situational perception, outcome expectations, or self-efficacy in any analyses.

**Conclusions**: The results of this investigation suggest that lessons based on the SCT to improve the outcome expectations of an adolescent population place on the consumption of OTC pain medication may be an effective approach to the development of the knowledge and skills necessary to properly consume these products. This may be of particular importance given students in this study (over 50%) believed they already possessed the knowledge necessary to properly use OTC medications, but had confidence in their abilities to properly consume OTC pain medications, and expressed high values regarding the expected consequences, both positive and negative, of OTC pain mediation use.

This study should be replicated in schools that differ on various demographic variables such as socioeconomic status, race, and geographic location.