CRITICAL THINKING IN MARRIAGE AND FAMILY THERAPY PRACTICE

by

MATTIE GATES BUSH

(Under the Direction of Bradley C. Courtenay)

ABSTRACT

One way that professionals can continue learning in practice is by the use of critical thinking in practice. Critical thinking is a way for professionals to encourage use of their collection of experiences and knowledge to comprehend day-to-day practice (Bickham, 1998). The purpose of this study was to examine critical thinking in the profession of marriage and family therapy practice. The research questions for the study were 1) What are the critical thinking behaviors used by marriage and family therapists?, 2) In what situations do marriage and family therapists use critical thinking in practice?, and 3) What factors appear to influence critical thinking in marriage and family therapy?

The research tools used were the interviews and a document called the genogram, which was generated by the researcher. The interviewees were selected among licensed marriage and family therapists throughout southeastern Georgia. The interviewees reviewed the genogram and answered the interview questions. The transcripts of the interviews were reviewed throughout the research study. Field notes were also kept and reviewed.

The findings suggest that marriage and family therapists use critical thinking in practice. In fact, at the initial assessment, in joining with the family and while seeking

supervision or consultation are the situations where marriage and family therapists use critical thinking. The factors that influence critical thinking in practice are the development of the genogram, communications between the family and the therapist, and the necessity for observation. The findings also suggest that critical thinking behaviors used by marriage and family therapists in practice include making an argument for the selected therapeutic approach, showing empathy for the family, and ensuring fairness to all the family members. Additionally, asking questions, employing metacognition to identify treatment resources and using self reference to determine expertise are also critical thinking behaviors used by marriage and family therapy in practice. There were two conclusions that were evident from the study. The first conclusion is that critical thinking behaviors in marriage and family therapy practice are interrelated and emerge often in practice. The second conclusion is that situations where critical thinking occurs in marriage and family therapy practice are a consequence of 3 factors; the factors are the development of the genogram, communications between the MFT and the family and the necessity for observation.

INDEX WORDS: Adult Education, Adult Learners, Continuing Professional
                 Education, Critical Thinking, Critical Thinking Behaviors,
                 Critical Thinking Skills, Genogram, Health Care Professions,
                 Marriage and Family Therapy, Marriage and Family Therapy
                 Practice, Self Directed Learning

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A Dissertation Submitted to the Graduate Faculty of The University of Georgia in Partial

Fulfillment of the Requirements for the Degree

DOCTOR OF EDUCATION

ATHENS, GEORGIA

2011

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May 2011

ACKNOWLEDGEMENTS

multiple topics. I have learned as much as I have taught. Thanks for my close friends for their encouragement and support: Marilyn, Slick and Susie. I thank my mother, Mrs. Ethel Jane Dickson Gates and my late father Rev. James Gates for instilling in me the values of education. My father encouraged me to get as much education as I could.

Finally, I thank my significant other Linwood Gantt, Jr. for his encouragement, patience and love through this process. True friends are friends forever. I am grateful to my beautiful daughters and their families. Erica, Ingrid and Erin are the best daughters a mother could ask for. Thank you so much for your understanding and patience during this journey. Thank you for all of the sacrifices you made. I could not ask for better son in laws as Jay and Dobby. To my grandsons CJ, Orin, Jay and Caleb; I wish the best of everything.

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CHAPTER 1

INTRODUCTION

According to Knowles (1970) part of the mission of adult educators is to help

adults to fulfill their needs and goals. Knowles (1970) suggest that the accelerated pace

of change in our society reveals that adults need more than what was learned in their

youth. The philosophy was that learning was a basic function of youth. An education

was supposed to give adults the adequate knowledge and skills needed to live sufficiently

throughout life. Borup (2000) says that much of the learning students gain is out of date

by the time they get to the job arena. Knowles (1970) says that we now understand that

our environment is filled with opportunities for learning As a result of the rapid pace of

change, lifelong learning should be the systematic foundation for all education. Adults

can no longer use facts learned in early life because many of the facts are no longer true.

Further, new technologies make skills learned in youth outmoded (Knowles, 1970).

Therefore, adult years become years of slow obsolescence in understanding the

world, understanding of self, in play and in work (Knowles, 1970). In fact, Knowles

(1980) says that current practice knowledge is only good for approximately ten years. He

says that about half of the knowledge in practice becomes obsolete over a decade. So,

Knowles' vision for the future was to define the purpose of education as to develop

capable people. Given changing conditions, people should be able to put their knowledge

into practice. Obviously, the underlying capability that everyone must have is the

capability to participate in "lifelong self-directed learning" (Knowles, 1980, p. 19). We

now understand that the way to develop capable people is to have people to receive knowledge in the context of its use (Knowles, 1980). But, even in the acquisition of knowledge in context, learners are subject to gaining illusion, fear, prejudice, hate, error and self deception (Paul and Elder, 2001). Consequently, Paul and Elder (2001) assert that learners should learn to think critically while involved in the process of learning. Authors who write about critical thinking (CT) believe that its use is necessary to survive and function in the world (Borup, 2000).

In recent decades, several authors, (Bickham, 1998; Brookfield, 1987; Chaffee; 1988; Halpern, 1996; Paul, 1993; Paul & Elder, 2001) all suggest that developing CT skills in adult life can help adults to understand the world, personal life and it can improve adults' work life. According to Brookfield (1987), learning CT skills in adult life is one of the most important activities that one can undertake. Business people, educators and politicians all agree that CT skills are needed in the general population (Pellegrino, 1995). In fact, Borup (2000) says that after 11 years of investigating CT, it appears that not only is CT a likely additional academic field, but that its acquisition is needed to subsist in a world with a "geometrically progressing knowledge base such as ours" (Borup, 2000, p.5). The way we think, see ourselves, make decisions, practice citizenry and participate in society by way of our professions, all influence the quality of life of those around us as well as our own quality of life. To think critically about one's behavior, choices, beliefs and circumstances will foster self-actualization and self-confidence both professionally and personally (Miller & Badcock, 1996).

In educational settings that typically do not serve adult learners, secondary and post secondary institutions, there is a large body of knowledge about CT. There is also

some literature that examines CT with adult learners. However, only a few adult education scholars have addressed the study of CT in adult education (Brookfield, 1987; Garrison, 1991; Goodfellow, 1999; Kenimer, 1999; Mishoe, 1995; Myers, 1986). Regarding CT, Brookfield states, "I think critical thinking is one useful dimension of adult learning to study…" (personal communication, October 28, 2003). However, very little work has been done in the area of CT in adult education. Brookfield (1987) says that CT helps adults to deal with real world problems. It is also a way to search for and visualize alternatives. Brookfield describes CT in five phases. The phases are a trigger event, appraisal, exploration, developing alternative perspectives and integration.

Another model of CT is presented by Garrison (1991). This model takes on a complete view of the learning/thinking method by blending communicative and reflective activity stages. The basis for this model is a constructive and cognitive view of the learning/thinking method reflecting the need of the person to accept responsibility to make meaning and to confirm that meaning through communicative action. One of the main characteristics of this model is an attempt to recognize the difference between shared or external worlds and private or internal worlds of the person (Garrison, 1991).

Additionally, the literature that examines CT with adult learners reveals that critical thinkers are described in terms of a list of certain dispositions (Ennis, 1996; Fisher & Scriven, 1997; Halpern, 1996; Hughes, 2000; Norris & Ennis, 1989; Paul & Elder, 2001; Ruggiero, 1998). For example, critical thinkers are honest with themselves about what they don't know. They are open to alternative solutions. Critical thinkers draw conclusions based on the evidence rather than on feelings or emotions. Critical thinkers seek a balanced view and they are fair-minded. They are open to others ideas

and views. They are clear about the intent of the meaning of what is said or written. They change position when the reasons and evidence are sufficient. Critical thinkers use empathy to understand a bewildering point of view or action (Fisher & Scriven, 1997; Norris & Ennis, 1989; Paul & Elder, 2001).

In addition to the dispositions, the literature reveals that understanding language, reasoning, questioning and reflection are component parts of CT. Several authors (Bandman & Bandman, 1995; Chaffee, 1988; Halpern, 1996; Hughes, 2000) all suggest that understanding language is important to think critically. Thoughts are expressed through language. Without language, we likely would not have thoughts and could not express thoughts. To be able to comprehend reasoning, one must give close attention to the relationship between language and thought. While the relationship appears to be straight forward, this is not the case. People often don't say exactly what they have in mind. Words are used to both shape our thoughts and to express our thoughts. To master CT skills, it is necessary to have an understanding of the ways in which words can help or hinder us to express our thoughts (Hughes, 2000).

Various scholars suggest that reasoning skills are a component part of CT (Chaffee, 1988; Cogan, 1998; Fisher, 2001; Halpern, 1996; Hughes, 2000; McPeck, 1981; Paul & Elder, 2001; Ruggiero, 1998). When confronted with an issue, question or problem, we reason about it. This means that we ponder about our situation in accordance with values, needs, desires and goals. To facilitate better thinking, it is valuable to learn to state problems, issues and questions in a clear and distinct way. To reason, we use information, or some set of experiences, data or facts to hold up our decision. To check out the data and to verify the facts are valuable CT principles

involving reasoning.   When we draw conclusions, we consider what we think we know, and judge something else on the basis of what we think we know. In other words, during the reasoning process, we make inferences. An inference is a thoughtful act by which one decides that a thing is true in regards to another thing being true, or appearing to be true. Making assumptions is also a part of reasoning. An assumption is what we know based on our belief system. An assumption can be justified or unjustified based on the reasoning underneath the assumption (Paul & Elder, 2001).

Questioning is another component part of CT (Browne & Keeley, 1998; Ennis, 1996; Meltzer & Palua, 1996; O'keefe, 1999). Browne and Keeley (1998), describe CT as knowledge of a group of mutually related critical questions. To read and listen critically requires a group of attitudes and skills. A series of critical questions surround these attitudes and skills. The deficiencies in what someone says can be searched out by asking a set of critical questions (Browne & Keeley, 1998). Questions about the main point, questions about the reasons, questions about the linkage between the conclusions and reasons, questions about the importance or significance or questions about defining certain words, can clarify a position (Ennis, 1996). Finally, questions about the quality of the evidence should be asked (Browne & Keeley, 1998).

Scholars also advocate that reflection is a component of CT (Bickham, 1998; Borup, 2000; Chaffee, 1988; Dewey, 1997; Miller & Babcock, 1996; Mishoe, 1995; Paul & Elder, 2001; Schon, 1987). Mishoe says that reflecting is critically thinking about one's decisions, biases, opinions and assumptions. Reflection, the heart of CT serves as a beacon to our thinking which influences our behaviors. Reflecting allows us to find meaning and purpose in life (Miller & Babcock, 1996). Schon (1987) suggests that

practitioners reflect in action when faced with conflicted, uncertain and unique situations in practice. While reflecting in action, the practitioner begins to think critically about a routine experience that produced an unexpected outcome. Reflecting upon an abundance of practical experiences with complex situations leads to expertise in professional practice (Bickham, 1998).

One area where adult educators have studied CT is in the area of adult professional practice (Bickham, 1998; Brookfield, 1987; Garrison, 1991; Goodfellow, 1999; Kenimer, 1999; Mishoe, 1995). Critical thinking can be used to help the professional to use knowledge from practice, to articulate situations in day-to-day practice (Bickham, 1998). Schon (1987) states that professionals have a repertoire of knowledge which includes actions, understandings, images and examples to be used in practice. When faced with an unusual situation, practitioners reflect in action to try to make sense of the situation. Practitioners use CT skills when they reflect in action. They begin to question the assumptions underneath their knowing in action. Reflection in action starts a process of thinking and doing which leads to a more skillful practitioner. Benner (1984) states that as practitioners refine and test hypotheses and propositions, expertise develops.

Currently, professionals should be aware that CT is perhaps one of the most valuable abilities and mental attitudes that they can acquire. Continuing professional education is one way to promote CT skills (Bickham, 1998). The fundamental goal of every mature, subtle and advanced kind of continuing education is to relate a complex stance made up of a willingness to apply the best techniques and ideas at that point in time but also to anticipate that they will be replaced or changed. The new principle will

succumb to a better one, the new machine will become out dated, the new drug will be obsolete and the progressive approach will initially be familiar and then outmoded. All must anticipate continuous change and with it new objectives to be accomplished and new skill and understanding to be learned. The important message of continuing education is to anticipate that the unexpected will continue to happen (Houle, 1980).

More specifically, Bickham (1998) echoes Houle's viewpoints by discussing continuing professional education and CT as coexisting. Bickham (1998) says that one's entire profession should be concerned with the aim of continuing professional education and CT. All professionals should understand the main purpose of the profession. The main purpose is concerned with changes in its primary discipline. Those changes enhance competency by applying techniques and theories of contemporary practice. They involve the use of ethical principles in a continually changing social and work environment. They empower and maintain a "responsibly coherent profession" in every way to conserve a suitable viewpoint on life in the work environment (Bickham, 1998, p. 62). Critical thinking is a way for professionals to encourage use of their collection of experiences and knowledge to comprehend day-to-day practice situations. Professionals engage in CT over the course of their work lives through the problem solving activities of their everyday practice, through reading, discussions with colleagues and formal and informal educational programs (Bickham, 1998). Additionally, Bickham (1998) states, "Most significantly, continuing professional education must be effective in helping practitioners enhance their performance as the embodiment of critical thinking" (p. 68).

Kenimer (1999) states, "The general consensus today among practitioners and educators alike is that the ability to think critically is the capability that will enable health

care and other professionals to meet the demands of a rapidly changing environment"(p. 7). Mishoe (1995) suggests that little is known about what CT looks like in adults' professional practice, which includes healthcare practice. However, several scholars including Mishoe (1995) conducted studies to examine CT in professional practice. Mishoe used a qualitative approach to study CT in respiratory care practice. She identified situations in which respiratory care practitioners use CT.

For example, CT skills are used to solve technical problems. The respiratory therapist also uses CT skills when interacting with other therapists, physicians and nurses about patient care. As an outcome of her interviews, she identified prioritizing, anticipating, troubleshooting, communicating, negotiating, decision making and reflecting as necessary skills for CT. Additionally, she found regard for multiple perspectives, flexibility in on going change in professional and personal life and awareness of how other respiratory therapists' actions affect them and their profession. Mishoe (1995), recommended several areas for further research, including the need for more substantive theory about what CT looks like in adult professional practice in general and other health care professions in particular (Mishoe, 1995).

Goodfellow (1999) followed up on Mishoe's CT components. Goodfellow conducted a quantitative study to research three areas. First, she wanted to see how respiratory care therapists ranked themselves on the CT components found by Mishoe (1995). Additionally, she examined to what degree did climate of the respiratory care unit, the role of the medical director, and the work setting affect the self-assessments of respiratory care therapists. Finally, she wanted to look at to what degree did age, gender,

level of education or years of experience in the profession affect self-assessments (Goodfellow, 1999).

Regarding Goodfellow's first concern, she found that prioritizing, troubleshooting and communicating ranked highest as CT behaviors reported by the respondents. Goodfellow further discovered that gender, years of experience, organizational climate, administration of the work setting and the role and level of support of the medical director did affect the self-assessed critical thinking behaviors of the therapists. The educational level, age, managed care environments, and various work settings did not have an effect on CT behaviors. Goodfellow asserts that most, if not all CT skills in respiratory care practice were identified in Mishoe's study. However, she wonders whether CT skills are apparent in multiple contexts. In other words, she calls for more studies to find out the degree of CT in health care professions other than respiratory care practice (Goodfellow, 1999).

In a related study, Kenimer (1999) examined CT behaviors in clinical laboratory science. A survey was used to collect the data for this study. It consisted of 65 elements measuring the respondents' ideas about the significance of CT behaviors in clinical laboratory science. Among the top 25 CT behaviors rated as significant to practice, eight behaviors related directly to the cognitive and highly technical nature of the jobs of most of those surveyed. Included in these behaviors are monitoring for errors, assuring test accuracy and troubleshooting. Eleven behaviors identified a belief in the significance of job performance and attitude (Kenimer, 1999).

Among these job performance behaviors are practicing responsibility and focusing on good patient care. Six behaviors dealt with setting priorities, managing time,

balancing tasks and communicating with coworkers or the context. Examining the behaviors through this configuration reveals specifically that CT behaviors described by practitioners and deemed as significant go well past the boundary of the cognitive domain usually thought of as increasing CT. Setting priorities, reflecting, communicating and troubleshooting were among the top rated CT behaviors found in Kenimer's study in clinical laboratory science. These CT behaviors were among Mishoe's findings as to skills necessary for CT behaviors in respiratory care practice. Similarly, Goodfellow found that prioritizing, troubleshooting and communicating ranked highest as CT behaviors reported by respiratory therapists. Kenimer calls for additional studies to confirm that practitioners' ideas about the significance of critical thinking behaviors are actually practiced in clinical laboratory science. Kenimer says that CT behaviors cannot be taught or learned separate from a practice setting related to a specific discipline (Kenimer, 1999).

The practice of Marriage & Family Therapy (MFT) is a specific discipline within the health care profession. It was organized as a profession in around 1946. The MFT field was formed for the purpose of helping family members to solve their problems (Broderick & Schrader, 1991). A family therapist conducts therapy based on the concept of family systems. An analogy of the mobile is often used to explain this concept to family members. Many therapists purchase or make a mobile made of family figurines. Use of the mobile, allows the family to clearly see the therapist demonstrate the family systems concept. The family will understand that when one figurine moves, the others move as well. The family learns that all family members affect one another. The family

therapist's task is to modify the interaction and structure processes of the identified

client's family. The therapist functions as the expert (Brock & Barnard, 1999).

This researcher has observed that some family therapy tasks demonstrate CT

skills. For example, one of the initial functions at the beginning of therapy is to conduct

a family genogram. The genogram is used to gather family history and to get to know the

family. It is a sort of map that diagrams the family structure and helps the therapist to see

how the relationships in the family structure works. During this process, the therapist

will ask many questions about relationships, roles, rules and other family dynamics

(Brock & Barnard, 1999). Questioning is a component part of critical thinking (Browne

& Keeley, 1998; Ennis, 1996; Meltzer & Palua, 1996; O'Keefe, 1999). One goal of the

genogram process is to keep all of the family members talking about the genogram

(Brock & Barnard, 1999). This skill, namely, communicating, is akin to one of Mishoe's

seven critical thinking skills found among respiratory care therapists (Mishoe, 1995).

Further, as a result of the information gathered from the genogram, the therapist

can assess communication of empathy and warmth, major illnesses, techniques of

adaptation, role rigidity and power allocation (Brock & Barnard, 1999). Fisher and

Scriven (1997) say that CT includes the evolvement of criteria and the use of principles

that help one's thinking in the future. For any professional this is a significant

requirement: for example, lawyers and surgeons are expected to know where to find

helpful information. Professionals are also expected to draw sound conclusions about

whether they are the holders of useful information. The professional must know their

strengths and weaknesses in order to give high quality services to their clients or to

practice safely (Fisher & Scriven, 1997).

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Various scholars suggest that reasoning skills are a component part of CT (Chaffee, 1988; Cogan, 1988; Fisher, 2001; Halpern, 1996; Hughes, 2000; McPeck, 1981; Paul & Elder, 2001; Ruggiero, 1998). The information gathered from the genogram allows the therapist to draw reasonable assumptions. For example, the therapist makes inquiries about the closest parent. This is quite significant because it is a reasonable assumption to conclude that the style of relationship with the closest parent will be the style of relationship with the spouse (Brock & Barnard, 1999).

Further, one common element during family therapy is taking breaks. One example of taking a break during therapy transpires with the use of a reflecting team. For example, while a family session is in progress, several therapists observe the session from another room. At a selected time, one of the therapists from the observation room (reflecting team member) goes into the consultation room. The therapist asks the family whether they want to hear the thoughts of the observing therapist. If the family agrees, they listen for helpful ideas as the team reflects about the family session. The therapists phrase statements in a tentative manner and statements are made using positive terms. These two features place emphasis upon a main assumption of the reflective process: there are several ways to interpret a situation rather than one correct way or one right way (Brock & Barnard, 1999).

A licensed MFT is mandated by the state to acquire 35 continuing education hours every two years. The association offers national, state and local conferences and workshop opportunities for the purpose of acquiring continuing professional education hours, not only for MFTs but for other health care professionals as well. However, a ten-

year search of MFT journals did not yield any literature about continuing professional

education in MFT practice or about CT in the MFT field.

