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Article 56

Achievement Motivation Training: An Evidence-Based Approach to Enhancing Performance

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Accountability in counseling, outcome based research, and evidence-based practices are topics that have been discussed and debated for several decades (West & Warchal, 2009). The profession of counseling has been part of that discourse, often challenging what actually constitutes evidence-based practices. Despite this discourse there is concurrence that the counseling profession needs to demonstrate evidence-based research that identifies best practices (Sexton, Whiston, Bleuer, & Walz, 1997). A call for more evidence-based research surfaced in the *Journal of Counseling and Development* (JCD; Marotta & Watts, 2007). A number of best practices in counseling were identified including a set of “common factors” found to be essential to client change, despite one’s theoretical orientation. Findings of evidence-based practices however, have focused mainly on individual counseling approaches in an attempt to demonstrate best practices for specific client problems. Cognitive Behavioral Therapy (CBT), as an example is identified as the treatment of choice for a number of mental health disorders including anxiety and clinical depression. CBT and Eye Movement Desensitization and Reprocessing (EMDR) are often cited as treatments for trauma, including posttraumatic stress disorders (PTSD).

The above research findings are significant, however there needs to be more of them. The author further argues that studies exploring effective individual treatment modalities should be only one stream of research that counselors investigate and use in practice. Evidence-based programs and models that effectively address issues and problems in today’s society need to be investigated, with best practices advocated that are based upon research findings. With the exception of substance abuse treatment programs, there are few models that have been researched and reported as effective and subsequently identified as evidence-based. Yet, many well designed, structured, treatment programs and group models have been repeatedly used by counselors to address challenges presented to them, including: substance abuse, school achievement/performance, student dropout, grief and loss, anger management, self and other destructive behavior, parenting, and stress management. Achievement Motivation

Training (AMT) is a well designed, research-based, program that has been repeatedly used to enhance achievement and personal performance. Because of its outcome based research findings, AMT is presented as an evidence-based program for enhancing achievement and performance.

AMT has a solid theoretical base with demonstrated effectiveness in a wide range of settings. Counselors and other behavioral science specialists perhaps should consider AMT programs to enhance achievement and performance of school age students and adults.

Achievement Motivation Training

David McClelland and his associates at Harvard University studied the need to achieve for over 20 years. Research findings by McClelland and others produced the prototype of a high achiever. Their research led to the identification of characteristics of high achieving individuals that included a set of thoughts and behaviors often displayed by these individuals. McClelland tested the theory that high achievers possess a certain thought process with the use of the *Thematic Apperception Test (TAT)* and other measures of creative imagination. Subsequent research produced very specific thoughts frequently associated with high achieving individuals who discussed their reactions to characters in stories. The thought processes most often associated with high achievers are summarized below (Smith & Troth, 1975).

Achievement Imagery (AI)—A desire for excellence that can be revealed through one of the following: Competition with others (CO), Competition with self (CS), Unique accomplishments (UA), Long-term involvement (LTI).

Need (N)—Deeply wanting to achieve something.

Action (ACT)—Planned action toward achieving excellence.

Hope of Success (HOS)—Expecting success before it is achieved.

Fear of Failure (FOF)—Worry about failing before it happens.

Success Feelings (SF)—Good feelings after success.

Failure Feelings (FF)—Bad feelings after failure.

World Obstacles (WO)—World obstacles interfering with success.

Personal Obstacles (PO)—Personal obstacles interfering with success.

Help (H)—Help sought and obtained to achieve success.

Researchers tested McClelland's theory on achievement thinking, and challenged his methods of measuring high achieving thoughts. Results of these studies, have supported the accuracy of thoughts initially associated with high achievers, as well as the methods used to measure achievement thinking.

Additional studies (McClelland, 1961) provided evidence that Achievement Motivation Training (AMT) programs could enhance the achievement thinking of adults, specifically businessman. Most of the early studies were directed to enhance performance with achievement thinking being taught through the use of stories, behavioral strategies, exercises, and individual exercises in goal setting.

