

Abstract

The major purpose of this study was to investigate the extent to which student's school-related attitudes, Standards of Learning (SOL) Achievement, SOL Attitudes, Academic Achievement, predicts Outcome Expectancy, in the atmosphere of high stakes testing. The participants were 99 African-American elementary school students, enrolled in the third and fifth grades.

Student's school-related attitudes were measured by a modified version of the Minnesota School Attitude Survey (Ahlgren, 1983). Student SOL Achievement and SOL Attitude statements were designed by the researcher to assess student's perception of the SOL's and their performance. Academic Achievement was measured based on Honor Roll status. Outcome Expectancy statements were also designed by the researcher to assess student's perception of future success. For the statistical analysis, intercorrelations and multiple regression analysis were performed for third and fifth grades respectively.

In general, most third graders have positive attitudes towards school, positive attitudes toward SOL's, and possess high outcome expectancy beliefs, while obtaining academic success. However, none of the variables measured predicted academic performance. Overall, fifth graders have high positive attitudes towards school, positive attitudes towards SOL tests, and high outcome expectancy. SOL testing attitudes were negatively related to academic performance, yet functioned as a predictor variable for academic success. Discussion was presented to inform educators of these previous mentioned variables in high stakes testing conditions.

ABSTRACT

Compounds extracted from plants and used for medicinal purposes have been labeled natural medicines and have not had to undergo the battery of tests required by the federal government before they can be used by man. These compounds have thought to be effective without the side effects associated with lab synthesized medicines. Many people have turned to the use of natural medicines for several disorders which no cure has been found. One such compound is garlic derived from, the bulb of the garlic plant, Allium sativum. The use of garlic as a treatment and prevention for cancer has been discussed for several years. In this study garlic was analyzed to determine its pharmacological effects on the K562 cell line, derived from a chronic myelogenous leukemia patient in blast crisis. This cell line was chosen as a possible model system to evaluate the effectiveness of garlic inhibiting cell proliferation or cancerous cell growth. The effects of garlic on extracellular protein synthesis and cell morphology were also evaluated. The commonly used anticancer agent, tamoxifen, was used as a comparison.

Garlic did not induce a dose dependent effect on the K562 cell proliferation as expected. The highest concentrations of garlic appeared to cause an increase in cell proliferation as compared to the control. This may have been the result of the down regulation of the cells' membrane surface receptors. Cell growth was not significantly inhibited by garlic until after treatment with estradiol, a known cancer agent. Extracellular protein synthesis was affected by garlic over a seven day period. However, the K562 cells did show signs of morphological changes such as nuclear condensation and cellular swelling, all characteristics of apoptosis. These findings indicate that garlic

does have some anti-proliferative effects on K562 human leukemia cells when stimulated to a cancerous state. This study indicates that the K562 leukemia cell line may be used as a possible model system for studying the effects of anticancer agents such as garlic.

ABSTRACT

The impact of teacher perceptions in relation to student achievement has been researched and documented. Children achieve based on what they believe about themselves and their potential to learn, grow and succeed. The seeds of self-confidence and self-awareness are in most cases, planted by teachers within the academic setting, where children spend most of the day and perform the majority of their critical developmental activities.

Perceptions form the fundamental basis for all of our actions and reactions. Learning also forms the foundation for continued development, and exploration of our individual role in a massive global and technological environment. Perceptions and learning shape our future potential and often form the foundation, which defines our successes and failures.

Given the relationship between perceptions and learning, I chose to embark on a research project, which investigated the relationship between special education and regular education teachers' perceptions of accommodations for students with learning disabilities and academic achievement.

Special Education and regular education teachers from Petersburg High School in Petersburg, Virginia participated in a survey designed to measure perceptions of both groups.

The findings supported the hypothesis and revealed that there is a difference between special educators and regular educators their perceptions about accommodations for students with learning disabilities. Special educators scored higher than regular educators based on the t-test to measure the findings from survey data.

The findings of the study and responses to the survey instrument provide current and future implications for research, training, resources, instructional innovations and modifications within the learning environment

ABSTRACT

Src family kinases participate in the regulation of cell growth and play a special role in cell immunity. More specifically, the Src family kinase Lck plays a crucial role in the activation of T-lymphocytes. Lck is required for the initial events in T-cell receptor (TCR) signaling. Lck phosphorylates the TCR at the immunoreceptor tyrosine-based activation motifs (ITAMs), as well as phosphorylating the kinase ZAP-70. These phosphorylations lead to the activation of a number of downstream pathways including the phosphatidylinositol pathway and the MAP kinase pathway. Two sites in the catalytic domain regulate Lck; Tyr 394 and Tyr 505. These two sites when phosphorylated, have opposite effects on Lck. Phosphorylation of Tyr 394 up regulates Lck, whereas phosphorylation of Tyr 505 down regulates Lck. The goal in conducting this study was to determine if there are two independent mechanisms associated with these sites, or if there is only one mechanism. In this study, site-directed mutagenesis was used to create a plasmid with mutations at both the Tyr 394 site and the Tyr 505 site of the Lck cDNA. The tyrosine residues were converted to phenylalanine residues to block phosphorylation of the sites. The plasmid cDNA was then transfected into the JCAM1 T-cell line which lacks Lck, and several clones were analyzed using western blotting procedures. Along with creating mutants with alterations at both regulatory sites (Tyr 394 and Tyr 505), a single mutant was also created that was only altered at the Tyr 505 site. A mutant that had changes at the Tyr 394 site was also obtained for analysis. It was determined from the data collected that indeed there is only one mechanism associated with both sites and that the Tyr 394 site was dominant over the Tyr 505F site, which is to say that no matter what happens at the Tyr 505 site, activity of Lck is controlled by the Tyr 394 site.