Linda Elder is an expert in CT across fields of study. She is the executive director

of the center for CT. She is also the president of the foundation for CT. Linda Elder

along with Richard Paul has developed an assessment of CT instruction at 66 universities

and colleges. Elder has been the main speaker at the International Conference on Critical

Thinking for the past five years (Paul & Elder, 2001). According to a representative in

Linda Elder's office, namely Linda Etheridge, no study has been conducted about CT in

the MFT field (personal communication, January 29, 2002). And Cevero (2002) says that

the literature about CT in professional practice is relatively sparse (personal

communication, February 28, 2002).

<div align="center">Statement of the Problem</div>

We now understand that the way to develop capable people is to have people to

receive knowledge in the context of its use (Knowles, 1980). We can acquire knowledge

by using experience and thinking. However, we can also gain illusion, fear, prejudice,

hate, error and self-deception. Human brains are noted for fallibility. As a result, we

should learn to think critically while involved in the process of learning (Paul & Elder,

2001). In fact, Borup (2000) says that after 11 years of investigating critical thinking, it

appears that not only is CT a likely additional academic field, but that its acquisition is

needed to subsist in a world with a "geometrically progressing knowledge base such as

ours" (Borup, 2000, p. 5).

Critical thinking is a way for professionals to encourage use of their collection of

experiences and knowledge to comprehend day-to-day practice situations (Bickham,

<div align="center">13</div>

1998). Bickham also calls for professions to carefully examine burgeoning areas of continuing professional education and critical thinking. He views continuing professional education and CT as coexisting. Bickham says that one's entire profession should be concerned with the aim of continuing professional education and CT. All professionals should understand the main purpose of the profession. The main purpose is concerned with changes in its primary discipline. Those changes enhance competency by applying techniques and theories of contemporary practice. In fact, Bickham (1998) states, "Most significantly, continuing professional education must be effective in helping practitioners enhance their performance as the embodiment of critical thinking", (p. 68).

However, very little research has been conducted about CT in the professions. The studies that are available were conducted within a specific discipline. For example, Mishoe (1995) and Goodfellow (1999) studied CT in the respiratory care profession. In a similar study, Kenimer (1999) explored CT in clinical laboratory science. Mishoe says that little is known about what CT looks like in adults' professional practice, which includes healthcare practice. Further, Mishoe calls for more research to discover whether her findings can be generalized to other work settings and various professions. Goodfellow (1999) wondered whether critical thinking skills are apparent in multiple contexts. In other words, she calls for more studies to find out the degree of CT in health care professions other than respiratory care practice.

Kenimer suggests examining CT across professional lines to learn whether the transfer of CT behaviors is discipline specific. Kenimer also suggests that CT behaviors cannot be taught or learned separate from a practice setting related to a specific discipline. The practice of Marriage & Family Therapy (MFT) is a specific discipline. It

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is a professional organization, which help individuals, couples and families to solve their problems.   While various theoretical approaches to practice exist in the MFT profession; there is no set of formulas to solve problems in practice. A thorough search of several databases in Galileo including academic press, academic search elite and academia and libraries, did not reveal any studies examining CT in marriage & family therapy.

<div align="center">Purpose of the study</div>

The purpose of this study was to understand how Marriage & Family Therapists (MFTs) apply CT in their practice. The following research questions were used to examine the MFT field and CT, using a qualitative methodology:

1) What are the critical thinking behaviors used by MFTs in practice?

2) In what situations do MFTs use critical thinking in practice?

3) What factors appear to influence the use of critical thinking in MFT practice?

<div align="center">Significance of the study</div>

This research will assist the field of adult education, specifically in continuing professional education and CT. Continuing professional education is one way to encourage CT skills (Bickham, 1998). The study will also help to develop more substantive theory in the study of CT in professional practice. The literature in these areas is sparse. Therefore, the findings add to the gap in the literature about CT in professional practice. According to Bickham (1998), continued learning improves the quality of the professional's work and the worth of their help to people. He calls for professions to carefully examine burgeoning areas of continuing professional education and CT.

Specifically, this study examined CT behaviors in the MFT profession. While various theoretical approaches to practice exist in the MFT profession, there is no set of formulas to solve problems in practice. Examining CT behaviors in practice could result in alternative approaches to problem solving in the professions. Further, a study about CT in MFT practice could solidify existing approaches to practice. Looking into CT in this field could result in innovative approaches to problem solving in the profession. The results of this study will yield specific language about CT in MFT practice. Then, the language of CT in MFT practice can be used for continuing education purposes or to train MFT interns. For example, workshops or conferences about CT in the MFT field could be conducted. Finally, examining CT in MFT practice may result in improved outcomes such as eliminating distress quicker.

Definition of Terms

Critical thinking is defined by Fisher & Scriven (1997) as active and skilled evaluation and interpretation of communications and observations, argumentation and information as a way to decide what to think or do.

Marriage & Family Therapy (MFT) - A field of study and practice, which helps individuals, couples and families with their problems. Examples of problems include marital conflict, symptoms of anxiety or depression or substance abuse in a family member, a child with ADHD or other behavioral problem, symptoms of obsessive-compulsive disorder or other emotional difficulties.

Genogram-The genogram is like a family map. Marriage & Family Therapist use the gengorams in practice to assess and treat the family. The genogram is an integral part of Marriage and Family Therapy practice.

CHAPTER 2

REVIEW OF THE LITERATURE

The purpose of this study was to examine critical thinking in the profession of

marriage and family therapy. The research questions for the study were 1) What are the

critical thinking behaviors used by marriage and family therapists (MFTs) in practice? 2)

In what situations do MFTs use critical thinking in practice? 3) What factors appear to

influence the use of critical thinking in MFT practice? The topics searched were

concepts of critical thinking, critical thinking in MFT practice, critical thinking in

secondary and post-secondary education, critical thinking in professional practice and

critical thinking in adult education were searched. Finally, critical thinking in continuing

professional education and critical thinking in the professions were topics searched.

Several databases in Galileo including academic press, academic search elite and

academia and libraries, sage publications, dissertation abstracts, sociology and

psychology abstracts were searched. The descriptors used were critical thinking, critical

thinking in secondary education, critical thinking in adult education, critical thinking in

professional practice and Delphi report.

History of Critical Thinking

Paul and Elder (2001) offer an overview of the history of the notion of critical

thinking. The idea of critical thinking dates back to the vision and teaching practices of

Socrates. Around 2400 years ago, Socrates, by using a method of probing inquiry, found

that nearly all people could not realistically substantiate their self-assured declarations to

knowledge. Lack of evidence, perplexing meanings and self-conflicting opinions often

hide under persuasive but dominantly vacuous rhetoric. Additionally, Socrates found that

those with high position and power could be profoundly irrational and confused (Paul &

Elder, 2001).

Socrates substantiated the significance of deep questioning which strongly delves

into thinking before we adopt an idea as believable. Socrates is attributed with the

significance of finding evidence, carefully analyzing reasoning and assumptions,

examining basic ideas, and exploring implications of what is done as well as what is said.

This type of questioning is known as Socratic questioning. He emphasized the

requirement in thinking for logical consistency and clarity. According to Paul and Elder

(2001) Socrates set the plan for critical thinking tradition as follows:

> to reflectively question common beliefs and explanations,
>
> carefully distinguishing those beliefs that are reasonable
>
> and logical from those that -however appealing they may
>
> be to our native egocentrism, however much they serve our
>
> vested interests, however comfortable or comforting they may
>
> be-lack adequate evidence or rational foundation. (p. 375)

.   Plato, Aristotle and the Greek skeptics' idea of critical thinking followed Socrates'

work. They emphasized that things are frequently different than they may appear to be.

They suggested that only the mind that is trained is equipped to see beneath the surface of

the way things seem to be. The way things seem to be on the surface are often deceptive.

The things under the surface reveal the realities of the life situation (Paul & Elder, 2001).

During the Middle Ages, Thomas Aquinas's teachings and writings manifested the "tradition of systematic critical thinking" (Paul and Elder, 2001, p. 375). Aquinas wanted to make certain that his thinking met the requirement of critical thought. Therefore, in a methodical manner, he answered the most basic criticisms of his philosophies as a prerequisite in cultivating his thinking. Other medieval thinkers, along with Acquinas improved our knowledge about the possibility of reason. Our knowledge was also heightened in regards to the need for reasoning to be methodically cross-examined and cultivated. Debate and disputation became an authentic tradition as a way of learning and teaching in the medieval university (Paul & Elder, 2001).

During the 15th and 16th centuries, critical thinking became prevalent with scholars in Europe. They began to think critically about human nature, society, art, religion, freedom and law. These scholars went forward with the premise that most of the realms of life require critique and analysis. Some of the scholars during the 15th and 16th centuries were Erasmus, Colet and More in England. The ancient Greek thinkers' insight was followed up by Colet, More and Erasmus (Paul & Elder, 2001).

During the 17th century England, Francis Bacon specifically examined the manner in which the human mind, in its natural state, is snared by vested interest, ignorance, self-deception and prejudice. He realized that the human mind could not reliably be left to its natural inclinations. Bacon authored a book called *The Advancement of Learning*. In this book, he discussed the importance of empirical study of the world. With his emphasis on information-gathering processes, Bacon built the foundation for modern science. He also suggested that, if left to their own natural tendencies, most people develop poor habits of thinking. Bacon called poor habits of thoughts idols. These poor habits of

thought influence people to "believe what is unworthy of belief" (Paul & Elder, 2001, p. 376). Bacon's books were likely some of the earliest books written about critical thinking because his plan was very greatly the traditional plan of critical thinking (Paul & Elder, 2001).

In France, around 50 years after Bacon's work, Descartes authored a book called *Rules for the Direction of the Mind.* Descartes' book may be referred to as the second book about critical thinking. In the book, he suggested that the mind needed a special systematic disciplining in order to direct its thinking. He distinctly defended the requirement in thinking for precision and clarity. He established a way of critical thought. This way of critical thought was based on the principle of "systematic doubt" (Paul & Elder, p. 376). Descartes suggested that thinking should be based on well-reasoned foundational presumptions. Descartes argued that all parts of thinking should be doubted, tested and questioned (Paul & Elder, 2001).

During the same time frame, Sir Thomas More established an ideal of a novel social order called Utopia. In this new social order each domain of the current world was susceptible to analysis. His implied contention was that organized social systems were in need of extreme critique and analysis. Around the 15th and 16th centuries, during the Italian Renaissance, Machiavellli, critically evaluated the politics in that day and built the foundation for contemporary critique of political thinking. The post Renaissance as well as the Renaissance scholars paved the way for science to become known and for the advancement of human rights, freedom for thought and democracy (Paul & Elder, 2001).

He would not believe that government operated as powerful people said it operated. Instead, Machiavelli critically examined how government did operate. He laid

the ground work for political thought that reveals the true plan of politicians. Moreover, he exposed the many inconsistencies and contradictions of the cruel, harsh political arena in that day by using critical thinking (Paul & Elder, 2001).

During the 16th and 17th century in England, Hobbes and Locke showed the identical assurance about the "critical mind of the thinker" (Paul & Elder, p. 377) that was found in Machiavelli. Neither Hobbes nor Locke nor Machiavelli adopted the conventional image of things prevalent in the thoughts of people in that day. Things that were considered normal in their culture were not automatically accepted as rational. Both focused on the critical mind to reveal new learning perspectives. According to Hobbes, everything in the world could be explained by reasoning and evidence. Locke argued for a common sense inquiry into daily thought and life. He built the theoretical groundwork to think critically about fundamental human rights and the duty of all governments to acknowledge citizens' thoughtful reasoned criticism (Paul & Elder, 2001).

During the 17th and 18th centuries, Robert Boyle and Sir Isaac Newton conducted their work about critical thinking. Both portrayed the attitude of critical thought and intellectual freedom. In Boyle's work, the *Sceptical Chymist*, he seriously criticized the pre-existing chemical theory. Newton cultivated a far extending frame of thinking that "roundly criticized the traditionally accepted world view" (Paul & Elder, p.377). The critical thinking of people such as Kepler, Copernicus and Galileo was extended by Newton. Following Boyle and Newton, it was acknowledged by those who seriously reflected on the everyday world that selfish opinions of the world must be rejected in

support of opinions based completely on sound reasoning and cautiously collected evidence (Paul & Elder, 2001).

French enlightenment thinkers were Voltaire, Diderot, Bayle, & Montesquieu. They made an important addition to critical thinking. All of them began with the assertion that when the human mind is regulated by reason, it is better equipped to examine the nature of the political and social world. Moreover, Voltaire, Didecot, Bayle & Montesquieu felt that, "reason must turn inward upon itself to determine weaknesses and strengths of thought" (Paul & Elder, 2001, p. 377). They appreciated intelligent discussions, in which all opinions were subject to serious critique and analysis. Additionally, the thinkers during the French enlightenment felt that all those with power needed to somehow be subject to critique in a reasonable manner (Paul & Elder, 2001).

The thinkers during the 18th-century, expanded our idea of critical thinking even more. The 18th-century thinkers helped us to understand how the tools of critical thought and critical thought can be powerful. When critical thought and its tools were applied to economic problems, Adam Smith wrote *Wealth of Nations.* During that same year, critical thought was applied to the conventional idea of allegiance to the king and the *Declaration of Independence* was produced. As a result of applying critical thought and its tools to reason, Kant's *Critique of Pure Reason* was created (Paul & Elder, 2001).

Additionally, during the 19th century, the concept of critical thought was expanded even further. Spencer and Comte applied critical thought to the realm of human societal life. The searching economic and social analysis of Karl Marx emerged when critical thought was applied to capitalism. Darwin's *Descent of Man* was produced when critical thought was applied to the experiences of human culture and the

fundamentals of biological life. Sigmund Freud's work reflected critical thought as

critical thought was applied to the unconscious mind. The development of the discipline

called anthropological studies was a result of applying critical thought to cultures. The

establishment of the discipline of linguistics and to numerous deep inquiries of the use of

language and symbols in life (Paul & Elder, 2001).

During the 20th century, our perception of the influence and essence of critical

thinking came forth with increasingly more specific details. William Graham Sumner, in

1906 published an innovative study of the basis of anthropology and sociology called

Folkways. Paul and Elder (2001) say that William Graham Sumner, "…documented the

tendency of the human mind to think sociocentrically and the parallel tendency for

schools to serve the uncritical function of social indoctrination" (p. 378). Sumner also

understood the strong need for critical thinking in education and in life. To think

critically is our only protection against deception, delusion, superstition and to

misunderstanding our earthly situations and ourselves (Paul & Elder, 2001).

John Dewey agreed with Sumner. From Dewey's work, we have more of a sense

of the practical explanation of human thinking and specifically its underpinnings in real

human objectives, purposes and goals. As a result of Ludwig Wittgenstein's work, we

have broadened our knowledge not only of the significance of concepts in human

thinking but also of the importance of analyzing concepts and evaluating their limitations

and power. From Piaget's work, we have expanded our understanding of sociocentric and

egocentric inclinations of human thinking and of the specific need to cultivate critical

thought that can reason in several standpoints, and to be elevated to the capacity of '

"conscious realization" ' (Paul & Elder, p. 378).

Scholars like C. Wright Mills have helped us to add to our knowledge of the way in which social exploitation occurs in entire societies. Also, Mills helped us to recognize the way in which democratic organizations are weakened. From the insight of psychologists and other research workers, we recognize how easy it is for the human mind to deceive itself. We also realize how easy it is to subconsciously form delusions and illusions and how easy it is to stereotype, scapegoat, rationalize and project (Paul & Elder, 2001).

As a result of Irving Goffman's work, we have more knowledge of how ' " social definitions" ' can control the mental activity of persons in a society. Numerous sociologists' work have helped to increase our knowledge of how the ' "normal" ' sociolization practices, "serves to perpetuate the existing society-its ideology, roles, norms and values-however inconsistent these might be within a society's announced picture of itself" (Paul & Elder, p. 379).

Through the work of economists, like Robert Heilbronner, we recognize that vested interest groups can act to negate or undermine human rights and ethical values if economic forces are not managed. From the substantial input of all the natural and physical sciences, we have awareness of the significance of gathering information with precision and great care and with the consciousness to its possible misuse, inaccuracy or distortion (Paul & Elder, 2001).

In summary, the possible resources and tools of the critical thinker have been greatly expanded by the value of critical thought's history. Numerous thinkers have added to the possible development of critical thought. Every important discipline has made promising additions to critical thought. However, critical thinking is not a real

discipline. Indeed, usually fields of study are taught in such a manner that the possible addition to critical thought in the field is obscure or unexpressed. In order to have a successful massive integration of the various perspectives in critical thought, numerous scholars would have to work across fields of study (Paul and Elder, 2001).

Therefore, the history of critical thinking reveals that the various components of critical thinking include questioning, analysis, explanation, logical consistency, clarity, identifying assumptions, reasoning, gathering information and evidence. However, no orderly integration of these components into one combined theory exists but various scholars have conceptions of critical thinking.

Conceptions of Critical Thinking

Critical thinking is an evolving phenomenon written about by scholars in various disciplines. Scholars' writings about critical thinking are referred to as conceptions and not theories. First critical thinking is not a science but a developing art. Second, there is no formal field of study of critical thinking. Thirdly, no integration of the various approaches by scholars across disciplines has been conducted towards establishing a theory of critical thinking (Paul & Elder, 2001). Several scholars' conceptions of critical thinking are mentioned throughout the literature. Critical thinking involves specific strategies or cognitive skills used to increase the likelihood of a good outcome (Halpern, 1996). Several scholars' conceptions of critical thinking is mentioned throughout the literature namely (Ennis (1996); Halpern, (1998), Fisher and Scriven (1997); Facione (1990); Paul & Elder (2001).

Review of the literature reveals that scholars describe their conceptions of critical thinking in dimensions of dispositions and/or skills. The disposition dimension is more

the affective trait of the thinker. For example, some scholars describe the critical thinker as fair-minded, inquisitive, and flexible or open minded. On the other hand, the skill dimension describes the cognitive component of critical thinking. In other words, the skill dimension refers to one's ability to think critically. Some examples of the skill dimension include analyzing, drawing inference, evaluating or self regulation (Facione, P., Facione, N., & Giancarlo, C. (2001). Although several scholars have formulated a conception of critical thinking, I will discuss conceptions that occurred more often as the literature was examined.

Facione's Delphi Report Conception

Facione (1990 is the author of an executive summary of the delphi report on critical thinking. Facione was asked by the American Philosophical Association by way of its committee on pre-college philosophy, to organize this study. The delphi method is an effective research methodology in qualitative work. During this method, a group of experts get together to discuss their expertise about a particular topic. The experts' goal is to come to a general agreement of issues of opinion (Facione, 1990).

The delphi report on critical thinking is the result of a forty six person panel who were selected by their peers as experts in critical thinking. The panel percentage of make up across disciplines was twenty percent social science, twenty two percent educations, 6% percent physical sciences and fifty two percent philosophy. Most of the participating experts had more experience at the college level than at the K-12 level. Among the experts participating were Neil Browne, Stuart Keeley, Richard Paul, Robert Ennis and Stephen Norris (Facione, 1990).

The results of the experts' work was that good critical thinking had a dispositional dimension and a skill dimension. The dispositional critical thinker makes a habit of being well-informed, open minded, trustful of reason, flexible, prudent in making judgments, fair-minded in evaluation, honest in facing personal biases, persistent in finding outcomes which are as precise as the topic and the situation of inquiry permits, orderly in complex matters, clear about issues and willing to reconsider (Facione, Facione, & Giancarlo, 2001).

Specifically, the experts suggest that there are "seven dimensions to the critical thinking disposition construct" (Facione, et al, 2001, p.5). The first dimension is seeking the truth. People who seek the truth are objective and honest about their pursuit to inquire even if their perceived opinions or interests are not the outcomes. Truth seekers will reevaluate and modify their views when sincere reflection indicates that change is required. The next critical thinking dimension is open-mindedness. These people are understanding differing views and they are realistic about the possibility of their own prejudice. The initial interest of an open-minded person is to recognize the prerogative of the other persons to hold their views (Facione et al, 2001).

Analyticity is the 3rd dimension of the critical thinking disposition construct. These types of people are frequently looking for ways to solve problems and they tend to be alert to the possibility of problems. They are evaluative of and aware of outcomes. The fourth dimension is systematicity. People who are systematic are described as orderly while working with perplexing situations. They aim to work on certain questions problems or issues in a diligent, focused and orderly manner, regardless to how that aim is achieved (Facione, et al 2001).

Critical thinking self- confidence is the fifth dimension of the critical thinking

dispositions. These people have high capacity for their capacity to reason. They trust

their ability to make sound judgments. Critical thinking self-confident persons also feel

that other people look to them to solve problems. Inquisitiveness is the 6th dimension.

Intellectually curious describes inquisitive individuals. They like to have information and

desire to know how things work although the short term benefit is not obvious. Maturity

is the seventh and final critical thinking disposition. Mature persons are reflective while

making judgments. These people are more cognitively equipped to see problems form

the viewpoint that some problems are not well defined some circumstances have several

alternatives, and that at numerous times specific answers to questions do not exist

(Facione, et al, 2001).