McClelland was interested in the need to achieve as related to ones' desire to meet a standard of excellence. He believed that entrepreneurial individuals, to begin with, possessed a high need to achieve, typically exhibited a set of achievement thoughts, and practiced certain behaviors. He researched the validity of behaviors associated with high

achievers through an analysis of entrepreneurship behavior of high achieving individuals from different countries. He analyzed children's stories, and assessed economic growth rates, population growth rates, power usage, and imports and exports in Japan, Mexico, United States, Germany, Italy, India, Russia, and several pre-literate societies in an effort to gain a measure of performance. Results of these studies demonstrated that high levels of need to achieve seemed to contribute to economic growth and, furthermore, it was possible to identify characteristics, or behavior patterns, exhibited by entrepreneurs representing countries with high levels of achievement and economic productivity. Results from these research projects led to developing achievement motivation training programs for businessmen. Research of these programs revealed that participants demonstrated significantly higher rates of advancement within their companies when compared to control groups. AMT programs targeted at small business owners were significantly effective in increasing job performance (McClelland, 1961).

The four action strategies identified as characteristic of high achievers are as follows.

Moderate Risk Taking (MRT)—In a new situation where a person must rely on one's own skill, the high achiever takes carefully calculated moderate risks. They set goals that are challenging; not goals that are unreasonably difficult or goals that are too simple and undemanding.

Use of Immediate Concrete Feedback to Modify Goals (ICF)—High achievers like to know how they are doing. They seek situations that offer immediate concrete feedback concerning their progress or lack of it. They use feedback to modify goals or behaviors.

Personal Responsibility (PR)—Individuals, children, and adults, with a high need to achieve like to test how much they can personally accomplish. They like situations where they can take personal responsibility for their success and failures. They initiate activities in which they can assume personal responsibility.

Researching the Environment (RE)—Persons with high levels of achievement motivation approach new situations with an alert, curious, and intentional style. They size up situations, checking out the limits and the possibilities—with the end in mind of accomplishing a goal, or moving toward it.

Research conducted in business and industry demonstrated that it was possible to increase the need to achieve in adults over a relatively short amount of time (McClelland & Winter, 1969). Success with corporate employees led to investigations of applying these principles in other group settings including those with adolescents and young children. Subsequently studies produced results that demonstrated the efficacy of AMT in school settings.

The following studies are presented in support of achievement motivation training programs as being considered evidence-based. It should be noted that there has been a dearth of recent experimental studies examining the efficacy of AMT programs. The author attributes this to the inherent difficulty of designing and conducting experimental research. In addition these studies are more time consuming and experience more

rigorous restrictions when conducted in the school environment. However, there have been studies examining achievement motivation related topics, including: cognitive ability and academic performance (Leeson, Ciarrochi, & Heaven, 2008); thinking skills and achievement in high school students (Lizarraga, Baquedano, & Oliver, 2010); and goal setting & performance (Schuler, Sheldon, & Frohlich, 2010; Sheldon & Cooper, 2008). These investigations support the importance of cognition, behavior, and goal setting as essential components in achievement motivation.

Ryals (1975) implemented AMT with eighth and tenth grade students. Results indicated improvements in the areas of mathematics, English and social studies over the school year. Students involved in achievement motivation training performed significantly better in mathematics than a randomly selected control group. Pre- and post standardized test scores in science and social studies demonstrated that the AMT students performed significantly higher on the science tests when compared to the control group.

Cueva (2006) implemented the AMT program with young Hispanic children in first, second, third, and fourth grades. The purpose of this study was to see if achievement thinking and achievement behaviors could actually be taught and understood by children at this level. The majority of the 64 students were Hispanic, attending a bilingual elementary school. Results indicated that children not only grasped these concepts at a young age, but they were able to apply what they were taught within the school setting. When compared to a control group, practical significance revealed a “medium” effect size when considering the variables of achievement thinking, goal setting, and intrinsic motivation.

deCharms (1972) implemented AMT with fifth through seventh grade students. Classroom teachers were trained to conduct an achievement motivation program with their students. Using the Iowa Test of Basic Skills, data analysis revealed that students receiving the training scored at or above grade norms, while those students who did not receive AMT training generally fell behind expected grade levels.