The experts found that the skill dimension had 6 cognitive skills which are central

to critical thinking. These cognitive skills are interpretation, analysis, evaluation,

inference, explanation, and self regulation. Interpretation means to understand and

articulate the significance or meaning of a multitude of conventions, rules, beliefs, data,

situations, events, experiences, criteria or procedures. The sub-skills for interpretation

are categorization, decoding significance and clarifying meaning (Facione, 1990).

The next skill, analysis, involves finding the actual and intended inferred

connections among descriptions, concepts, statements or other kinds of representation

designed to express information, opinions, reasons, judgments, beliefs or experiences.

The sub-skills to analysis are examining ideas, identifying arguments and analyzing

arguments. The third skill, evaluation, involves determining the reliability of statements

or other illustrations which are descriptions or accounts of a person's belief or opinion,

perception, experience, situation or judgment. Further, evaluation is to determine the logical substance of the intended or actual inferential connections among questions, statements, descriptions or other types of representation.   The sub-skills to evaluation are assessing claims and assessing arguments (Facione, 1990).

The fourth skill, inference, involves finding and securing components needed to come to reasonable decisions; to speculate and hypothesize; to examine important information; and to bring out the result surging from evidence, beliefs, judgments, data, statements, questions, descriptions, opinions, concepts or other types of representation. The sub-skills to inference are querying evidence, conjecturing alternatives and drawing conclusions (Facione, 2001).

The fifth skill, explanation, is concerned with expressing the outcome of one's reasoning: reasoning in regards to the evidential, criteriological, contextual, conceptual and methodological concern upon which one's outcomes were based; reasoning in the form of a persuasive argument. The sub-skills to explanation are stating results, justifying procedures and presenting arguments (Facione, 1990).

The last skill is self-regulation. This skill involves watching over one's thinking activities, the components applied in those activities, and the results extracted, specifically by using skills in evaluation and analysis towards one's own inferential conclusions with a view toward confirming, questioning, correcting or validating one's results or one's reasoning. The sub-skills to self-regulation are self-examination and self-correction (Facione, 1990).

Fisher and Scriven's Conception

Fisher and Scriven wanted to develop an innovative concept of critical thinking. While Facione's delphi report concept is based on the skill and disposition dimension; the prevailing dimension of Fisher and Scriven's concept is the skill dimension. Therefore, Fisher and Scriven offer a narrower concept. Moreover, after a great deal of deliberations about the meaning of critical thinking, three things emerged to frame Fisher and Scriven's definition. First, they discovered that the word critical, was intimately linked with the word evaluation. They refer to their definition as an evaluative definition. Secondly, they found that it is very difficult to evaluate before one makes connection with interpretation and the critical thinking frequently starts when a person identifies ambiguities in a written piece, an argument, a legal contract, reportage or alleged facts (Fisher & Scriven, 1997).

The final strand that frames Fisher and Scriven's definition is that critical thinking is consistently related to a context, in that critical thinking is to some extent more than determining what persons know or can comprehend without difficulty. So, Fisher and Scriven are saying that critical thinking is a cognitive process. Threading the strands of evaluation, interpretation, context and skill, Fisher and Scriven (1997) define critical thinking as…"skilled and active, interpretation and evaluation of observations and communications, information and argumentation" (p. 21). Fisher and Scriven (1997) comment that the definition has four pairs of terms. The terms are skilled and active, interpretation and evaluation of observations and communications, information and argumentation. While Fisher and Scriven refer to the terms as pairs, Fisher and Scriven discuss the terms individually in their work.

Skilled Component

The skilled component of Fisher and Scriven's definition is not to be confused with the skill dimension of critical thinking as described by the experts in the Delphi report. The meanings are entirely different. Specifically, the skilled component of Fisher and Scriven's definition simply means that any kind of good thinking has to meet particular standards. A person may intend for thinking to be critical but unless the thinking meets certain standards, it is not considered critical thinking. These standards are clarity, notably relevance, fairness, accuracy, adequacy and reasonableness. A person can be more or less skilled at these standards. These general standards will be context dependent to what we regard as critical thinking because these standards will change a great deal depending upon the context of the inquiry and the sophistication or age of the thinker (Fisher and Scriven, 1997).

Additionally, these standards will be context dependent in regards to the subject matter because competence will often be necessary to apply critical thinking about a certain topic or item. Fisher and Scriven (1997) say that, "furthermore, there are standards of difficulty to be met; more exactly the standard of making a contribution to knowledge or thought" (Fisher & Scriven (1997, p. 22). For example, on the way to work one might observe the state of the weather. While the observation may be correct, it does not qualify as a scientific act. However, the person may have intended for the observation to be called a scientific act (Fisher & Scriven, 1997).

The observation about the weather can only be called a scientific act thus adding to the knowledge base about weather in a particular research context. In other words, the observation about the weather could only be science if its included in a systematic and

complicated group of observations, "about the weather in a remote Antarctic outpost, set up to look for patterns of global warming" (Fisher & Scriven, 1997, p. 22). Therefore, if the observation about the weather is part of a particular research context; the outcome of the observation adds to the knowledge base about the weather (Fisher & Scriven, 1997).

In much the same way, critical thinking brings forth new horizons of thought, at any level relevant to the context. For example, for most people struggling to translate a very complex Japanese legal document into English, critical thinking may be required. The translators may ponder about what a particular phrase means in the legal document. About this phrase the translators may have to remind themselves that the samurai had a very unique status during a certain time in Japanese history. However, bilingual scholars, fluent in Japanese would not see a difficulty with the translation. If the bilingual scholars, fluent in Japanese would not see a difficulty with the translation. If the bilingual scholars are participating, the interpretation would not be considered critical thinking (Fisher and Scriven, 1997).

Active Component (Levels 1, 2, 3, 3A, 3B, 3C & 4)

The active component of Fisher and Scriven's definition has more incorporated than any of the other words in the definition. Fisher and Scriven describe critical thinking as an active process. It is described as an active process for two reasons. First, critical thinking is concerned with questioning what is read, seen or heard. Secondly, critical thinking involves metacognition or thinking about one's thinking. The active component of Fisher and Scriven's definition of critical thinking is explained with 4 levels of activity. The 1st level is called reactive processing. This level is also known as the transactional stage. The 2nd level is known as investigatory or proactive. The 3rd

level is more analytical or reflective.   The 3rd level includes sublevels namely 3A, 3B, and 3C. The creation of new principles or concepts in critical thinking or fine tuning present principles is what the fourth level involves.

Reactive Processing Level 1 (Active Component)

Reactive processing is the first level of activity in critical thinking. It is known as the transactional stage. The skill of a profound understanding of a discipline or of a real life example is included in this stage. Instead of a part of critical thinking, most of the reactive processing level is actually a way to begin to think critically. About reactive processing Fisher and Scriven (1997) say, "Much of this is really an entry requirement for critical thinking rather than part of it; but the more sophisticated elements, when made explicit, often qualify as good critical thinking", (p.24). Included in this stage is the entry level skill to critical thinking, which is a profound understanding of a discipline or of a real life example.

The reactive processing level includes more than the reflex or passive processes of easy organizing, classifying or comprehending. These skills could be very well quizzed by giving someone a phrase from a paragraph and asking the person to choose the most similar meaning of the phrase from among several alternatives.   Reactive processing also involves plain examples of finding important missing elements and ambiguities. For instance, during this stage one would identify information that will be needed in order to support a declared conclusion (Fisher & Scriven, 1997).

Investigatory and Proactive Level 2 (Active Component)

The terms used to describe the second level of critical thinking are investigatory and proactive. This stage is more characteristic of critical thinking because it involves

examining or interrogating or finding more sources in order to get additional important

clarification or information (Fisher and Scriven, 1997) Empathy gives us one significant

entry way example of this stage, "because it involves the investigatory effort of

projecting oneself into the shoes of another" (Fisher & Scriven, 1997, p. 25). Empathy is

usually required in order to comprehend a bewildering point of view or action. Empathy

will usually cause a stronger understanding. Empathy may prompt the observer to see the

situation in a different vein. The critical thinker will frequently comment that another's

actions are being judge too harshly. Further, the critical thinker may voice understanding

another's motives (Fisher & Scriven, 1997).

Analytical or reflective Level 3, sublevels 3A, 3B & 3C (Active Component)

Fisher and Scriven (1997) say that the 3rd level involves "metacognition – or

metathinking, or thinking at the metalevel" (p. 26). In other words, thinking about the

way one thinks in regards to some general characteristics of, or similar styles of failures

and successes in thinking and the rationale for these.

Sub-level 3A Identifying External Sources

At this level Fisher and Scriven (1997) are suggesting that one learn how to

identify reliable authorities and references about a specific topic. In other words,

thinking about the source of one's information. Further, this level suggests a systematic

way of gathering information which may include seeking the opinion of at least one

expert in a relevant field who does not have a financial interest in the issue at hand or

finding pertinent expertise, not just any person with a doctoral degree. The objective here

is that one should not immediately trust a particular source on a specific topic. In my

judgment, the essence of this sub-level is for learners to develop some personal principles

in regards to checking out the credibility of external sources and information gathering procedures.

<center>Sub-level 3B Self-Referent Evaluation</center>

The critical thinker will have reached level 3B of the reflective analytical level when he or she is able to apply critical thinking to self-connected matters such as family, school or country as well as to the self. At this level, one must learn how to decide whether one is an authority about some topics and not on other topics even though one may have strong views about the topics in which one is not an authority. This ability for self-referent evaluation may be the most significant aspect of this level and a major guide for general critical thinking skills. This ability shows that one can set similar standards to oneself as one sets to others. This also reveals a pattern of consistency, which is necessary for rational thinking. In order to be called an agent of critical thinking, the self-referent component must be exercised on a frequent basis (Fisher & Scriven, 1997).

The self-referent component not only applies to the person but also to her or his country or family. For example, the initial reaction of the attorney general of the U. S. to Martin Luther King's assassination was that in a democratic society, no reason for violent killings ever exists. A critical thinker will immediately begin to question this statement and perhaps cite cases that my or may not counter a generalization such as this. For instance, having knowledge of the Civil War experience, police storming a person holding others hostage or the Drug Enforcement Agency going into homes without search warrants accidentally killing innocent people could be examples of justifiable killings in the U. S. The practice of the skill of self reference evaluation can strongly deter future mistakes because one will realize when one is an authority or not about a matter.

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Moreover, when one hears a generalized statement, one can refer to prior knowledge of cases that may serve as counter examples to the generalization. Self reference is a type of evaluation that benefits one over an extended period of time, and in many instances, and therefore depicts generalized learning (Fisher & Scriven, 1997).

Sub-level 3C Use of logical terms

The last sub-level, 3C, of the reflective analytical level involves a more formal type of awareness. Many find it easier, however, it is more formal because it has some aspect of a formal discipline and it brings forth a group of categories. The vocabulary of English logical words and the principles that guide their grammar is what this level encompasses. These logical terms can be used to evaluate and describe the thinking of one's self as well as others' thinking. In order to be highly effective, critical thinking must go beyond assessing the reliability of information sources and the self reference component For the greatest efficiency, the critical thinker has to use and master powerful logical words such as inference, conclusion, premise, commitment, bias and implication (Fisher & Scriven, 1997).

In my judgment, Fisher and Scriven (1997) are attempting to help us to use and master logical words as a link to a more in depth understanding of thinking. Likely, on a daily basis, we read information or hear information and dialogue about the information using words or phrases that symbolize drawing inferences, drawing conclusions, stating premises, commitment, bias, or implication. For example, whether one reads a political journal article, a science article, a psychology or sociology article, an article about adult education or an article about marriage and family therapy, these logical words can be used to think about our thinking about the article.

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According to Fisher and Scriven (1997), use of the aforementioned logical vocabulary promotes the transfer of critical skills because, "…it makes possible the formation of principles, distinctions, and strategies of great generality and power" (p. 29). Further, Fisher and Scriven (1997) say that cause and correlation, necessary and sufficient conditions and knowledge/proof are examples of powerful distinctions which can be derived from applying terms like inference, conclusion, premise, commitment, bias or implication. A huge amount of experience is usually required in order to make these distinctions (Fisher & Scriven, 1997). To some extent, anyone working in a particular field can acquire these distinctions. To a less precise degree anyone using the aforementioned logical words can acquire these distinctions. To illustrate the cause/correlation distinction, in recent years, a correlation among accidents and the use of car phones has been discussed. We may have the inclination to understand the causal connection due to the obvious distraction of the car phone. However, the critical thinker would ask whether we have a definite causal connection or whether some other factor was creating the correlation (Fisher & Scriven, 1997).

To illustrate the necessary and sufficient condition distinction, for example, a music teacher tells a potential piano student that an ear for music is a necessary condition for learning to play the piano. In other words, the music teacher is saying if you do not have an ear for music, you will not learn to play the piano. Further, if an attorney says that a natural born citizen of the UK to a British family is a sufficient condition for acquiring a British passport. The attorney is also saying if you are a natural citizen to British parents one can get a British passport (Fisher, 2001).

While a good ear for music is necessary for learning to play the piano, it is not sufficient. One would need many hours of piano practice as well. Clearly, a natural born citizen of the UK to British parents is sufficient for a British passport; however it is not necessary because others can be authorized for passports as well. Another very powerful distinction that can come from the use of the logical vocabulary is the knowledge/proof distinction. For instance, one cannot just say that one was home the night a crime was committed but one must be able to provide evidence that one was home.

4th Level Formulating New Principles

The fourth level is a naturalistic expansion of the third level in that the fourth level is also analytical and reflective.   Moreover, the third and the fourth levels involve metacognition or thinking about thinking.   At the third level one thinks about one's own thinking. On the other hand, at the fourth level one thinks about critical thinking. Thinking about critical thinking can lead to the creation of new principles or concepts in critical thinking or fine tuning present principles.

For example, thinking about critical thinking can lead to rules or revisions about standards of practice for practitioners. Thinking at this level can inspire curiosity about or investigation into standards of practice in any discipline. Furthermore, curiosity and investigation about a discipline can lead to original contributions to that discipline.

Regarding this fourth level Fisher and Scriven (1997) write, "…thinking about critical thinking and working out the principles that can be applied in critical thinking led to what is called informal logic, the logic that describes and guides the practice of critical thinking" (p.33). In fact, informal logic gives us an additional serious basis for the claim that critical thinking skills can be generalized. Simply, informal logic involves

identifying general types of bias and fallacies and use of some of the standards of argument analysis.

Bias and fallacies are explained in words which can be applied throughout academic disciplines as well as in practical matters of daily living. For instance, examples of the fallacy known as the application of the argument of the slippery slope can be identified in a variety of topics. This kind of argument is very general. One can learn to identify the slippery slope argument from minimal examples. To say that once the U. S. goes to war to remove Iraq's brutal dictator; the U. S. will have to go to war with all countries who have brutal dictators is a slippery slope argument.

The slippery slope fallacy is a method of argumentation that is used often and it is an attractive argument. However, this type of argument is not valid and it is not difficult to show that it is invalid. But learning to identify the slippery slope fallacy advances one's thinking. Instructing others to identify the slippery slope fallacy helps to advance their thinking. Therefore, the slippery slope concept is valuable and teachable. It also transfers across many fields. A deep understanding of informal logic or identifying bias and fallacies is not necessary in order to think critically about most particular concerns. However, the use of informal logic is one of the most effective ways of strengthening one's critical thinking abilities (Fisher & Scriven, 1997).

Interpretation

Interpretation is simply how one clarifies, understands and accurately describes an expressive activity such as a film/video, a speech, or a drama. Interpretation is also how one comes to understand, clarify or accurately describe actions, behavior, body language or graphics. Interpretation, like explanation, usually involves coming up with and

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choosing the best of many alternatives. A very important tool used in interpretation is defining terms or concepts, because defining concepts and terms are often helpful ways to clarify or express something. Interpretation also involves understanding behaviors. This effort usually requires considerable "empathic power" (Fisher & Scriven, p.36). Some people, to some degree, can learn to be empathic by continued rehearsal at changing roles in a group made up of people whose situation others are asked to emulate and who would then be in a position to identify weaknesses. For example, the fallacy of the straw man could be demonstrated in the aforementioned group setting. The straw man fallacy is portrayed when a person disregards someone's stated position and replaces the position with an exaggerated, misrepresented or distorted form of the position (Fisher & Scriven, 1997).

Evaluation

One of the main themes of Fisher and Scriven's conception of critical thinking is evaluation. In fact, they refer to their conception of critical thinking as an evaluative conception. Evaluation is the method of determining the value, quality, worth or merit of something. A general field of evaluation exist which covers program evaluation, product evaluation or personnel evaluation. However, all that is needed for critical thinking evaluation are the particular skills of judging argumentation, presentations and so forth. The skills used in other disciplines to evaluate a product or a program are not needed. Critical thinking involves a real specialized type of evaluation. For instance, critical thinking may influence us towards a debate, an inquiry, an opposing example or a description of an assumption, instead of an evaluative judgment, although evaluative judgments are drawn throughout the process (Fisher & Scriven, 1997).

While there are sixty terms that can be used to express evaluation the basic critical thinking terms used in critical thinking evaluation are valid, plausible, probable, true, provable or reliable (Fisher & Scriven, 1997). For instance, what is being evaluated is the plausibility of an argument or different presentations as set forth by the presenter. To illustrate, the results of a critical thinking response has two parts. First, a conclusion is stated. Secondly, the justification for the conclusion is presented. The results of the critical thinking response to presented in the form of an argument (Kurfiss, 1988). In the framework of critical thinking, an argument is simply a set of reasons given for the reader or hearer to believe the presenter's stated conclusion (Fisher, 2001).

Observations

Fisher and Scriven's conception of critical thinking suggests that critical thinking is used to evaluate and interpret. Now, the discussion moves to what are the things that one evaluates and interprets. Part of what one evaluates and interprets is observations. Observations take place through the use of various forms of sensing such as feeling or hearing. In other words, one normally evaluates and interprets what one observes through the senses (Fisher & Scriven, 1997).

To illustrate, most Americans get their news reports from the television. For this reason, it is very important for people to cultivate their critical thinking skills to understand what they observe in news clips. For example, during the Gulf War news coverage "everyone saw footage of heat-seeking missiles going down the chimney of installations in order to blow them up, or footage of ground-based missiles intercepting incoming enemy missiles" (Fisher & Scriven, 1997, p.57). The critical thinking quiz for those who viewed the news clip would be the number of people who questioned the

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number of targets that were missed but were not a part of the footage. The uncritical

viewer would believe that the footage was impressive and demonstrated the success of

these missiles. However, after an investigation, it was determined that our missiles were

greatly ineffective. The uncritical viewer was in fact being shown a portion of selective

successful footage from among a lot of failures. Further, Fisher and Scriven (1997) say,

"Any approach to critical thinking that supposes the critical thinking does not come until

someone says something, is missing much of the power of critical thinking" p. 57.

Approaching observations as part of a main goal of critical thinking is somewhat unusual

albeit becoming a more and more popular component of Fisher and Scriven's concept.

The conventional view of critical thinking usually emphasizes spoken or written

information as opposed to applying critical thinking to observations (Fisher & Scriven,

1997).

Communications

Reference to Fisher and Scriven's concept of critical thinking, communications

are also part of what one evaluates and interprets. Communications are definitely

different from information in that the intent of communications is not always to express

information. A few important exceptions are commands, literature and questions.

Commands usually ask for action and questions usually ask for information. Commands,

literature and questions usually require interpretation and clarification before an adequate

response can be made. Basically, Fisher and Scriven (1997) are saying that critical

thinking is applied and manifested through some communications but not all

communications. For example, normal signals to the band members from the band

director requires an immediate pertinent response and critical thinking is not applied

On the other hand, if a question is posed as to whether a person believes in affirmative action, a critical thinker would ask the inquirer to clarify their meaning of affirmative action (Fisher & Scriven, 1997).

In order to understand communication, one must have knowledge of the differences of meaning in a complicated language. Moreover, the process of interpreting communication also involves some discernment about linguistic ability, intent, others' situations, audiences and originators. Communications that originate with the communicator can serve as one of the best manifestations of critical thinking provided that the subject matter is suitable and if the subject matter clears all the barriers of the standards of critical thinking. For example, suitable subject matter might be a perceptive criticism of a politician's reasoning that we should raise taxes to increase revenue to pay for smaller class sizes at the elementary schools (Fisher & Scriven, 1997).

At times, critical thinking may only be useful to the thinker. For instance, identifying a loophole in a marketing piece for an analgesic or an automobile would benefit the thinker. However, if one wants to relate the outcome of one's thinking to another person or substantiate one's thinking, critical thinking is required. It is required because it is used to communicate just as it was applied to the marketing piece about the analgesic or the automobile. Consequently, one must use such vital requisites as concision, clarity and the pairing of vocabulary to audience to one's own communication. For example, if one is presenting to a group of marriage and family therapist, one would choose clear, concise words which are familiar to the discipline of marriage and family therapist. Fisher and Scriven (1997) say, "Doing this will simulate what others do in

using critical thinking to assess your communications to them, and the results will increase the success of your communications" (p.40).

Finally, about communications Fisher and Scriven (1997) say that one has to place one's thoughts on paper in order to examine them. In situations involving critical thinking, it is good to externalize one's thoughts in writing. By placing one's thoughts outside one one's self one can apply the same critical thinking skills that one has learnt to apply to communications created by others. In some cases to verbalize one's thoughts to sufficient to examine them critically. The effect will be improved communications. Specific formulation is the most effective way to clarify and a systematic method is needed for actual communication. Therefore, Fisher and Scriven (1997) say "…we should regard the effective encapsulation of critical thinking into a communication format, whether the presentation is intended for others or yourself, as a key part of critical thinking" (p. 40).

Information

According to Fisher and Scriven's concept information is also something that one evaluates and interprets. The usual way to define information is to distinguish factual knowledge from basic data. Factual knowledge is considered information because substantial cognitive work has occurred to produce the factual knowledge. An example of basic data would be the figures or mere descriptions acquired from observations or measurements. It is commonly believed that genetic triggering, computation, inspiration, reflection and reasoning are sources of information on which critical thinking is focused. Critical thinking is used to interpret and evaluate this information. For example, attempting to determine whether the outcomes of a research study about an innovative

pain killer reveals that it is better than existing pain killers for migraine headaches would be applying critical thinking to evaluate and interpret this study or this information source (Fisher & Scriven, 1997).

Argumentation could be implicit or explicit, external or internal or debatable. Arguments can include hypothetical debates. For example, instances where the veracity of the premises is not affirmed but implied if for instance, the premise happens to become true or to be true. Information is not exactly argumentation. Thus, the two are addressed separately. A distinction exists between inferences and arguments, although dictionaries do not reflect this distinction. About this distinction, Fisher & Scriven (1997) say that, "Arguments are explicit presentations of premises from which explicit conclusions are drawn: inferences are the steps from premises or observations, etc., and the term is often applied just to the conclusions from such steps" p. 44. Obviously critical thinking can be applied to both inferences and arguments.

Argumentation

Argumentation is the final target that one interprets and evaluates in the context of critical thinking. Here, one interprets and evaluates how well a set of claims supports the conclusion of the author or the presenter. The set of claims contain reasons for accepting the conclusion. An argument is always intended to cause the audience to believe the conclusion drawn by the set of claims. Generally, words and phrases such as hence, so, therefore, consequently, the evidence is or it follows that, are indicators that reasons are being introduced to back the conclusion (Fisher, 2001). For example, if asked whether marijuana should be legalized, I could argue that many very sick people who experience excruciating pain say that marijuana is one of the few things that eases their pain;

therefore marijuana should be legalized for medicinal purposes. The conclusion is that

marijuana should be legalized for medicinal purposes. The reason is given to support the

conclusion. Part of evaluating this argument is to determine whether the argument is a

strong argument or a weak argument. For the argument to be strong, it has to be both

important and related directly to the question (Fisher & Scriven, 1997).

Halpern's Conception

While Fisher and Scriven's concept of critical thinking mainly addresses the skill

dimension, Halpern's concept and Facione's concept addresses both the dispositional

dimension and the skill dimension. Halpern (1998) defines critical thinking as using

cognitive strategies or skills that improve the probability of a good outcome. It is the

kind of thinking used to explain thinking that is goal directed, reasoned and purposeful.

It is also the type of thinking concerned in making decisions, calculating likelihoods,

drawing inferences and solving problems, "when the thinker is using skills that are

thoughtful and effective for the particular context and type of thinking task" (Halpern,

2003, p. 3)

Halpern (1998) suggests that the disposition to think critically should be separate

from the skill dimension of critical thinking. Halpern (1998) makes this distinction

because she says that someone may have superb critical thinking skills and may know

that critical thinking skills can be applied to a situation but may choose not to invest the

mental effort involved in using the critical thinking skills. A part of learning about

critical thinking is learning when to invest in the mental effort necessary to apply critical

thinking to an argument or a problem. Halpern (1998) says that critical thinkers portray

certain attitudes or dispositions. These certain attitudes or dispositions include the

willingness to tackle and stick with a difficult task. Also, a critical thinker makes a habit of using plans. They are able to restrain from impulsive activity or behavior. A critical thinker is open minded or flexible.   They are willing to let go of strategies that are not working in an effort to self correct. Finally, about attitudes or dispositions Halpern (1998) says that critical thinkers exhibit, "an awareness of the social realities that need to be overcome (such as the need to seek consensus or compromise) so that thoughts can become actions" (p.452).

Halpern (1998) suggests a brief taxonomy on critical thinking skills. The first skill is verbal reasoning. These skills are needed in order to defend against and understand the influential techniques that are ingrained in daily language. The second skill is argument analysis. Similar to Fisher & Scriven (1997), Halpern (1998) also describes an argument in the context of critical thinking as a group of statements with at minimum one conclusion and the argument is supported by one reason. In daily situations, arguments are difficult because arguments often include reasons that "run counter to the conclusion, stated and unstated assumptions, irrelevant information, and intermediate steps" (Halpern, 1998, p. 452).

Thirdly, the critical thinking skill needed is in the area of hypothesis testing. The explanation for this section is that humans behave like curious scientists to predict, explain and control events. Among the thinking skills used in hypothesis testing are generalizability, identification of the need for a sufficient sample size, correct assessment and validity. The fourth skill involves addressing uncertainty and likelihood. The rationale for this skill is that we can only be positively assured about a limited number of things in life. Consequently, the accurate use of exclusive contingent and cumulative

probabilities should play an important part in nearly every decision. The final critical

thinking skill involves problem solving and decision making. In a way, every critical

thinking skill is used   to solve problems and make decisions. However, mainly problem

solving and decision making skills is concerned with creating, selecting and judging

among alternatives. This group of skills gives directions for a "skills approach to critical

thinking" (Halpern, 1998, p. 52). The skills cover a very wide area. The advantage is

that skills are generalizable and teachable. Therefore, the skills can help to close the gap

"between thinking skills that can be taught in college and those skills that are needed in

the workplace" (Halpern, 1998, p. 452)

Paul and Elder's Conception

Unlike Facione (1990) and Halpern (1998) who describe critical thinking in terms

of the skill and disposition dimensions, the prevailing dimension in Paul and Elder's

conception is the disposition dimension. Paul and Elder (2001) describe critical thinking

as follows:

> Critical thinking is that mode of thinking about any subject,
>
> content, or problems- in which the thinker improves the quality
>
> of   his or her thinking by skillfully taking charge of the structures
>
> inherent in thinking and imposing intellectual standards upon
>
> them. (p. xx).

Paul and Elder (2001) further describe their conception in terms of strong and

weak sense critical thinkers. For instance, strong senses critical thinkers are fair-minded.

In fact, the essence of Paul and Elder's definition of critical thinking is fair-mindedness.

To become a fair-minded person one must have certain interdependent and interrelated

characteristics of mind. Paul and Elder's emphasis on the certain interdependent and interrelated characteristics of mind seems to support the disposition dimension.

The interdependent and interrelated characteristics of mind include intellectual humility, intellectual integrity, intellectual autonomy, intellectual empathy and intellectual courage. Other characteristics of mind are intellectual confidence in reason, intellectual fair-mindedness, intellectual perseverance, and intellectual sense of justice. Intellectual humility implies that one is not going to pretend to know more than one knows. It also involves being conscious of one's prejudices, one's biases, the extent of one's ignorance and the limitations of one's point of view. To have knowledge of our ignorance can help to identify habits of mind, false beliefs, and prejudices that results in defective learning (Paul & Elder, 2001).

Intellectual integrity means that one holds oneself to the same standards one wants others to meet. It also involves the requirement to be honest to one's own thinking. It means to practice what one believes others should do. To have intellectual integrity means that we evaluate our own actions and thoughts for inconsistencies and discrepancies.   Intellectual autonomy involves thinking for one's self. An independent thinker does not rely upon others' to guide their thoughts or actions. The critical thinker processes issues and situations for themselves and they don't accept things without justification. They monitor their own thinking and they are open to acknowledge their mistakes (Paul & Elder, 2001).

Intellectual empathy is putting one's self in others' places so as to honestly understand them. It is attempting to see their viewpoint from the angle of their ideas, assumptions, and their reasons. This trait also reminds us of times when we were wrong

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in the past in spite of a firm belief that we were right. This trait helps us to reflect on the past in regards to the current situation (Paul & Elder, 2001).

Intellectual courage involves the willingness to fairly confront opinions, beliefs, or ideas about which one has intense negative emotions which have not been investigated. It is the awareness that some ideas considered threatening or senseless are at times justified by rationale. It takes intellectual courage to realize that some threatening or senseless ideas could be partly true. It also comes forth when we realize the distortion in some firmly held beliefs in our social groups. Confidence in reason is the next trait needed for critical thinking. For the person that practices this trait, reasonability is a very valuable focus of one's life (Paul & Elder, 2001).

The individual that portrays intellectual perseverance deals with intellectual problems in spite of the frustration involved in facing the problem. Some intellectual problems are difficult and don't have easy solutions. This person remains rational in the midst of irrational opinions of others. The person is willing to battle with perplexing and unresolved inquiries over the course of time. Finally a person who portrays an intellectual sense of justice practices being fair to opposing views. This person is bound to be open minded about an opposing view to ensure that they are not being condemned out of bias or ignorance (Paul & Elder, 2001).

Ennis' Conception

Like the skill dimension of Facione (1990), Fisher and Scriven (1997) and Halpern (1998) Ennis' (1996) skill dimension also involves hypothesizing, analyzing, reasoning, drawing references, stating arguments and generating alternatives. While the prevailing characteristic of Ennis' conception is the skill dimension, he briefly discusses

the importance of the disposition dimension of critical thinking. He discusses 3

important things about the disposition dimension. First, he says that one must care about

deriving at the best and most unbiased answer that one can given the circumstances.

Secondly, Ennis says that one must have the disposition to care to be clear and honest in

regards to what is thought, written and said. Thirdly, the dignity and worth of every

person must be cared about (Ennis, 1996).

Ennis (1996) describes critical thinking as six essential steps. The six step

approach includes focus, reasons, inference, situation, clarity and overview. The first

step is to focus. Ennis (1996) suggests asking the following questions, "'What is this all

about? What is this person trying to prove?'" (p.5). Ennis warns that there may be

several things to focus on. The questions will help one to know what to focus on. Ennis

points out that when presented with an argument, the focus most often involves the

resolve of the argument. Next, one must have some idea about the reason or reasons

given to defend a judgment. A decision made must be made as to whether the reasons are

agreeable before a definite conclusion about an argument can be made. When one

presents his or her own argument, the person must present their own reasons.   The pros

and cons should be considered before making a decision (Ennis, 1996).

When doing an experiment or investigating something, the aim is to find the

evidence that can become the reasons or reason for a judgment. One must decide

whether one agrees with the reasons because they are essential to drawing conclusion.

Finally, when evaluating one's own argument, one must recognize and decide whether

the reasons are acceptable. The next intellectual feature is judging the inference. While

judging the inference, it must be decided whether the reason, if agreeable, would defend

the conclusion. A good inference suggests that the reasoning is acceptable. In other words, a good inference says that the reasoning process is an intelligent one (Ennis, 1996).

We must judge the acceptability of the reasons as well as the inference. When judging the inferences, it is important to look at whether believable alternatives to conclusions exist. Ennis (1996) mentions that if alternatives are not pursued; possibilities of alternatives will be ignored. The next intellectual step is to consider the situation. The situation gives focused thinking meaning and dictates some of the guidelines. The situation considers interests, group memberships, prejudices, feelings, knowledge, allegiances, histories and the people involved and their purposes. Both social and physical surroundings are considered. All of these elements are important to the thinking process. Further, considering the broader community is important to the purpose of what the thinker is judging or doing (Ennis, 1996).

Clarity is the next on the list of Ennis' critical thinking steps. As part of the critical thinking process, Ennis recommends clear writing and speaking. He suggests clarifying meanings of terms to ensure that the terms are defined the same by all involved. Clarity involves contrasting terms that lessens disruption of the issue at hand. The last element in the critical thinking process is overview. During the overview and throughout the process, you look over conclusions, decisions and you evaluate the experience to determine whether it is still sensible. You check everything (Ennis, 1996).

Browne and Keeley's Conception of Critical Thinking

Among the similarities to Ennis (1996), Halpern (1998), Fisher and Scriven (1997), Facione's conception and Browne and Keeley's conception also discusses

drawing conclusions, reasoning to support conclusions, argument analysis and examining evidence. Browne and Keeley (1998) offer a conception of critical thinking that involves asking a set of questions. For an example, by using the critical questioning strategy, Browne and Keeley (1998) say that the deficiencies in what someone says can be searched out. Browne and Keeley (1998) say that the first critical question is "What are the issue and the conclusion" (p. 14)?   The issue is a controversial topic or question open for discussion. It is the catalyst for the conversation. Descriptive issues raises inquiries about the precision of descriptions of the present, past and future. Prescriptive issues concern what is right or wrong, good or bad or what we should do. The conclusion is what the speaker or writer wants you to believe. Conclusions are inferred and come from reasoning. Conclusions are beliefs that need other beliefs to support them (Browne & Keeley, 1998).

According to Browne and Keeley (1998) the next critical question is "what are the reasons" (p.23)? Reasons are rationales or explanations as to why we should accept a certain conclusion. An argument has two components, a conclusion and the alleged reasons supporting it. Critical thinking is needed to determine the quality of an argument. Browne and Keeley (1998) write the next critical question as, "What words or phrases are ambiguous" (p. 35)? A phrase or word is ambiguous when its definition is so unclear in the midst of the argument that we need clarity before the reasoning can be adequately judged. The context in which an ambiguous statement is made is a guide to its meaning. The authors define context as the words or statements before and after the possible ambiguity, traditional use of the word in regards to the issue, and the speaker's or writer's background (Browne & Keeley).

Browne and Keeley (1998) say that the next critical question is "What are the value conflicts and assumptions" (p. 52)? Values are opinions that people see as important. The quality of human behavior is measured by the standards of conduct provided by values. A value assumption is a firm choice of one value over another in specific circumstances. If a value assumption is added to the reasoning, the reasons will logically support the conclusion. An assumption is an unspoken opinion that defends the specific reasoning.

Browne and Keeley (1998) write the next question as, "what are the descriptive assumptions" (p. 66)? A descriptive assumption is an unspoken opinion about how the world will become, is or was. Reasoning typically has several assumptions. The assumptions are identified between the process of reasons to conclusions. Knowing the assumptions helps one to determine how well the conclusion is supported by the reasons. Browne and Keeley (1998) say that the next critical question is, "Are there any fallacies in the reasoning" (p. 78)? The authors warn to be aware of trickery or fallacies in reasoning. Some common fallacies include presenting reasoning that demands incorrect assumptions. Advocating for the conclusion that is contingent on the conclusion's stance as true is a common fallacy (Browne & Keeley, 1998).

The last question by Browne and Keeley (1998), to be addressed is "How good is the evidence: Intuition, Appeals to Authority, and Testimonials" (p.95). We can refer to a claim as fact when the quantity and quality of the evidence supports the claim. Intuition can be a source of evidence; however a critical thinker would look for other kind of evidential support to the claim. Another source of evidence can be found in expert opinions or authorities. The authors warn that sometimes authorities are wrong.

Though person testimonials can be a source of evidence, the authors caution that personal testimonials should not be taken seriously until we research biases, values, interests and expertise behind them (Browne & Keeley, 1998).

In summary this part of the literature review is about 6 scholars' concepts of critical thinking. These definitions give us guidelines for applying critical thinking to any aspect of life particularly adult education and the professions. The core components derived from the 6 definitions include a dispositional dimension and/or a skill dimension of critical thinking. The dispositional dimension is required by some scholars before one can be considered a critical thinker. For example, Paul and Elder (2001) say that a strong sense critical thinker is fair-minded with certain interdependent and interrelated characteristics of mind such as intellectual humility, intellectual integrity, and intellectual autonomy. Similarly, Facione's Delphi report suggests 7 dispositional components of critical thinking which includes seeking truth, self confidence or inquisitiveness. However, Facione's skill dimension or cognitive skills include interpretation, analysis, evaluation, inference, explanation and self regulation. Unlike Paul and Elder's and Facione's concepts of critical thinking, Ennis's Browne and Keeley's and Fisher and Scrivens approaches are more purely related to the skill or cognitive dimension. For instance, Ennis's 6 item approach to critical thinking are focus, reasons, inference, situation, clarity and overview. Fisher and Scriven's concept of critical thinking includes 4 levels of activity. In other words the activity is something that is done. Synthesizing all the concepts, the important components of the skill or cognitive component are questioning, reasoning, stating premises, drawing inferences, drawing conclusions, evidence gathering, analyzing, reflecting, interpretation, evaluation, explanation, making

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assumptions ,clarity in speaking and writing about the issue at hand and self regulation. The use of the skill dimension of critical thinking appears to transfer across disciplines.

Table 1

Critical Thinking Concepts

Concept	Description
Peter Facione The Delphi Report	CT has a dispositional dimension and a skill dimension. Dispositions include truth seeking, open mindedness, analyticity, systematicity, self-confidence, and inquisitiveness. The skill dimension includes interpretation analysis, evaluation, inference, explanation, and self-regulation.
Fisher & Scriven (1997)	Critical thinking (CT) is skilled thinking which means general standards of good thinking such as adequacy, fairness, accuracy, and notably relevance 4 levels of activity involved in critical thinking: **Level 1** – Reactive Processing **Level 2** – Investigatory and Proactive **Level 3** – Analytical or Reflective (thinking about one's thinking) **Level 3a** – Critical thinking about external sources **Level 3b** – Apply critical thinking to self, school, family, an country **Level 3c** – Mastering the use of logical terms to facilitate the transfer of critical thinking skills in all disciplines **Level 4** – Creating new principles or concepts in critical thinking
Halpern	CT is using cognitive strategies or skills to improve the probability of a good outcome.

"Brief Taxonomy on CT"

"Verbal Reasoning"

"Argument Analysis"

"Uncertainty & Likelihood"

"Problem Solving & Decision Making"

Paul & Elder	Represents a fair-minded person with certain interdependent and interrelated characteristics of the mind. In short, intellectual humility, integrity, autonomy, empathy, courage, confidence, and perseverance are just a few characteristics that compose a well-rounded mind.
Ennis	The approach is a series of steps that break down the critical thinking process. In actuality, the first step is to identify the problem. Moreover, a massive search to find evidence that supports conjectures. One must identify all possible alternatives. However, learning to acknowledge the difficulties that arise are also important. Clarity becomes a key component at the end of this process. Finally, after a strong evaluation then a decision can be obtained based on the information that has been gathered.
Browne & Keeley	Asking 7 critical questions:

"What are the issues and the conclusions?"

"What are the reasons?"

"What words or phrases are ambiguous?"

"What are the moral conflicts and assumptions?"

"What are the descriptive assumptions?"

"How good is the evidence: intuition appeals to authority and testimonials?" |

Critical Thinking in Secondary and Post-Secondary Education

In educational settings that typically do not serve adult learners, secondary and post-secondary institutions, there is a large body of knowledge about critical thinking. Borup (2000) says that critical thinking should be evaluated as a theory of literacy, learning and knowledge which can provide another option to the didactical approach to teaching which is at present the basis of all teaching around the world. Similarly, Fisher (2001) says that critical thinking is akin to writing and reading and critical thinking should be directly taught rather than indirectly taught as a large number of teachers assert to do in their approach to teaching a subject. Educators and researchers usually agree that critical thinking is an important skill to be taught in higher education. However, the debate continues as to how critical thinking skills can be taught by the educator (Tusi, 2002).

Critical thinking involves the ability to challenge one's own thinking. Additionally, critical thinking requires applying knowledge, competence, and assumptions. When applying critical thinking skills, one is capable of getting outside of one's self and focusing on the value of one's thinking (Behar-Horenstein & Niu, 2011). Further, the process of critical thinking calls for reasoning, initiative, active argumentation, analyzing complex alternatives, and envisioning (Simpson and Courtney (2002).