Kolb (1965) investigated the effects of an AMT program on academic performance with underachieving high school students. A control group of students received only the academic program. A 6 month follow-up indicated no significant difference between the groups in school grade averages. However, 1 year and 6 month follow up revealed differences in grades between the AMT group and the control group. In the experimental group, school grades were also significantly correlated with change in Achievement Motivation and performance scores on a business game used by the researchers.

Elias & Rahman (1994) investigated the effectiveness of achievement motivation training in increasing the level of achievement motivation of university students. AMT was designed to include the teaching of achievement motivation (thoughts and action strategies), planning, goal setting, and motivational games. The subjects included 188 university students that were randomly assigned to one of three groups. Results indicated that the group receiving AMT had a significant increase in the affective and cognitive aspects of achievement motivation when compared to a discussion group and a control group.

Lopez (2008) implemented AMT with ninth grade students. The treatment included standard achievement motivation training components of teaching achievement thinking and achievement action strategies. A control group was utilized. The main effect

of the AMT on locus of control demonstrated practical significance. Students in the AMT group significantly increased their level of internal control when compared to the control group.

Smith (1973) implemented AMT with twelfth grade students. The training consisted of teaching achievement thoughts and action strategies, and applying these concepts through goal setting exercises within their school setting. A pre-post-control group design was used with random selection of participants. Findings demonstrated significant change in achievement motivation levels and levels of internal control for the AMT group when compared to a control group.

Achievement Motivation Training as an Evidence-based Program

There are many factors deemed important when determining what constitutes an evidence-based practice. Factors to consider include: defining the evidence that one needs, determining how much evidence is needed, examining conditions necessary for the evidence to be valid, and assessing real life issues when applying a practice or program. In order to be identified as an evidence-based practice or intervention, certain criteria need to be met. Change needs to be considered when determining whether a practice is evidence-based. Does a particular practice or intervention change something in a predetermined positive direction? Is the method of change studied under rigorous scientific research conditions, including random sampling and control groups? Have the studies been replicated with different populations? Is the phenomenon studied relevant and are the measures of change valid?

The following is a review of achievement motivation training programs as related to a set of standards often aligned with evidence-based practices.

1. *Randomized clinical trials of the practice or intervention.* AMT research has used randomized clinical trials demonstrating program effectiveness. Several studies reported in this paper incorporated random sampling procedures with participants assigned to treatment and control groups by chance. Earlier studies (Kolb, 1965; Ryals, 1975; Smith, 1973) and more recent investigations (Cueva, 2006; Elias & Rahman, 1994; Lopez, 2008) have met this standard.

2. *Demonstrated effectiveness using different samples.* AMT programs have been effective in: business settings, universities, secondary schools, middle schools, and at the elementary level. Programs cited in this article have been successfully implemented with adults, adolescents, and children with diverse backgrounds.

3. *Dependent and independent variables are clearly defined.* Dependent, outcome, variables have been clearly defined in studies involving AMT programs. Examples of dependent variables include: job performance, promotion, grades, locus of control, and achievement motivation. The independent variable, the AMT program itself, follows a set protocol consisting of principles that have been established over time. The treatment, independent, variable includes: teaching achievement thinking, demonstrating achievement behavior strategies, setting comprehensive goals, and applying these concepts within one's work or school setting.

4. *Feasibility of the practice or program.* AMT programs have been implemented in a wide range of settings. The program is structured and can be presented in a group setting or in the classroom. Classroom teachers have been trained in using

AMT programs and have successfully implemented these programs within their classes (Cueva, 2006; Kolb, 1965; Lopez, 2008; Smith, 1973).

5. *The practice or program needs to be grounded in theory.* AMT programs are grounded in need to achieve (n-Ach) and achievement motivation theory developed by McClelland and others. Achievement goal theory (Deemer, 2003) supports the treatment program as does, Dweck's (2000) self theories.

6. *Assurances of fidelity.* AMT programs are consistent in infusing concepts associated with high achievers. Cognition, thoughts, and behaviors of high achievers have been researched with findings infused in AMT programs. Achievement thinking, achievement behavior strategies, and comprehensive goal setting are mainstay components of programs cited in this article.