Students can use critical thinking to examine reading assignments. The student with a critical eye examines for relevance, accuracy, depth, significance, breath, precision, fairness and logic. In fact students' reading improves as they evaluate what they read. The use of critical thinking helps the student to learn to switch from

metacognition to cognition. In other words, the student learns to switch back and forth from thinking about what they have read to thinking about their thinking. The student also becomes aware that the author's thinking is separate from the student's thinking. The student always keeps in mind that there are essential elements to thinking (Elder & Paul 2004).

For instance, thinking is always for some purpose within a particular view point. There are assumptions within the viewpoint which leads to consequences and implications. When we think, we use concepts, theories and ideas to interpret facts, data and experiences, to solve problems, resolve issues and answer questions.   Mastering these essential elements to thinking gives the student strong intellectual tools that help the student to improve thinking. The student begins to understand that all reasoning includes the essential elements to thinking and these essential elements are built into the operations of the mind (Elder & Paul, 2004). Students have to learn to present supporting evidence to defend their thinking (Lipman, 1988).

More and more educators are doubting the efficiency of teaching critical thinking skills indirectly by use of the content on the subject at hand (Borup, 2000; Celuch & Slama, 1999: Fisher, 2001; Pither & Soden, 2000).   Therefore, much of the literature about critical thinking in secondary and post-secondary institutions concerns teaching critical thinking skills. Selman (1989) suggests that the skills or process approach, the logic approach, the multi-aspect approach, the problem-solving approach and the information processing approach are five predominate ways to teach critical thinking.

The skills or process approach was one of the first approaches to become popular. The theory behind this approach stated that critical thinking could be viewed as a list of individual teachable processes or skills. Capabilities such as synthesizing, classifying and analyzing are viewed as critical thinking skills. This method is captivating because it is manageable and straight-forward. A teacher can create assignments whereby these skills can be practiced by the students. For instance, the teacher may assign the student to classify buttons or rocks. The assumption is that classifying is a skill that can be transferred to other situations. If this assumption is true then critical thinking skills would be a set of general skills that one could apply to all situations. While critical thinking skills lists remain a part of almost every curriculum; few people are captivated by the skills approach. Selman (1989) suggests moving away from the idea that critical thinking is concerned with a set of skills.

The problem solving approach encourages students to logically and systematically solve problems using a set of steps. First, the students are asked to describe the problem and create hypotheses. Next, the students are asked to collect and test the evidence. And finally the students are asked to reject or accept the hypotheses. For an example, the process could include examining a hypothetical problem related to a topic of discussion in social studies. Additional uses of the problem solving approach could include ways to save paper in the classroom, ways to set up a new student welcoming program or ways to reduce the number of fights on the school grounds. Making decisions and judgments based on sound evidence in school may lead to use of the problem solving approach in their lives beyond the school setting. By using the problem solving approach, students

can recognize problems and find solutions to the problems. This approach should consider expressing societal and personal values that are underneath judgments. Selman (1989) suggests that while not all critical thinking is based on the problem solving approach, it is definitely a beneficial model.

According to Selman (1989), the remaining basic approaches to teaching critical thinking are the logic approach, information processing and multi-aspect approaches. Briefly, the logic approach suggests that good thinking and logical thinking are equal. Generally, students learn to use conclusions and premises and to change arguments into reasoning processes by which conclusions are drawn. For an example, a major premise could suggest that placing huge numbers of chemicals in small rivers could poison fish. The minor premise could state that a particular mining company is placing huge amounts of chemicals into small rivers as a side product of their strip mining process. The conclusion may be that this mining company is poisoning the fish. This kind of formal logic is usually taught in university courses in critical thinking (Selman, 1989).

The information processing approach is a portion of a wide cognitive science point of view that suggests comprehending and good thinking instruction, to be breaking down tasks into tiny pieces of data and processing steps. The idea behind this approach suggests that people automatically seek to make meaning of their world.   Therefore, in order to satisfy their innate need to understand their world, they structure and analyze their experiences. People using this method will find similarities, differences, observe and compare and form generalizations and concepts related to similarities (Eggan & Kauchak, 1988). This method seems to be sufficient and a beneficial way of seeing how people understand new information. The notion of getting students to look for

relationships through observing and comparing certainly helps the students to understand context. For example, students may be assigned to compare and observe through discussion and reading, the various types of shelter and food used by Native Americans in various regions of North America. Further, the students may be asked to look at the ways in which shelter and food are related to religion, art and mythology. However, as for making decisions and judgments, information processing is not a complete model. Accomplishing feasible negotiations and solving urgent world problems goes beyond the ability to see patterns, to observe and compare. They require decision making, tact, originality, diplomacy and awareness and respect for people's strong values (Selman, 1989).

The multi-aspect approach is concerned with the many propensities, attitudes and abilities that are necessary to be recognized as a critical thinker. Norris and Ennis (1989) are advocates of this approach. Norris & Ennis display lists of dispositions which include constructing a statement of the question or thesis, finding reasons, staying up to date on information and being flexible. Other abilities of a good critical thinker include judging the credibility of a source, concentrating on a question, analyzing arguments, judging and making observations, deductions, inductions, and judgments about values (Norris & Ennis, 1989). This model is quite complex and may not be attractive to teachers who desire a simpler way of teaching critical thinking (Selman, 1989).

The literature reveals other approaches to teaching critical thinking that mirror some of what Selman describes in the above five main approaches to teaching critical thinking. For example, in a freshman level biology course, critical thinking exercises were conducted. The main goal of the exercises was to increase students' capability to

form a succinct, "logically persuasive line of reasoning" about why an assertion should

not be accepted or why the assertion should be accepted (Tyser & Cerbin, 1991, p. 41).

In the first step, the students are asked to read a brief science news article and

identify the evidence from the information. Next, they are asked to either accept or reject

the claim based on the evidence. In other words, they are to judge the validity of the

claim. Then the students are asked to come up with a set of questions which include a

couple of hypothetical claims suggested by the teacher regarding the article. A week

later, the students are asked to take a quiz derived from the set of questions from the list

of questions about the article. If adequate evidence exists, the student's reasoning

approach would include one statement encapsulating pertinent evidence and one

statement about the inference drawn as a result of the evidence. They will state whether

inadequate evidence exist to validate the claim. The students' line of reasoning should be

directly related to whether the claim is accepted or rejected (Tyser & Cerbin, 1991).

Celuch and Slama (1999) advocate teaching critical thinking skills which can be

applied to any business course. They preface this notion by suggesting that students need

to be lifelong learners, which prepares the students for future challenges. Celuch and

Slama (1999) feel that the best way to achieve this goal is to focus on critical thinking

skills. The increase in critical thinking skills by way of self-evaluation along with the

application of critical thinking skills to realistic problems within a particular discipline

are useful in cultivating some important intellectual traits that "contribute to the lifelong

pursuit of knowledge and the capacity to solve future problems" (Celuch & Slama, 1999,

p. 135).

The intellectual traits mentioned are intellectual fair-mindedness, intellectual humility, intellectual faith in reason, intellectual courage, intellectual integrity and intellectual empathy (Paul & Elder, 2001). In order for students to learn critical thinking skills in a course, the course must be outlined as a process of thinking useful to resolving the problems presented within a specific field of study rather than a course outlined with content area only. The concepts and language along with the thinking related to solving problems in that field of study must be mastered by the students. While it might appear that content is not as important as solving problems in this method, in fact the content is learned more intensely because of the critical thinking approach to the course (Celuch & Slama, 1999).

Students' learning improve when they are participating actively in increasing their thinking skills, in other words, becoming better evaluators of their thinking. Within this significant realm of critical thinking ideology, there are learning goals and teaching goals. The teaching/learning approach is based on the assertion that good thinking is a basic skill of life. As a citizen, businessperson or as a student, good thinking brings forth advantages, on the other hand poor thinking leads to disappointment, wastes energy and time and causes problems (Fountain for Critical Thinking).

This higher realm of critical thinking ideology is concerned with building an understanding between people and the development of intellectual excitement. Building an understanding between people involves inspiring productive student feelings as a way of fostering the optimum level of thinking and encouraging an environment of respectfulness toward the students. During the intellectual excitement process, the students frequently experience an increase in good thinking about the subject matter. The

goals related to this higher level of critical thinking are concerned with how to increase

students' thinking within a subject area and understanding how to think. The students'

learning improves when their thinking improves. Further, proficiency in critical thinking

results in better listening skills, reading, speaking and writing skills (Celuch & Slama,

1999).

<center>Critical Thinking in Adult Education</center>

Critical thinking is not a frequently used term in the adult education field.

However, the terms critical reflective practice and reflective practice are used frequently

in adult education. The terms critical reflective practice and reflective practice appear to

overlap. Both terms are used in discussions about experiences in practice. Reflection is

concerned with the practitioner's ability to analyze decisions, biases, opinions and

assumptions (Mishoe, 1995).   Consequently, reflection is mentioned throughout the

literature as a component of critical thinking. On the other hand, critical reflection

involves the practitioner accepting new ways of practice and inquiry in regard to the

effects of classroom dynamics on the students as well as the teacher. For instance,

according to Brookfield (1995), the critically reflective teacher looks back on daily

occurrences in the classroom.

Further, the critically reflective teacher may have to face strong emotions

generated by actions in the classroom. The critically reflective practitioner becomes

concerned with control and power in the classrooms. The critically reflective journey

may involve promoting a more democratic environment in the classroom. Perhaps

critical reflection of the practitioner is mainly concerned with awareness of actions and

influences in practice and examining alternative assumptions.   Examining alternative

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assumptions is also mentioned in the literature as an aspect of critical thinking. Consequently there appears to be overlap in the terms, critical reflective practice, reflective practice and critical thinking. Critical thinking seems to be a term that can be applied to daily life in ways other than experiences in practice. So, critical thinking appears to be a term that can be used to understand any subject or situation. Further, several scholars studied critical thinking in their professions. Mishoe (1995) studied critical thinking in respiratory care therapy. Goodfellow (1999) also studied critical thinking in respiratory care therapy. For these reasons, the researcher chose to discuss critical thinking in marriage and family therapy.

There is some literature that examines critical thinking with adult learners. However, only a few adult education scholars have addressed the study of critical thinking in adult education (Brookfield, 1988; Garrison, 1991, Goodfellow, 1999; Kenimer, 1999; Mishoe 1995; Myers, 1986). Brookfield says, "I think critical thinking is one useful dimension of adult learning to study"…(personal communication Oct. 28, 2003).

Myers (1986), an educator of adults was concerned that the quantity of information accessible through the media and computers appeared to have surpassed college students' capability to use and process this information. For that reason, universities and colleges need not continue to serve as depositories of knowledge and it is no longer necessary for instructors to serve as information givers and lecturers. Therefore, it is becoming more and more urgent that students become skilled in reasoning and thinking in order to use and process the abundance of information that is imminently accessible (Myers, 1986)

More specifically, Myers (1986) wanted to help college instructors as well as any other educators to develop useful ways to teach critical thinking skills. Myers (1986) suggest that critical thinking in all disciplines use fundamental components of logical reasoning, particularly those concerned with making accurate inferences or applying deductive reasoning to draw sound conclusions. Likewise critical thinking in any filed of study often looks like analysis and or problem solving. Regardless to the particular approach used to teach critical thinking an instructor must introduce some framework or some direct viewpoint to analyze the methods in the discipline. Myers' experiences with instructors who attempt to teach critical thinking revealed that many instructors as well as other experts found it difficult to present their analytical framework for study of critical thinking within their particular discipline (Myers, 1986).

If the instructor doesn't introduce some framework, the students are left to analyze the material using their own framework. Over the years Myers conducted several workshops designed for teachers to learn how to teach critical thinking. After these workshops, Myers was frustrated. He felt that for the most part, the workshops were very theoretical. He also observed that the workshops' format was limited as far as providing adequate time for teachers to attempt to tackle the challenge of clarifying their critical thinking idea. A further observation was that one time workshops did not provide the emotional support required for making important changes in the way one teaches (Myers, 1986).

After several disappointing workshops Myers discovered Carol Holmberg, a colleague was battling with a similar problem in regards to teaching critical thinking. For years Holmberg had been trying to teach adult learners to critically read literature.

Interestingly, Holmberg had experienced several similar frustrations that teachers of traditional undergraduates experienced. Pessimistic about discussion and lecture techniques Holmberg chose to try a novel approach. The main point of Holmberg's model was to portray the instructor's thought processes in the form of a visual. The visual presents one concrete way of understanding critical thinking in a particular discipline. The visual model is one way to present the instructor's analytical framework for the course (Myers, 1986). For instance, in literature, one of Holmberg's visuals outlined modes of perception of literature. The modes of perception depicted were the sensory mode, rational mode, imaginative mode and the visionary mode. This visual was designed to move the student's perception from restricted perceptions to more broad interpretations that include the expression of rich imaginative figures of speech and idealized imagery. As a result of Holmberg's teaching critical thinking by use of a visual model of perception in literature, the adult learners increasingly developed critical ways of understanding literature (Myers, 1986).

Myers was so impressed with Holmberg's visual model of teaching critical thinking that he asked her to present her model in several of Myers' seminars with instructors. The instructors who participated in Holmberg's seminars found that the visual model was much more beneficial than verbal or written exercises at helping them to understand their person way of thinking about the course material. The concrete visual model did more to help the instructors' to make their critical thinking ideas explicit than discussing the material could ever achieve (Myers, 1986).

Another scholar who has examined critical thinking in adult education is Brookfield (1987). He was concerned that critical thinking be applied to adults' everyday

lives. In fact he says that critical thinking is one of the most important task an adult can undertake. Brookfield offers the most comprehensive insight about critical thinking in adult education. Brookfield (1987) describes critical thinking in five phases. The phases include a trigger event, appraisal, exploration, developing alternative perspectives and integration. A trigger event can be either positive or negative. Negative triggers include such things as disability, divorce or bereavement. Brookfield emphasizes that the critical thinking process doesn't always begin with a negative experience. He says that some people begin a critical analysis after a joyous event. He points out that peak experiences can also cause someone to evaluate their priorities (Brookfield, 1987).

The next phase in the critical thinking process is the appraisal phase. We begin to question ourselves and to take stock of the situation. We may fluctuate between denying the situation and minimizing the situation. The third phase is the exploration phase. During this phase, we acknowledge that something went wrong in our lives. We begin to look for ways to understand the contradictions or we look for ways to live with the contradictions. However, we want alternatives that will help us to feel more comfortable with our circumstances. It is also during this phase that we begin to try out new ways of acting and thinking which seem more fitting for what we feel has occurred in our lives (Brookfield, 1987).

Phase four involves developing alternative perspectives. During this time, we begin to behave and think in ways that help us to understand our situations. We choose from ideas, identities or role models previously investigated, which fit our ways of living and our relationships. We begin to trust in our new way of doing things in our life.

During this phase, old ways of thinking and acting are left behind and new ways of thinking and acting are established (Brookfield, 1987).

The last phase of the critical thinking process is integration. After experiencing the value of new ways of living or thinking, we look for ways to incorporate our new perspectives into our lives. Our solutions may be weak and questionable. On the other hand, we may negotiate conflicts to our satisfaction. Attitudes and assumptions may need to be changed.   We may have a deeper sense of conviction about our stances.

Summary of Concepts

As mentioned, Paul and Elder (2001) define critical thinking as that way of thinking about any problem, content or subject which the person increases the quality of his or her thoughts by proficiently taking command of the natural way of thinking and applying intellectual principles. Ennis (1996) defines critical thinking in terms of six essential parts. The parts include focus, reasons, inference, situation, clarity and overview. Fisher and Scriven (1997) define critical thinking as active, skilled evaluation and interpretation of communications, information and observations. All of the aforementioned definitions have beneficial aspects. However, Fisher & Scriven's definition of critical thinking seemed most appealing mainly because it is comprehensive. Once the concept is unpacked, it encompasses most of the aspects of critical thinking revealed in the literature. The active part of the definition is appealing because the critical thinker must have a profound understanding of a discipline or of a real life example. It also involves investigating and showing empathy.

The reflective aspect of the definition makes it interesting because reflection is mentioned throughout the literature as a component of critical thinking. The self-referent

aspect of the definition is relevant to adult education. This is evident when Fisher and Scriven (1997) suggest that the critical thinker must evaluate and analyze their published work as well as other authors' work as part of the self-referent aspect. Among the definitions examined, Fisher & Scriven seem to frequently cite more examples involving adult situations. This definition is also appealing due to its interpretative component. They suggest that this is a reasoning process by which one looks for consequences of the different ways to interpret something. Another essential tool used in the process of interpretation is defining concepts or words. Understanding language is a component of critical thinking. Finally, while conventional views of critical thinking usually emphasize spoken or written information, Fisher & Scriven add observation to their definition. One normally evaluates and interprets what one observes through the senses. The evaluative component comes into effect because one will consider various hypotheses in regards to what was actually seen or heard.

<center>Critical Thinking in Professional Practice</center>

Practitioners also use critical thinking skills when they reflect in action. In reflective practice Schon (1987) states that practitioners have a repertoire of knowledge which includes actions, understandings, images and examples to be used in practice. When faced with an unusual situation, practitioners reflect in action to try to make sense of the situation. They begin to question the assumptions underneath their knowing in action. Reflection in action starts a process of thinking and doing which leads to a more skillful practitioner. Reflecting upon an abundance of practical experiences with complex situations leads to expertise (Bickham, 1998). Benner (1984) states that as practitioners refine and tests hypotheses and propositions; expertise develops.

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Professionals' work is a vital part of society's functioning. Members from the various professions treat our mental and physical ailments, resolve our arguments, train our children, keep track of our money, direct our affairs, assist with spiritual issues and support military missions. One quarter of the work force are professionals. They are the main decision makers for society's large organizations (Cevero, 1988). In today's unstable society, professionals have a great deal of pressure. Society expects professionals to be more socially oriented, ethical and knowledgeable than are paraprofessionals. Professionals are expected to be self-sufficient in their judgments (Baskett & Marsick, 1992).

According to Bickham (1998), continued learning improves the quality of the professional's work and the worth of their help to people. For those who work in numerous professions, training and education in the work place is really continuing professional education (CPE). In fact CPE came about to help professionals to learn on an ongoing basis. The purpose of CPE is to improve professional competence and to increase professional competence. One reason for the rise in CPE in recent years has to do with the increase in the number of professions and the public's growing dependency on the professions. The increase in dependency resulted public demand for competency in ones profession as well as public and legislative efforts towards increase accountability in one's profession. Professional organizations reacted to these concerns with greater focus on certification and licensure, standard of performance and continuing professional education. All professions became concerned about outdated knowledge as new theories, models and new knowledge were advocated, new practice approaches emerged and innovative technologies were promoted. As knowledge about the professions increased,

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the idea of reflection in practice became the typical model of professional learning and development. Therefore, the need for CPE increased as the numbers and importance of the various professions increased (Mott, 2000).

One way that professionals can continue learning in practice is by the use of critical thinking in practice (Bickham, 1998). Critical thinking is a way for professionals to encourage use of their collection of experiences and knowledge to comprehend day to day practice situations. Bickham views continuing professional education and critical thinking as coexisting. He calls for professions to carefully examine burgeoning areas of continuing professional education and critical thinking. Several studies about critical thinking in the area of adult professional practice have been conducted (Goodfellow, 1999; Kenimer, 1999; Mishoe, 1995). For example, Mishoe (1995) used a qualitative approach to study critical thinking in respiratory care practice. As an outcome of her interviews, with respiratory care therapist experts, she identified prioritizing, anticipating, troubleshooting, communicating, negotiating, decision making and reflecting as necessary skills for critical thinking (Mishoe, 1995).

The critical thinking skill of prioritizing, involves planning the expected work schedule and giving attention to the unexpected work situation. Situations are prioritized based on the level of importance. Implementing critical thinking, the therapist performs work in an optimum manner. The therapists were able to express clearly the reasons for performing their work in a particular order. Prioritizing also involves making very fast adjustments to the schedule and making quick responses to emergency situations. Prioritizing the unexpected emergencies and problems is " 'rapid think' " while prioritizing the expected work is " 'organized think' " (Mishoe, 1995, p. 125). Several of

the therapists viewed prioritizing to be the most significant ability in their practice. They were able to show and talk about how the skill of prioritizing is significant in practice (Mishoe, 1995).

Anticipating involves thinking and planning ahead in order to fend off future problems for the therapist. The main point of the skill of anticipating is to prevent problems. When the therapist thinks ahead about patient care or equipment, this allows for he or she to stay ahead in order to defend against problems and to devise solutions. To be able to anticipate solutions and problems, the therapist must be able to recognize subtle changes in the patient and perform ongoing assessments on the patient (Mishoe, 1995).

Troubleshooting involves the capacity to identify and fix problems related to technical difficulties. In Mishoe's study, this skill was observed when therapists were able fix breakdowns or malfunctions, initiate new technology or change equipment for a new patient. Equipment shortages or problems with the equipment can create an emergency situation. Respiratory therapists are called upon by nurses and doctors for their technical expertise and the capacity to troubleshoot and use respiratory care equipment. The respiratory therapist is able to solve technical problems because they understand the logic of their discipline whereas another clinician may not. These situations call for a deeper degree of critical thinking in order to formulate the problem (Mishoe, 1995).

Communicating in respiratory care therapy involves gathering and giving information to patients' families, patients, nurses, other respiratory therapists or physicians. Mishoe calls communication "'people think' " p. 143. Adequate information

has to be gathered in order to make judgments, evaluate and analyze situations. Clinical communication is a prerequisite to critical thinking. Communicating as a respiratory care therapist requires a great deal of skill because the therapist must choose the right time to speak. The therapist also speaks in a manner that's appropriate to the situation. A lot of the communication between the therapists, other clinicians, doctors and nurses is non-verbal. Their working relationships allow them to use body language to convey information that they do not want the patient to hear. The therapist communicates in a manner that is fitting to the situation as well as to the therapist's personality. The frequency, style and duration of communication vastly changes depending on whose involved. The majority of the therapist in Mishoes's study felt that skill of communication was the most significant skill in their practice.

The next skill is negotiating. Respiratory therapists practice negotiating when they do not have total command in deciding the best care for the patient. They have to be able to negotiate responsibilities, medical orders and patient care. The intent of negotiations is to communicate in a manner that will influence the actions and decisions of others. For example, if the therapist is unsuccessful at negotiating a medical order, the therapists' use of their expert skills for patient care will be limited. Effective negotiations require the therapist to make good judgments and have sufficient communication skills. They study revealed that negotiating responsibilities was an important part of good patient care and helped the therapist to be positive about their work (Mishoe, 1995).

The entire practice of respiratory therapy is influenced by the decision making of the therapist. In order to give quality patient care, the therapist must be able to make sound clinical decisions. During decision making, the therapist reaches a judgment by

interacting with doctors and nurses and by getting input from others. When an extraordinary problem occurs, the therapist may consult with other professionals outside of the bedside interactions. The therapist uses feedback from others, clinical experience, and patient assessment skills to make clinical decisions or judgments. The therapist gets more satisfaction from their career when they are able to make shared as well as individual decisions (Mishoe, 1995).

Reflecting involves the therapist's ability to analyze decisions, biases, opinions and assumptions. During Mishoe's study the therapist reflected upon their decisions, patients, work and their profession. Reflection allows the therapist to cope with the pain death, sickness and mistakes. Reflective practice is how the therapist refines and develops medical ethics. Reflection also helps the therapist to learn from problems and errors. Additionally, reflection encourages job and career satisfaction. The therapist in this study reflected less and less about their decisions as they gained more experience. While they reflected less with more experience, they began to reflect more about health care and the general situation of their profession. However, when a difficult problem occurred, the expert therapist would rely on reflection. Reflection helps the therapist to come up with solutions to unique problems. Additionally, Mishoe found regard for multiple perspectives, flexibility in ongoing change in professional and personal life and awareness of how other respiratory therapists' actions affect them and their profession. Mishoe recommended several areas for further research, including the need for more substantive theory about what critical thinking looks like in adult professional practice in general and other health care professions in particular (1995).

Goodfellow (1999) followed up on Mishoe's critical thinking components. Goodfewllow conduct a quantitative study to research three areas. First, she wanted to see how respiratory care therapists ranked themselves on the critical thinking components found by Mishoe (1995). Additionally, she examined to what degree did climate of the respiratory care unit, the role of the medical director, and the work setting affect the self-assessments of respiratory care therapists. Finally, she wanted to look at to what degree did age, gender, level of education or years of experience in the profession affect self-assessments.

Regarding Goodfellow's first concern, she found that prioritizing, troubleshooting and communicating ranked highest as critical thinking behaviors as reported by the respondents. Prioritizing is concerned with the problem solving part of critical thinking. Goodfellow's findings in this area confirm Mishoe's findings. Troubleshooting, the second highest rated, involves the logical reasoning component of critical thinking. Troubleshooting is basic to critical thinking in respiratory care to start, alter or utilize respiratory care technology in practice. Mishoe and Goodfellow found that troubleshooting within respiratory care practice was a skill unique to respiratory care therapist. The therapist is often called upon by the doctors or nurses to fix equipment or to solve a technical problem. Communication was the next rated self-assessed behavior. Communication and critical thinking are connected because the therapist must seek the right information to explain or judge, evaluate, infer, analyze or interpret. Decision making and reflecting were the next ranked behaviors. Finally, negotiating and anticipating were the last ranked self-assessed critical thinking behaviors (Goodfellow, 1999).

Goodfellow further discovered that gender, years of experience, organizational climate, administration of the work setting and the role and level of support of the medical director did affect the self-assessed critical thinking behaviors of the therapists. The educational level, age, managed care environments, and various work settings did not have an effect on critical thinking behaviors. Goodfellow asserts that most, if not all critical thinking skills in respiratory care practice were identified in Mishoe's study. However, she wonders whether critical thinking skills are apparent in multiple contexts. In other words, she calls for more studies to find out the degree of critical thinking in health care professions other than respiratory care practice (Goodfellow, 1999).

In a related study, Kenimer (1999) conducted a study to examine critical thinking behaviors in clinical laboratory science. She did not feel that the literature addressed the role of critical thinking in the day to day solutions to problems in the practice of clinical laboratory science. Kenimer suggested that studies should be done to determine observable occurrences in practice as a result of the critical thinking metaprocess that are in the affective domain, behavioral domain, cognitive domain and situational domain.

Kenimer's findings included seven factors that describe important critical thinking behaviors in laboratory science. Reflecting on tasks, acting professionally, managing tasks, reasoning technologically, managing time, developing expertise and using experience emerged from Kenimer's study as important factors in clinical laboratory science. Reflecting on tasks is considered a cognitive trait. Reasoning technologically is considered a behavioral trait. Acting professionally and using experience were considered to be affective traits. Managing tasks, managing time and developing expertise were considered situated. These findings imply a stronger relationship between

practice and critical thinking behaviors than historically reported (Kenimer, 1999). Kenimer points out that only one factor, namely reflecting on tasks is a cognitive trait. The remaining factors are more similar to contextual/situational, affective and behavioral domains. Kenimer feels that these findings suggest that critical thinking is more comprehensive than previously thought. Setting priorities, reflecting, communicating and troubleshooting were among the top rated critical thinking behaviors selected by the respondents. These critical thinking behaviors were also among Mishoe's findings as to skills necessary for critical thinking in respiratory care practice. Similarly, Goodfellow found that prioritizing, troubleshooting and communicating ranked highest as critical thinking behaviors reported by respiratory therapists. Kenimer calls for additional studies to confirm that practitioners' ideas about the significance of critical thinking behaviors are actually practiced in clinical laboratory science. Kenimer says that critical thinking behaviors cannot be taught or learned separate from a practice setting related to a specific discipline (Kenimer, 1999).

The practice of Marriage & Family Therapy (MFT) is a specific discipline within the health care profession. It was organized as a profession in around 1946. The MFT field was formed for the purpose of helping family members to solve their problems. Marriage & Family Therapy differs from traditional psychotherapy. While psychotherapist primarily focuses on the individual's emotional problems; the MFT field asserts that emotional experiences and human behaviors emerge from past and present connections within the individual's family system. The marriage & family therapist will assume that the individual's current symptoms are a way of indirectly describing the family system's dysfunction. The assumption will also be that other family members will

experience the dysfunction in some way maybe even in other generations   By developing clinical methods aimed at changing behavioral and interactional patterns among the widely identified intergenerational family; the family system will change which will diffuse and relieve the individual's symptoms. Moreover, hopefully the family system will be healthier thus reducing the chance of symptoms cropping up elsewhere (Everett & Everett, 2002).

In many ways the MFT field emerged as a result of the early pioneers' push for more efficient treatment methods. The field did not emerge as a result of professional roles or clinical theory but it evolved to answer the public's demand for help with the increasing numbers of troubled marriages after World War I. Around the 1920s and 1930s, marriage counselors met the challenge of following psychoanalyst and the conflict about psychotherapists who were non-medically trained.   But it was the marriage counselors, who found the important connection between spouses' personalities and the benefits to receiving conjoint treatment. Further, the child guidance movement occurred in the 1940s in the U. S. During this time marriage counselors began to identify and treat childhood disorders. Parents of the child were a part of the treatment process, however the child and the parents were seen by separate therapists. Nathan Ackerman and Salvadorte Minuchin, two pioneers in the field created the driving force for treating children and parents simultaneously. The treatment of children and parents together became known as family therapy (Guerin, 1976; Nichols & Everett, 1986).

Marriage & Family Therapists can enter the field by way of a graduate program or through seeking post degree education to add to previous education in other disciplines of mental health. These two ways to enter the marital and family therapy field sets it apart

from other mental health disciplines. Moreover, it gives Marriage & Family Therapists an identity as a field of clinical practice as well as a professional discipline. In professional practice, MFTs diagnose and provide treatment for nervous disorders and mental disorders within the confines of the family. MFT practice is one of the main choices to treat a variety of disorders including severe mental illness, substance abuse, and chemical dependency as well as disorders of adolescence and childhood (Everett, 1990).

The process of accreditation outlines standards for education.   An accreditation process is important to the development of any professional field. The American Association of Marriage & Family Therapy started in the 1950s to approve training and educational programs that prepared therapists to do therapy with families and Marriages. By 1974 accreditation became a formal process in the AAMFT field. In 1978, after a year of public hearings and review, the U. S. office of education acknowledged the AAMFT's commission on accreditation for marital and family education as the accrediting agent for both post degree clinical training centers and graduate degree programs in the field. This notable gesture defined for certain that marital and family therapy is a distinct and separate field of study (Everett, 1990).

The marriage and family therapy field looks towards a profession that is easily identified as the experts on family and couples' issues. Through a balance with other mental health care professionals, MFTs would be acknowledged as the best and first choice for interpreting family and couples' issues by the insurance companies, managed care companies and most significantly, in the public arena. The AAMFT membership

and the association responsible for moving the profession to a favorable position in society where everyone can have access to our skills and knowledge (Turney, 2004).

Further, the marriage and family therapy field should emphasize and promote the access to education and training. Through the growth of graduate programs, we can increase our numbers and advance our research. Research is especially important as we make every effort to show that MFT really works. We have to develop an era of researchers who pledge to expand our knowledge about our field and the techniques that are most beneficial. The profession of MFT should mirror a diverse membership. Included in our ideal, should be a focus on nurturing professionals who are sensitive to the impact of discrimination and oppression. A charge for social justice ought to be a main focus of professionals who come in contact with persons who have been marginalized in various ways. The MFT field has a very promising future. Working collectively, we can have a positive impact on our profession as well as on the world (Turney, 2004).

<u>Chapter Summary</u>

This literature review discusses the history of critical thinking, the concepts of critical thinking, approaches to teaching critical thinking in secondary education, critical thinking in adult education and critical thinking in the professions. Throughout history applying critical thinking to any aspect of life including culturally, politically, socially, philosophically, educationally, professionally as well as personally has yielded positive results.

The various concepts of critical thinking include either a dispositional dimension or a skill dimension or both. The dispositional dimension of critical thinking describes

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more of who a critical thinker is. The skill dimension is more of what one does during the critical thinking process. The dispositional dimension and/or the skill dimension of critical thinking can be applied to examine any aspect of life. However, for the purpose of this study we will look into the skill or cognitive dimension of critical thinking because it appears to be a more systematic manner of applying critical thinking to any phenomenon. Further, it seems that using the skill dimension facilitates the transfer of critical thinking skills across disciplines.

Therefore, the literature review supports the idea of examining any aspect of life by the use of critical thinking. The skill dimension of critical thinking can be used to examine the discipline of Marriage and Family Therapy.

CHAPTER 3

METHODOLOGY

The purpose of this study was to understand how marriage and family therapists

(MFTs) apply critical thinking (CT) in practice. The emphasis of the study was to

examine the following research questions in the context of marriage and family therapy

(MFT) practice:

1) What are the CT behaviors used by MFTs in practice?

2) In what situations do MFTs use CT in practice?

3) What factors appear to influence CT in MFT practice?

Although many professionals have called for more research of CT in the

professions, very little is known about CT in professional practice (Bickham, 1998,

Goodfellow, 1999, Kenimer, 1999, Mishoe, 1995). Prior to this study, no study had been

conducted about CT in the profession of MFT. A qualitative research approach was used

to examine CT in the practice of MFT.

This chapter discusses the methodology used for this study. Design of the study,

sample selection, data collection, data analysis, validity, reliability, research assumptions

and biases and the summary are presented in this chapter.

<u>Design of the Study</u>

A qualitative research method was chosen to study CT in MFT practice for

several reasons. A qualitative method is used when little is known about a phenomenon.

During this approach rich descriptive data is gathered about a phenomenon. The data

gathered is known as soft data. It is rich in description of conversations, places and people. The description portrays a mental picture of an emotion, an experience, a scene, a piece of scenery or an event (Strauss & Corbin, 1998).

Moreover, a qualitative research approach can be framed around a phenomenological perspective. Patton (1990), says that a phenomenological perspective can be described as "a focus on what people experience and how they interpret the world (in which case one can use interviews without actually experiencing the phenomenon oneself)" (p. 70). The present study examined CT in MFT practice. In fact, little is known about CT in MFT practice. The participants were presented a genogram of a family called the Mathews. A genogram is similar to a family map. The participants answered the interview questions while reviewing the genogram. The participants expressed their emotions and experiences as they responded to treating the Mathews family. One goal of this study was to establish a language for CT in MFT practice.

The qualitative research methodology has 4 characteristics. First, the phenomenon has to be understood from the perspective of the participants. This is sometimes known as the insider's perspective. Secondly, the researcher is the main tool for collecting the data as well as for analyzing the data (Merriam, 1998). Thirdly, in qualitative research the data to be analyzed usually comes from fieldwork. Fieldwork usually yields massive amounts of raw data. The data are arranged into interesting stories with meaningful subjects, classifications, and samples of cases derived from the analysis of the raw data. The insights, understandings and findings arising out of fieldwork, and the analysis of fieldwork are the profits of qualitative research. Document analysis, interviews or observations are used to collect data (Patton, 1990). Finally, the qualitative

research methodology emphasizes understanding, meaning and process. Therefore the data is richly descriptive.

<div align="center">Sample Selection</div>

To respond to the research questions, a purposive sampling was selected. A purposeful sample is one in which the researcher seeks to learn as much as possible about a phenomenon that has been experienced by an individual or group. Consequently, a purposeful sample was used to find 10 licensed MFTs to participate in this study. It is assumed that a purposeful sampling will yield rich descriptive information. According to Patton (1990) choosing information rich cases for research creates an in depth learning experience. From information rich cases, data emerge which is significant to the research.

Before purposeful sampling could begin I had to decide the selection criteria for the participants in the study. First, the participants had to be licensed MFTs. A licensed MFT has fulfilled a rigorous process to obtain the license credential. I verified through Georgia's licensing verification website that all participants were licensed with the state of Georgia. Secondly, the participants had to have at least 5 years of experience in practice. Benner (1984) suggests that a competent professional has been on the job for 2 to 3 years. Their performance is guided by maxims or ambiguous instructions that only someone with a deep understanding of the situation can comprehend (Benner, 1984). The study was open to males and females. I did not seek a deliberate balance between males and females. However, the study yielded 5 males and 5 females. The study was open to all ethnic groups.

I have been an MFT for the past twenty years. I have been a member of a southeastern Georgia chapter of MFT for a little over twelve years.   Nine of the ten participants were colleagues from the southeastern Georgia chapter of MFT. One participant was from the northeast Georgia area. I deliberately selected colleagues to interview whom I felt were the best at the discipline. Several of the participants were full time professors at nearby universities. I had witnessed presentations by several of the participants at conferences.   Their presentations were thorough and quite educational. The participants are highly recommended among their peers in the discipline of MFT.

<u>Data Collection</u>

According to Merriam (2000), in a qualitative study, the researcher is the main instrument for gathering data. According to Patton (1990) the use of interviews and written documents are two of three ways to collect data. Marshall and Rossman (2006) say that many qualitative research studies use a combination of data collection methods over the duration of the study. I used a combination of the interview and a document, called the genogram to gather data (See Figure1).

Interviews

Qualitative interviewing allows one to learn about the world of others (Rubin & Rubin 1995). Interviewing is conducted when one is unable to observe feelings, behavior or how people understand their environment (Merriam, 1998).   I selected the interview as a data gathering tool because interview data are made up of specific quotations from participants about their feelings, experiences, opinions, and knowledge.   Qualitative interviewing is conducted based on conversational skills of the interviewer. However,

the interview is different from a regular conversation in valuable ways (Rubin & Rubin, 1995).

One difference is that the interview is a research tool. It is a deliberate way of learning about people's experiences, thoughts and feelings. Also the qualitative interviews could be between acquaintances or strangers. A final difference is that the researcher is in charge of asking a few questions which the interviewee will answer at length (Rubin & Rubin, 1995).

The usual way of determining which interview type to use is by deciding the extent of structure needed. The three types of interviews are semi-structured, standardized or highly structured and informal or unstructured. The semi-structured interview is a less structured interview. The semi-structured interview guide was selected for this research because the semi-structured interview is more flexible and offers more opportunity to probe the interviewee. About the semi-structured interview, Merriam (1998) writes, "In this type of interview either all of the questions are more flexibly worded or the interview is a mix of more or less structured questions" (p. 74).

Generally, a definitive type of information is sought from all of the participants in a semi-structured interview. The interviewees were encouraged to express their honest clinical opinions to the questions on the interview guide. The interviewer was careful to support a sincere interest in the interviewees' clinical experiences and opinions to the interview guide questions. I feel that this sincere support helped thick and rich data to emerge from the interviewees' responses (Merriam, 1998).

I thought in advance about the best candidates for interviewees to help me to examine CT in MFT. I was careful to present myself to the interviewees in a most

professional manner. I called potential interviewees and explained in detail that I was

working on research for dissertation at the University of Georgia. They would be asked

to respond to questions while reviewing a genogram of the Mathews family.

The interviewees were asked to set aside at least 1 hour for the interview. It was

important to me to schedule the interview at a time most convenient to the interviewee.

The consent forms were reviewed and signed before each interview began. A copy of the

consent form was left with each interviewee. They were told that a pseudonym would be

used to identify their data. They were advised that the data would be kept confidential.

The interview guide (see Appendix C) was used to ask the questions about CT in MFT.

Genogram

A document is used to understand an event, a person or a situation under

examination. The researcher may generate a document for the purpose of the study

(Merriam, 1998). For this research, I generated a document called a genogram (see Figure

1). The genogram is like a family map. The genogram has 3 generations of family and

extended family. It is used to assess the family's relationships and issues. The genogram

is also used to determine the strengths and weaknesses of the family. It is also used to

identify intergenerational patterns and messages that may be affecting the family. The

genogram was of the Mathews family. The family is made up of Michael, Sr and Brenda

Mathews and Michael, Jr. and Amanda. Mrs. Mathews phoned the office for an

appointment stating that her family was falling apart. Her husband had been having an

affair. Michael, Jr has been writing suicide notes and getting bad grades in school. The

interviewees were asked to review the genogram of the Mathews family and respond to

questions about CT in MFT practice.