7. *The practice addresses diversity.* AMT programs have been used in settings across the globe with diverse populations including: businessmen (Japan, Mexico, U.S., Germany, Italy, India, and Russia), college students, students in grades 1-12, inner-city students, Hispanic students, and African American students (Cueva, 2006; Elias & Rahman, 1994; Lopez, 2008; Smith, 1973).

Summary of Study Findings

Investigations considering the efficacy of achievement motivation training programs have demonstrated change in a number of salient areas: achievement thinking, performance in school, internal control, and the ability to set and accomplish goals. The literature reporting research findings of achievement motivation program efficacy has varied. There have been significant gaps in the reporting of research between 1980 and 2000. The initial research investigations by McClelland and others demonstrated that achievement motivation training programs were successful with businessmen across the world. The 1960s and early 1970s investigations revealed that businessmen completing AMT demonstrated greater productivity when compared to control groups. During the 1970s studies reported the use and subsequent efficacy of achievement motivation training programs with middle and high school aged students. At this time AMT was introduced to the public school setting, demonstrating gains made by students in academic subjects, achievement thinking, internal control, and goal setting ability. A gap in years of reported research during the 1980s and 1990s is attributed to the challenges in conducting experimental research that addresses random selection procedures and controlled conditions including the use of matched groups. Researchers have also been confronted with problems when attempting to gain approval in public schools and other settings.

Recent studies, cited in this article, have investigated components of achievement motivation training programs including: goal setting (defined as achievement goal theory), student cognition (student thinking), and achievement (school performance). These investigations, although not experimental in nature, support the use and importance of factors most often included in achievement motivation training programs that are relevant to achievement and performance.

Based upon research findings the efficacy of achievement motivation treatment programs, independent variables, have the following characteristics that are closely

related to research on “common factors” found to be essential in counseling and psychotherapy.

1. AMT programs are structured and follow a consistent pattern of: teaching achievement thinking (cognition); teaching and practicing achievement behaviors; using games and exercises along with teaching sessions; implementing a comprehensive planning or goal setting schedule that infuses achievement thoughts and behaviors; and encouraging students to believe in the change process that results in increased levels of achievement and performance (positive psychology).

2. AMT programs are lengthy rather than brief to allow effects of the treatment to take place. The achievement thoughts and action strategies need to be practiced and applied over time.

3. AMT programs emphasize the dynamics of achievement including affective and cognitive sessions and demonstrate that AMT programs have been successful when individuals incorporate thoughts and achievement strategies of high achieving individuals.

4. AMT programs are characterized by high levels of effective helping and support skills demonstrated by teachers and group leaders creating a climate for growth and change. Empathy, genuineness, and respect are conveyed by those implementing AMT programs.

5. AMT programs target needs that are important to the setting being served. Performance and specific achievements germane to an individual’s setting are targeted through goal setting exercises.

Conclusions and Challenges to Counselors and Other Behavioral Science Specialists

In today’s society there remains an emphasis on achievement, production, generating new ideas, and finding effective methods to solve problems. This presence is found in business, schools, government agencies, and throughout society. Educators are expected to address issues of achievement and performance with school age children and young adults. Counselors are expected to, and should, play a role in helping to address school related issues such as student motivation, attrition, and performance. Counselors are expected to use evidence-based practices that effectively address these problems. At the university level counselor educators are expected to teach best practices to their students who will soon find themselves working within a school, business, or agency setting.

Achievement Motivation Training (AMT) is presented as a program intervention that warrants serious attention by counselors and other behavioral science specialists (school psychologists, social workers, special education teachers) for increasing student performance. AMT programs are presented as evidence-based as they address most standards considered relevant to this classification. How counselors proceed in implementing AMT will be determined by their knowledge of achievement motivation principles, advocacy skills, and implementation expertise. Several researchers (Dweck, 2000; Sheldon, & Cooper, 2008; Schuler et al., 2010; Leeson, Ciarrochi, & Heaven, 2008) have recently provided support for achievement motivation training by examining factors that influence a student’s motivation to achieve. It therefore behooves counselors

and others to continue their effort as advocates and agents of change by infusing best practices in their chosen setting of service.

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