African American Family
The Matthews Family
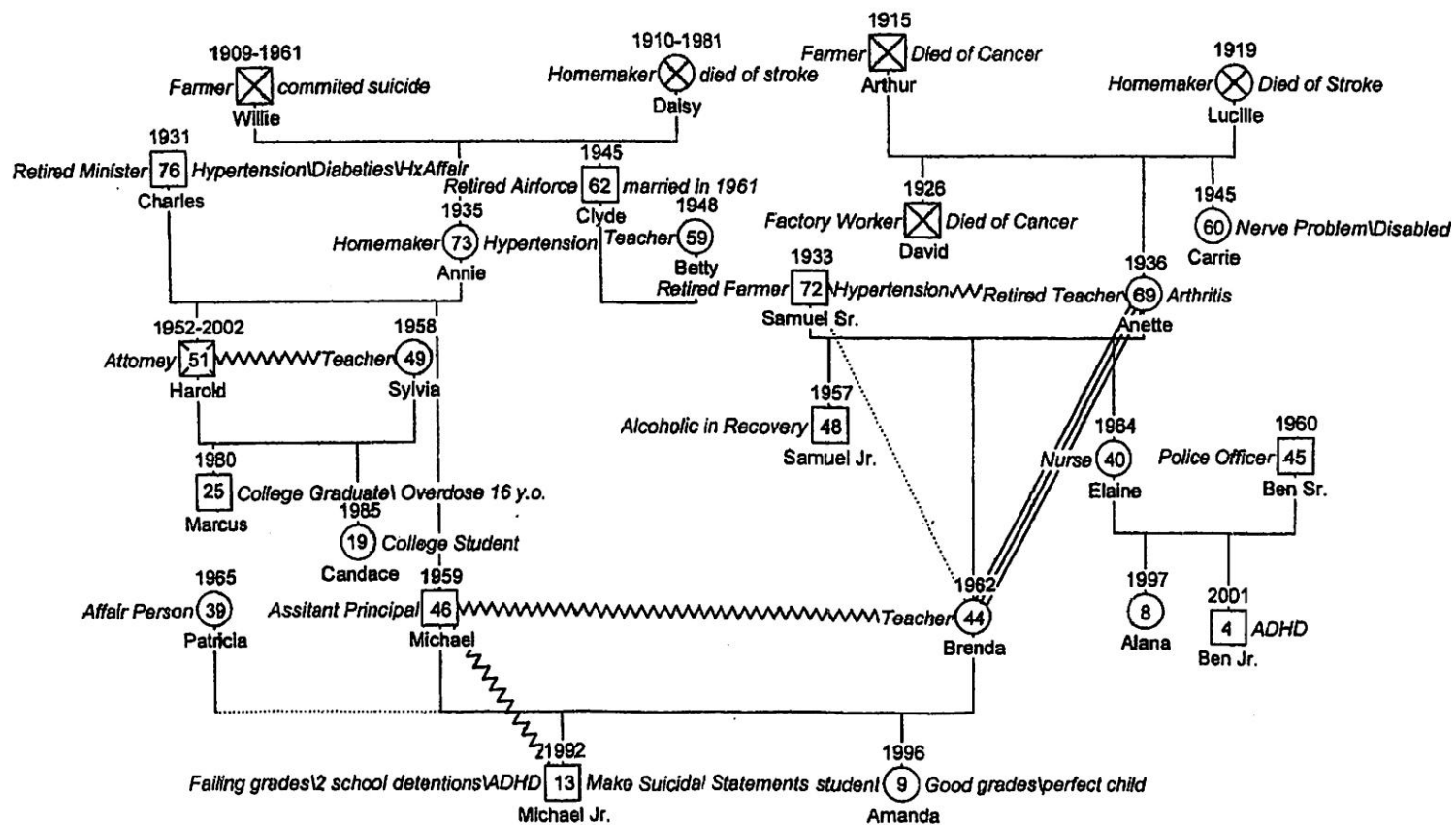
Figure 1: Matthews Family Genogram

In MFT practice the genogram of the family is examined based on the systems theory. The genogram is used to guide the MFT as to the healthy or unhealthy parts of a family. In other words, the family is looked upon as an operating system. The essential method in the systems process is the feedback circuit. The feedback circuit, in conjunction with the turnout of the system, relays a modifying response signal that moderates the continuos actions of the system (Armand, 1988).

Feedback that is positive improves the amount of the system's output.   On the other hand, circuits that relay negative feedback, lessen the system's output. From a family systems point of view, one challenge for the MFT is to understand that the family may go back and forth from the homeostasis state, or not wanting to change, to the change state. The idea behind the systems theory is that the family's system has certain interlocking patterns of communications and behaviors that send powerful messages to the family members (Armand, 1988).

These messages can enhance the functional development of family members or the messages can delay functional development of family members. The genogram provides an avenue to look at the messages that are carried over from one generation to the next generation of families. These messages can be looked at through the lens of emotions, gender, culture or sexuality. The family comes for help when one or more family members is in distress. By carefully examining the genogram, the MFT and the family can identify maladaptive and adaptive patterns of interactions. The challenge is to come up with more loving and new and constructive messages for our grandchildren, great grandchildren and our children. While examining the past dysfunctional messages

of the family, it is important to build and enhance self-esteem (Demaria, Weeks & Hof, 1999).

A genogram of an African American family was selected for several reasons. First, there is little to no empirical research about how to effectively work with African American families or individuals in MFT. Secondly, the discipline of MFT has always been interested in more effective ways of understanding the special problems and complexities of African American families. Finally, while the genogram is of a fictitious family, it depicts some of the mental health concerns facing these families. For example, the peculiar rise in the suicide rates among young African American males is one issue depicted.

Boyd-Franklin (1989) encourages MFTs to understand that there is much cultural diversity between African American families. It is important to understand the subtleties of this culture. Further, it is important to learn more effective ways for intervening and joining with African American families and individuals. The members of the extended family of African American families are often a powerful resource to help with interventions. For instance, the Mathews family's genogram can be helpful to identify extended family who could help to solve some of the problems in the family.

Data Analysis

The analysis of the transcripts involved understanding the meaning of the data. I used the constant comparative method to analyze the data. About the constant comparative method Merriam (1998) writes, "…at the heart of this method is the continuous comparison of incidents, respondents' remarks, and so on with each other." p.179. Similar bits of information or units of data are placed into groups word for word.

More specifically, Merriam (1998) states, "A unit of data is any meaningful (or potentially meaningful) segment of data; at the beginning of a study the researcher is uncertain about what will ultimately be meaningful" (p. 179). A data unit can be as minute as a word used to express a feeling or thing, or as much as pages of notes from the field about a certain incident. The idea is to bring together tiny bits of information and place the tiny bits of information into categories (Merriam, 1998).

The data from the transcripts were coded using Coffey and Atkinson's (1996) method. Coding can be viewed as a way of simplifying the data. The process of coding involves labeling the data. Coding connects various instances or segments in the data. It connects the data parts to a specific concept or idea. The concepts or ideas are interrelated. Coffey and Atkinson (1996) state, "Essentially, what we are doing in these instances is condensing the bulk of our data sets into analyzable units by creating categories with and from our data" (p. 26). Coffey and Atkinson (1996) use coding and category development synonymously.

Coding or developing categories begins after reviewing the initial transcript. As the initial transcript is read, comments, questions, or observations are written in the margins (Merriam, 1998). The first step was to read the data from the initial interview with Jade. I read the data word for word and paragraph by paragraph (Rubin and Rubin, 1995). As I reviewed the transcript, I kept in mind the research questions. As I made comments in the margin, I felt that interpretation of the data from the transcript was an obvious part of the process (Rubin and Rubin, 1995).

I coded or labeled in the margins of each line of the data from Jade's transcript. Among the comments that I wrote in the margins of the initial transcript were assessing a

suicidal teenager, the genogram, problem solving, peer supervision and joining with the children. Various other comments included observation, communications, individual perspectives, drawing conclusions and ambivalence. Assessing a suicidal teenager, joining, and the genogram were grouped under the category of assessment.   I kept an ongoing list of the comments that I made along the margins of the initial transcript. In fact, a lengthy list of comments was compiled from the initial transcript data because I was not aware of what might emerge through the remaining data. (Merriam, 1998).

Next, I read the second transcript from Sharon's interview. While reviewing the transcript I coded in the margins. Among the various labels written in the margins were affairs in the family, parents' marriages, intergenerational work, non-verbal communication and the genogram. After reviewing the entire second transcript, I made an individual list from the labels made in the margins. Next, the list from the first interview data was combined with the list from the second interview data for a master list. About this process Merriam (1998) states, "This master list constitutes a primitive outline or classification system reflecting the recurring regularities or patterns in your study. These patterns and regularities become the categories or themes into which subsequent items are sorted" (p. 181). The remaining transcripts were read and the comments were sorted appropriately under the master list.   The regularities and patterns in the transcripts were evident   The regularities and patterns were named as categories by the researcher. According to Merriam (1998) the researcher names the categories that express what she or he draws from the data.

Validity and Reliability

The reliability and validity of qualitative work is contingent upon the integrity, sensitivity and methodological skill of the researcher. The reader of the results can be assured that the findings are trustworthy when the researcher has accounted for reliability and validity. In essence, in qualitative research, ensuring validity and reliability is concerned with doing the research in an ethical way. Reliability of the study is concerned with whether the findings can be duplicated. For instance, if the study is repeated will the same results be found? (Patton, 1990). More specifically, internal validity is concerned with whether the results are consistent with reality. The use of the qualitative methodology, places the researcher closer to the data. In other words, since the researcher is the main instrument for data gathering; the researcher is in a better position to extract the reality of the phenomenon (Merriam & Simpson, 2009).

Internal Validity

According to Merriam (1998), peer evaluation enhances validity. I asked several of my peers to review my findings and to comment on my findings. Peer 1 is a psychologist who has experience in the practice of MFT. He said the following, "CT is a nice way to look at how MFT perceives and then hypothesizes interventions. But more of a standard approach or "how to" would be more useful." During discussion with Peer 1, he said that he would like to see a model for CT about marital therapy or for ADHD with an outline showing how to proceed with treatment. Peer 2 is a licensed professional counselor who uses the MFT discipline and the genogram in her practice. Peer 2 commented specifically about the genogram. She said reviewing the genogram is a way

to think critically about the relationships in the family and extended family. She stated, "I particularly thought that this part was very interesting."

Peer 3 read my findings and commented, "I like the focus on the teenager who is an African American male and the suicide issue. Their numbers for suicide are increasing. They don't fit in anywhere. We need to begin to think critically about young African American males and about how we can reach them. Peer 4 is also a licensed professional counselor. Peer 4 read my findings and commented "It is beneficial to me. I learned a lot about critical thinking. Like metacognition is thinking about your thinking. I liked when it focused on empathy. One guy talked about having more empathy for the teenager in the family. You could see the critical thinking in most all of their responses, like you could see empathy, questioning or self-reference." Peer 5 is a licensed psychologist who commented, "I read your research and it was excellent! I don't usually like reading those things. But yours was really good. I think you should publish it. It was very good."

Rubin and Rubin (1995) suggest that a better way to improve qualitative work's credibility is by transparency. Transparency allows the reader to see how the data was collected.   For example, I generated the genogram and presented it to the interviewees. I conducted ten interviews with licensed MFTs. The interviews were recorded using a tape recorder. I have ten marked transcripts which are the written versions of the interviews. The transcripts were typed verbatim from recorded tapes. The information was not edited because I wanted to stay as close to the reality of the interviewees' responses as possible. The transcripts are rich in description and detail. About transparency Rubin and Rubin

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(1995) states, "A transparent report allows the reader to assess the intellectual strengths and weaknesses, the biases, and the conscientiousness of the interviewer" (p. 95).

According to Rubin and Rubin (1995) the findings must be communicable in order to improve validity. In other words, the participants can relate to my narrative about our conversations. However, the participants may take issue with some of the interpretation or detail. Further, readers who are not familiar with CT and MFT practice will be able to navigate the process of the research study. Through vividness of the text and abundance of evidence, the reader who has never been in this research field is confident that the information is real. In fact, communicability is akin to what Merriam (1998) describes as member checks.

External Validity

External validity involves considering whether the findings from my study can be generalized to other circumstances under similar situations. I used the principles of completeness and thick rich description to strength external validity. According to Rubin and Rubin (1995), one principle that can give credence to external validity is completeness. Another name for completeness is saturation of the data (Glaser & Strauss, 1967). Moreover, Merriam (1998) says that another way to enhance external validity is thick rich descriptions of a topical or current platform.

The researcher using completeness interviews people who are the most knowledgeable about the topic under study. The researcher keeps interviewing participants until no new information is learned about the topic of study or to the point of saturation. According to Rubin and Rubin (1995), the researcher could interview one knowledgeable person for a study. The test of completeness is not the number of

participants interviewed but whether the participant provides sufficient information. For

the present study, I interviewed 10 MFTs who were selected for their knowledge and

experience.   Near the 10th interview, saturation of the data was evident because I was not

getting a lot of new information.

Merriam (1998) suggests that a suitable goal in qualitative research is to submit

thick rich descriptions of a setting or situation. Wolcott (1994) also suggests that the rich

descriptions of the phenomenon should convey a clear voice. In other words, the data

should be easy for the readers to understand and to determine whether the findings will

be useful in practice.   I attempted to provide as much thick rich description of the

participants and their practices as possible. In my judgment, the data also vividly speaks

to the phenomenon of CT in MFT practice. Therefore, I used completeness and thick rich

description to help to determine whether my findings can be generalized. However, a

researcher uses qualitative research mainly to understand a phenomenon not to

generalize. Actually, a researcher uses qualitative research mainly to understand

phenomenon not to generalize. A common way to consider whether findings can be

generalized is the idea of user or reader generalizability. In other words, it is up to the

people to decide whether the findings fit their particular circumstances (Merriam, 1998).

Reliability

Reliability is concerned with whether the study can be duplicated. In other

words, if the study is duplicated, the same findings will emerge. According to Merriam

(1998), triangulation, and the audit trial can enhance reliability. Triangulation takes place

in research when multiple data collection methods are used by the researcher. I used the

interview and a document known as the genogram to collect my data.   In fact,   Merriam

(1998) says, "the data found in documents can be used in the same manner as data from interviews or observations," p. 126. Documents used by the researcher often already exist in the research field. All of the participants in this study use genograms in their practice. In fact, the genogram is a sort of family map about the family under study. However, this genogram displays data about approximately 13 extended families to the family under study. The reason that a document is generated is to gain more insight about the phenomenon under study. Uncovering leads, exploring new ideas, and being receptive to the information are identical whether the examiner is analyzing documents, interviewing or observing. I also kept field notes. The participants reviewed the genogram and responded to questions about the information on the genogram. Consequently, I was able to constantly compare the transcripts, the document and the field notes. The interview was recorded and a transcript was generated. The constant comparison of the data collection tools enhanced the study's reliability.

The audit trail was also used to enhance reliability. Rubin and Rubin (1995) suggest that reliability is enhanced when the researcher keeps detailed records of what they saw, did and felt during the interviews. In the data analysis section, I described thoroughly how the data was collected and analyzed. I wrote field notes about my feelings before, during and after the interviews. The notes are available to the reader. For example, I made notes about the interview with Belinda. She wanted to meet at a restaurant called the "Red Tomato." I agreed, however I was very apprehensive because I was not familiar with this restaurant and I did not know what to expect. However, the interview with Belinda turned out to be one of the best. Early in the interview, it was evident that Belinda practiced CT in MFT practice. Early in the interview Belinda talked

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about getting each family member's perspective of the problem. I wrote in my field

note book   that the environment in this place was conducive to interviewing. It was

beautifully decorated in red and white. We were both a little nervous initially but after

about 10 minutes, we found ourselves very relaxed and engaged in the research questions

and responses.   It was a very good interview and I was very excited about the potential

data for my study.

I made other entries in my field notebook. The interviews with Barry and Arthur

were conducted in the conference rooms in a medical school setting. The conference

room setting was most comfortable for me.   These by far were two of my best

interviews. In my field notes, I wrote about how thrilled I was about the potential data

from these two interviews.   In regards to Arthur's interview, I wrote that Arthur does

CT in a big way.   I noted that I was very, very pleased with this interview.   The

interview with Arthur was my best of the two.   On a couple of questions, I wanted

Arthur to expand his answers. I asked Arthur what he looked for as he observed the

family. Arthur said, "So it's it's all the language that's really important to me. I look

more at sequences or patterns and that sort of thing. There's there's meaning in, in that

and there's symbolism in, in most everything."

Researcher Bias and Assumptions

According to Merriam (1998), the researcher is the primary instrument for

analyzing and gathering data in a qualitative study. The use of the human instrument

limits the researcher. For instance, personal bias interferes, opportunities are missed and

mistakes are made.   Merriam (1998) suggest that the researcher's ability to tolerate the

ambiguity of the qualitative research process should be assessed before the study.   The

intuition or sensitivity is another trait that is needed by the qualitative researcher.   For

example, the researcher needs to be hypersensitive to the context.   In other words, the

qualitative researcher must try to understand the variables that exist within the context

including nonverbal behavior, the overt and covert agendas, the physical setting and the

people.   The researcher must be sensitive to the relevance of the data to the study.

The Researcher

This section will discuss my biases and assumptions that may affect the study.

I tolerated ambiguity during the research quite well. I was open minded and

flexible about the entire qualitative process. I believe that this mindset prepared me to

tolerate ambiguity.   I feel that I was extremely sensitive to the context of the data mainly

because I was examining the discipline of MFT of which I have practiced for the past 20

years.   Interviewing families and individuals is a large part of my work in the MFT

discipline. Consequently, my background as an interviewer helped me to listen and

understand what the interviewee was communicating.

I am an African American MFT.   I chose to study an African American family

for my research. African American MFT are a minority group in the discipline.

Consequently, the majority of my colleagues in MFT practice are Caucasian. At the

outset of the research, I made the assumption that the family's race will not be overtly

mentioned in the context of the therapy. For the most part my assumption was correct.

However, two of the participants appeared to be more sensitive about the family's race.

For example, Glenda who is Caucasian said that she was a "military brat" and that she

particularly got along with other races. Interestingly her percentage of the races of her

clientele were Caucasian 50%, African American 30%, Hispanic American 10% and

Asian American 10%. Glenda's clientele were the most diverse of the participants. Afumai, an African American male participant mentioned how society tends to view the African American male negatively.

At the onset of the study, I also assumed that the MFTs would be fair and objective to each marital partner and each family member. One female participant appeared to be allying more with the wife in the study. However as the interview continued, the participant recognized her partiality towards the wife and verbalized amends. Finally, I also assumed that the interventions recommended by the MFT participants would be consistent with sound MFT practices. This assumption held true across all of the participants.

CHAPTER 4

RESEARCH FINDINGS

Introduction

The purpose of this study was to examine critical thinking (CT) in marriage &

family therapy (MFT). The research questions for the study were

      1. What are the CT behaviors used by MFTs in practice?

      2. In what situations do MFTs use CT in practice?

      3. What factors appear to influence CT in MFT practice?

I employed a basic generic model of qualitative research. I interviewed ten

licensed marriage & family therapists (MFTs) whose experience ranged from five to 28

years of practice.

This chapter starts with a description of the ten participants. The descriptions are

assembled by pseudonym in the order that the interviews occurred. The researcher chose

the pseudonym for each participant. The next part of the chapter reveals the research

findings with supporting data extracted from the interviews.

Description of the Participants

Ten licensed marriage & family therapists were interviewed for the study. The

subjects were identified by the researcher from among licensed marriage & family

therapists throughout the state of Georgia. The researcher used the following criteria

      1. Participants are licensed marriage & family therapists across the state of

         Georgia.

2. Participants have at least five years of practice as a licensed marriage &
   family therapist and are actively practicing.

Licensed marriage & family therapists were selected from among colleagues that the researcher had met at various continuing education conferences throughout the state of Georgia. As indicated in Table 1, the participants' years of experience ranged from five to 28 years.   The average years of experience was 16 years. The variants of practice settings included four solo private practices, two academic medical practices, three partnership private practices, and one practice in a residential program for youth. Though gender equity was not a deliberate goal, the study yielded five males and five females. The racial makeup of the participants was one African American male, three Caucasian males, two African American females, three Caucasian females and one Asian male.

Description of Participants

Jade

Jade is an African American within a solo practice. She has been in private practice for ten years. Jade has a Master's Degree in Family Studies. She is married with two adult children. The composition of Jade's clientele includes 40% African American, 50% Caucasian, 5% Hispanic American and 5% Asian American. Jade made interesting comments about the importance of case consultation in a solo practice. Some MFTs may call this supervision or peer review. Jade suggests that MFTs in solo practice may feel more isolated than MFTs in other practice settings. Jade stated:

> …because in a solo practice, I think we isolate, not intentionally,
>
> cause there is just nobody there. …You know but in solo practice,
>
> when you sit there from six to six, you know, anywhere from five

to eight hours, dealing with different clients and so forth, you

get burned out.   You need to know what you are doing. So

you need to pace yourself and really have somebody that you

can trust and that you can discuss those cases with.

Bernice

Bernice is also in solo private practice. Bernice has been in a solo practice for 16 years. She has a Master's Degree in Family Studies. She is married and she has two adult children. Bernice is Caucasian. The percentage of Bernice's clientele include 84% Caucasian American, 5% Asian American, 10% African American and 1% Asian American. Usually the MFT's session with a family like the Mathews' would last for 50 to 60 minutes.   However, Bernice mentioned that her first session time is one and a half hour with a family like the Mathews'. Bernice said:

…I do an hour and a half. I learned that early on, I learned

that fifty minutes was not sufficient, so then I expanded the

first session to an hour and a half.

Sharon

Sharon, too, is in solo practice.   Sharon has been in solo private practice for 25 years. She has a doctorate degree in curriculum instruction. Sharon met the requirements for a Masters in Family Therapy during her postdoctoral fellowship work in psychiatry. Sharon is married and she has three adult children. Sharon is Caucasian. The percentage of Sharon's clientele includes 90% Caucasian, 5% Asian American and 5% African American.   Sharon had the following to say about diagnoses when working with a family like the Mathews family. Sharon said:

I'm really not that much about a diagnosis and putting it

down about a family or a marriage—I—I tend to see people

struggling and trying as things come up and trying to help

them through the struggles.

Belinda

The last participant in a solo practice is Belinda. Belinda has a Master's Degree

in Marriage and Family Therapy. Belinda is married and she has one son age eleven.

She is African American. The percentage of Belinda's clientele includes 50% Caucasian,

40% African American and 1% Hispanic American. Belinda talks about how she will

collaborate with a family like the Mathews family. Belinda said:

…I don't want to take the family where they don't want

to go. I mean I have to tell them based on my expertise

how I would go about helping the family so it's a collaborative

between myself as a therapist and them as the client.

Melvin

Three participants are in partnerships in practice. Melvin is one of the MFTs that

is in a partnership practice. He has been in practice for twenty years.   He is married and

he has one adult daughter. Melvin is Caucasian. The percentage of Melvin's clientele

includes 95% Caucasian and 5% African American. Melvin mentions the importance of

MFTs staying in therapy gives reasons as to why MFTs should stay in therapy. Melvin

says

It's hard to talk about this and I am not self-promoting, but I will

self-promote therapy. If a therapist does not stay in therapy

I don't think they're going to be an effective therapist.

I don't think so. Because that, depending on the kind of therapy

you give, the quality and so forth, that's going to keep you focused

on transference and counter-transference or on issues and keep the

dialogue going in you. …So, I just believe in staying in therapy.

Glenda

Glenda is also in a partnership practice. Glenda has been in practice for fourteen

years. She has a Master's Degree in Family Studies. Glenda is married and she has 4

adult children. She is Caucasian. The percentage of Glenda's clientele includes 50%

Caucasian, 30% African American, 10% Hispanic American and 10% Asian American.

Glenda gave several examples of families who got better due to resolving medical

problems in the family. Glenda would likely assess for medical problems in the

Mathews' family. During the interview, Glenda gave several examples of families who

got better due to resolving a family member's medical problems. Glenda said

Now I tell you I do a medical status of the family too. I had

a patient with rumatoid arthritis. I finally told him to go and

get treatment for his rumatoid arthritis and don't come back

until he did, because as long as he's in pain, he's going to be

depressed….Family medical history. I have cured a lot of

depression by having my patients address medical problems.

Afumai

Afumai is the last participant in partnership practice. Afumai has been in private

practice for eighteen years. He has a Ph.D in Family Sociology. Afumai is married and

he has four adult children. He is African American. The percentage of Afumai's clientele

is 1% Caucasian and 99% African American. Afumai had some informative comments

about the common factors approach to therapy with the Mathews family.   Afumai said:

> …in all therapies whichever the approach is whether its
>
> cognitive behavioral or Narrative or Family Systems,
>
> whatever the therapy is there are some common factors
>
> that you can see in all those therapies that make them
>
> effective. … It says that, for instance, forty percent of
>
> what works in therapy, no matter what the style of therapy
>
> is, it's what they call extra therapeutic interventions. In
>
> other words stuff that didn't happen in here, but it happens
>
> there. … Forty percent of what makes change in our clients
>
> happens outside of the interview. Thirty percent of what
>
> works with therapy, no matter what therapy we use is the
>
> relationship between the client and the therapist.

Chuck

Chuck practices at a residential program for youth. He has been in practice for 5

years. He has a Master's Degree in Family Studies.   Chuck is AsianAmerican. The

percentage of Chuck's clientele is 50% Caucasian and 50% African American. Chuck

does have children but their ages were omitted from the data sheet. Chuck had some

impressive comments in regards to communications among the Mathews family. Chuck

stated:

If they are communicating, ah, the level of intimacy established

during the session…When I say level of intimacy I mean that

they can discuss freely, their thoughts and feelings without any

fear of other people saying something is wrong against what they

said. People understand each other through communication.

Arthur

Two participants practice in an academic medical practice. Arthur has been in an

academic medical practice for 11 years. He has a Master's Degree in Family Therapy

and PhD in Family Therapy. Arthur is married and has two children ages eight and six.

Arthur is Caucasian. The percentage of Arthur's clientele is 70% Caucasian and 30%

African American. In the next excerpt, Arthur talks about how he makes a family like the

Mathews family a part of a team. Arthur said:

And I try to see if they feel comfortable with me. But I

also, just to add, what I would also do is check in with

them and let them know, I always make it clear to families

that we're a team. So if there are issues that don't, we don't,

they don't think we're addressing that we need to be

addressing to bring that up to me….Letting them also take

charge of their likes and dislikes.

Barry

Barry practices in an academic medical practice. He has been in practice for 28

years. He has a Ph.D in Marriage and Family Therapy. Barry is married. He is

Caucasian. The percentage of Barry's clientele is 80% Caucasian, 15%African American

and 5% Hispanic American. Barry does not have children. In the following passage

Barry describes one uncommon approach to dealing with the conflict in the Mathews'

marriage. Barry stated:

> Um, Um, I usually start off generally speaking about paying
>
> attention to sibling position in each of their respective families.
>
> For instance, noting that Michael, Sr., is youngest in his family
>
> and that Brenda is the middle child and just looking at some
>
> generalities that typically go along with these positions.

<div align="center">Results</div>

The purpose of this study was to examine critical thinking (CT) in the practice of

marriage & family therapy (MFT). As the data was analyzed, answers to the three

research questions emerged. As indicated in Table 2, findings are described in three

sections as they pertain to the three research questions: 1) What are the CT behaviors

used by MFTs in practice? 2) In what situations do MFTs use CT in practice? 3) What

factors appear to influence CT in practice? Each research question is answered

respectively in the following three sections. The findings reveal CT behaviors used by

MFTs in practice. It also shows in what situations MFTs use CT in practice. The

findings will describe what factors appear to influence CT in practice.

The Context

The definition chosen to examine CT in MFT practice was developed by Fisher

and Scriven (1997). The definition is restated as a reminder to the reader. Fisher and

Scriven (1997) defined CT as … "skilled and active interpretation and evaluation of

observations and communications, information and argumentation" (p. 21). Moreover,

Fisher and Scriven refer to their definition as an evaluative definition. This definition can serve as a directory to action and thought. The CT frequently starts when a person identifies ambiguities or missing elements in something read, said or observed. The skilled part of the definition simply means that any kind of good thinking has to meet certain standards (Fisher & Scriven, 1997).

Table 2

Participants' Information

Name	Type of Practice	Years in Practice	Degree	Ethnicity	Gender
Jade	Solo Practice	10	MFT	African American	Female
Bernice	Solo Practice	14	MFS	Caucasian	Female
Sharon	Solo Practice	25	EdD	Caucasian	Female
Belinda	Solo Practice	10	MFS	African American	Female
Melvin	Partnership Practice	20	MFS	Caucasian	Male
Glenda	Partnership Practice	14	MFT	Caucasian	Female
Afumai	Partnership Practice	18	PhD	African American	Male
Chuck	Residential Program	5	MFS	Asian American	Male
Arthur	Academic Practice	11	PhD	Caucasian	Male
Barry	Academic Practice	28	PhD	Caucasian	Male

Table 3

The Use of Critical Thinking in MFT Practice

Critical Thinking Behaviors Used by Marriage & Family Therapists in Practice

    Making an argument for the selected therapeutic approach

    Showing empathy for the family

    Ensuring fairness to all family members

    Asking questions

    Employing metacognition to identify treatment resources

    Using self-reference to determine expertise

Situations Where MFTs use CT in Practice

    At the initial assessment

    In joining with the family

    While seeking supervision or consultation

Factors That Influence CT in Practice

    The development of the genogram

    Communications between the MFT and the family

    Necessity for observation

The standards are clarity, relevance, fairness, accuracy, adequacy and reasonableness. Further, Fisher & Scriven's definition describes CT as an active process for two reasons. First, CT is concerned with questioning what is read, seen, or heard. Secondly, CT involves metacognition, reflection, or thinking about one's thinking. Also included in the active part of CT are argument, empathy, questioning, metacognition,

self-reference or self-evaluation, information gathering procedures, and identifying reliable authorities and references and choosing the best of several alternatives. (Fisher & Scriven, 1997).

Mrs. Brenda Mathews called the MFT's office for an appointment for therapy. Michael Mathews, Sr., Brenda's husband has been having an affair. The couples' children are Michael Jr., age 14 and Amanda age 10. Michael Jr., has written several suicide notes and he's failing some subjects in school. Amanda doesn't seem to have any problems. Normally, MFTs draw their own genograms of their clients. However, for this research, a completed genogram of the Mathews family was presented to the MFTs (See Figure 1). They were asked to respond to questions about how they would go about treating the Mathews family.

Critical Thinking Behaviors Used by MFTs in Practice

The CT behaviors used by MFTs in practice are argument, empathy, fairness, questioning, metacognition, and self-reference. An argument is simply a set of reasons given for the reader or hearer to believe the presenter's stated conclusion. Empathy involves understanding another's point of view or actions. Fairness is one of the standards of good thinking. Critical thinking involves questioning what is read, seen or heard. Metacognition is thinking about one's own thinking in terms of describing similar patterns or features in past successes or failures in practice and the explanations for these. The use of metacognition can lead to identifying good sources and describing information gathering procedures. Finally, self-reference involves determining whether one is an expert on a particular subject.

Making an argument for the therapeutic approach. Making an argument is part of the active process of CT. The result of a CT response is presented in the form of an argument. The MFTs interviewed for this study frequently presented arguments in response to interview questions about how to solve the Mathews family's problems.

Arthur presents arguments as he thinks about how to help the Mathews family to solve Michael, Jr.'s problems. In other words, Arthur makes claims and gives reasons for the claims that he makes. Arthur states that

> Assuming that the diagnosis of ADHD is, is accurate, and, and was with a comprehensive assessment. Um, I, I would assume that in some ways it's not being effective. Also, at age 13, he is in the middle school age and it's very common for kids with ADHD to have problems with anxiety and depression at that age. Um not necessarily just because they have ADHD, but because they run into so many brick walls. As he is with failing grades and the detention. And then his suicidal statements are really, um I would look at that from a systems point of view as probably having something to do with just that, that scream for help and I'm desperate and somebody needs to help me, something's going on that's wrong here. Whether he's aware of what the friction or the tension is between Michael, Sr. and Brenda because they've said it, he's obviously aware emotionally that its going on.

In the following passage, Glenda makes several arguments as she thinks about her approach to help the Mathews family solve their problems. One argument that Glenda makes is that Michael, Jr. may not have ADHD. Glenda considers an alternative to ADHD. Glenda also questions the relationship between Brenda Mathews and her mother and how Brenda's relationship with her mother may be affecting her marriage to Michael, Sr. Finally, she inquires about their parenting style. Glenda says:

> They've got this kid acting out. He may not have ADHD
>
> He may be depressed. When there is depression, the
>
> symptoms are the same as ADHD. And I'd love to see
>
> whats going on with Brenda and her mother? Is Brenda
>
> spending all her time with her mother and neglecting her
>
> marriage? I'd love to see their parenting styles. Are they
>
> micromanagers or are they wimps? I'll educate them
>
> about parenting styles. I'll educate them and I'll take
>
> them back to the Bible to the days of Adam & Eve. They
>
> were told the rules and they knew there would be
>
> consequences for breaking the rules. Then they said the
>
> serpent made me do it. Its somebody's else's fault.

In the following passage as Sharon contemplates the Mathews' marital problems, she argues that Michael, Sr. and Brenda married to try to work out past childhood issues from their families of origin. Sharon states the following:

> When I do marriage therapy, I always find out first, what it's like for
>
> that person going on in their family and what they saw in their parents?

What was in their parents' marriage? And do they think they are just

like their—If it was Michael, Sr. is he just like the father or does he

do things differently in his marriage? And how does he see that?

And then I would ask Brenda the same thing. Because I think a

lot of problems in marriage have to do with expectations.

But I-I would think that-I do a lot of intergenerational work. Yeah,

cause I think that you know, we transfer from our family of origin

the feelings, we replicate it in our marriages, whatever situation we had

in our family of origin. I think we replicate it. So then, you marry some

body whose very similar to the parent that you've had the most trouble

perhaps. So, you're working out, your problems with your parents on

your spouse. Unless we've grown past them. Unless we've done a lot of

work on ourselves.

Showing empathy for the family.   The next CT behavior identified by the

participants is empathy. Empathy is also a component of the active part of CT. The

active part of CT involves examining or interrogating or finding more sources in order to

get additional important clarification or information. Empathy gives us one significant

example of this stage, "because it involves the investigatory effort of projecting oneself

into the shoes of another." (Fisher & Scriven, 1997, p. 25).

Empathy is usually required in order to comprehend a bewildering point of view

or action. Empathy will usually cause a stronger understanding. To understand behavior

one must show empathy. In the following excerpt Arthur practices CT as he describes his

empathy for the Mathews children. Arthur states

And then, um, I think probably though the most empathy

I have is, is for the two kids, and not necessarily one more

than the other, ah, because I imagine that what's going on with

Amanda, even if she is the perfect child, that's a lot of pressure

to live under. So there's a lot going on there, but most

immediately I think Michael, Jr. because of his, I do tend to

favor the underdog, or fight for the underdog. And he seems

to have a lot going against him right now.

In the following passage, Sharon practices CT as she expresses empathy towards

Michael and Brenda Mathews, the couple in the case study for this research. Sharon

says

I don't know--I--you know--I got into this business ah

because I was caring about women--Ah growing up, more

becoming independent, self-confident people. So I have

a tendency to see things from the woman's standpoint. But

then, I also am aware of personality characteristics. And

so, if somebody is sneaking off to have an affair, I have

empathy for their inability to speak up for what they need

in the marriage.

In the following quotation Barry demonstrates empathy as he reveals the family

member for whom he has the most empathy. Barry said

Ah, certainly at first appearance, it would be Michael, Jr.

because from looking at the genogram, he's obviously

picking up on some tension or being the target of some

tension that probably does not belong to him. Ah, we

don't know exactly what Brenda's relationship is with

Michael Jr. or with Amanda, but I would suspect that

…that, ah, she has a close relationship with Amanda

or Michael, Jr.

Ensuring fairness to all family members.   According to Fisher and Scriven's

definition of CT, any kind of good thinking has to meet certain standards. Fairness is one

of the standards of   good thinking. In fact, several scholars believe that fairness is a CT

behavior. Fairness is concerned with treating all opinions pertinent to the issue at hand,

in an unprejudiced, unbiased manner. In the next excerpt, Glenda explains how she

would ensure fairness as she works with a family like the Mathews. In the following

 passage Arthur demonstrates the CT behavior of fairness as he explains how he would

ensure fairness in the Mathews family. Arthur states,

Um, I think there's a couple of ways that fairness, that the

concept of fairness jumps out at me, and one way is air

time, making sure that everybody has air time, making

sure that everybody has an opportunity to talk. And that

at least to the extent that I have control over fairness

in the therapy process and specific therapy sessions, I

will try to make sure that each person's voice is validated.

Melvin discusses how he would ensure fairness with the Mathews family.

 Melvin explained:

I know that I am fair. And, if I am not, I register that

with myself and then I have to talk about that among

supervision. But, that's never a question for me. So

I know I am going to be fair. Everybody that comes

in is my client. I am not attached to any one person.

They are all my clients. Even though Michael, Sr.

has had the affair. He is my client and I feel for him.

Because he's in some pain too. He's struggling with

his life and what's going on with him. I mean if I

can't join and understand his pain, I cannot be his

therapist.

In the next excerpt Belinda talks about how she would make sure that she was fair
to all of the Mathews' family members. Belinda says

Well, one of the reason for bringing in all of the family

in that first session, at least in the first part of the session,

is to be fair and allowing each person to give their per-

ception of what's going on in the family. Because in my

opinion not only is it important and helpful for me to have

all of those different perceptions, the takes of what's really

going on, but it's also only fair to the family um to be able

to say, this is what I believe, this is what I think. I think

that's very fair.

Asking questions. Questioning is part of the active component of CT. In fact, CT is concerned with questioning what is read, seen, or heard. The MFTs in this study used questioning frequently during the interviews. For instance, questions were asked about the Mathews family to clarify, explain or gather more information about the family. In the following passage Arthur practices CT in the form of questioning as he talks about Michael, Jr.'s problems. Arthur states:

> Who let Michael, Jr. down? Parents not quite hard enough for
>
> him or they're not educated enough in terms of ADHD? Or
>
> whatever is going on. Did the school not do its part? Any
>
> body that's kind of let Michael, Jr. down even though he's
>
> um, really don't have information to say his behavior one
>
> way or another, but even though he may be a problem. He's
>
> still suffering and he's been allowed to get to this point. Who's
>
> done that? So it's more about that.

In the next excerpt, Melvin demonstrates CT as he ask questions to gather more information about the affair in Michael, Sr. and Brenda's marriage. Melvin states:

> …they'll lie about whether the affair is over. Also, how did this
>
> affair occur? What problems in the marriage allowed this? Some
>
> research suggests that couples collude to have an affair before
>
> anybody ever has an affair. They even talk about it ahead of time.
>
> They check it out with one another before they do it. In very
>
> subtle ways sometimes. But, what was the fertile ground that
>
> allowed it to happen? What was the affair about? Was it an

attempt to get out of the marriage? Is that what this affair

is about? Some are. Was it an amateur attempt to therapy?

My spouse doesn't understand me, maybe you will. Was it

something just to exacerbate the relationship?

In the following excerpt Jade portrays CT as she looks over the genogram of the

Mathews family. She mentions the genogram as critical to her work. Jade is asking

questions to clarify and she is also gathering more information about the family.   Jade

says

We.., I would ask questions right off because I'm going with

the genogram. I am old school. I guess if you want to call

it old school. I was taught when you do the genogram, I

have a neat way of doing the genogram and hooking the

people right up front. So that the people feel safe enough

that first interview to give me what I want. Because I don't

want them leaving out of here and I not know if they are

safe. So, I hook them right then and there. I go for the

gut. Cause that might be my last chance seeing them. Um

ha. genogram. Who are you? Ah, Brenda, tell me a lil'bit

about you. Ah, ah how long have you and Michael been

married? How long did you date? Da, da, da. Ah, ah who?

Tell me who's your mom and dad? Brothers and sister?

Tell who? Michael, tell me about you. Who are the

alcoholics in this family? Who are the abusers? Who are

the people with the mental-illness?

Finally in regards to questioning, Afumai explains why he would continue asking

questions of the Mathews family during every family therapy session.   Afumai stated

I always assume and I always take a "not knowing position"

because the moment I believe that I know everything that's

the moment I stop asking questions and when I stop asking

questions, I stop having knowledge. And so, the idea of

feeling comfortable in an assessment, I never, in that sense,

I would never feel comfortable. I always make an assumption

that there are things I don't know about this family. The

family knows more than I do, and so, they are always the

ones I feel should always be at the center of directing

what goes on in the relationship.

Employing metacognition to identify treatment sources. Metacognition involves

thinking in terms of describing similar patterns or features in past successes or failures in

practice and the explanation for these. Consequently, metacognition in practice is similar

to reflection in practice. Metacognition can lead to identifying a good source about a

particular topic. Good sources include reliable references and authorities on the topic at

hand. As Melvin reflected on the Mathews' case, he began to identify sources that he

would use to treat the marital problems of Brenda and Michael Mathews. Melvin says:

…You can either have been in a family where the parents

have a pretty good marriage, and you say well, I want that

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and you go and try to re-create it. But, more often there is

more a reaction formation, where you saw things that you

didn't like and you say you don't want to be like

your parent and you react and so you try to do a lot of

things differently. You know, I like Oliver Hendrick's

book, "Getting the Love That You Want" just for some, for

the sake that I think that we really do have a lot of

agenda in our marriage.

In the next excerpt Afumai identifies a source that appears to be very meaningful

to his work with a family like the Mathews. Afumai stated:

Ah, I am very much influenced by the work of Scott Miller

and the folks who work with him. Ah, looking at what

we call common factors. Quit looking at the common

factors with the idea that I really don't have much

confidence in the so-called evidenced based therapies or

so called evidence based approaches…Ah, but this idea

that somehow some particular some so called scientifically

researched therapy works better than others, and of course,

right now one is, ah, Cognitive Behavioral Therapy, that's

the only one that is taught in school these days. But, ah,

common factors approaches said that basically, in all

therapies whichever the approach is whether it's Cognitive

Behavioral or Narrative or Family Systems, whatever the

therapy is there are common factors that you can see in all

those therapies that make them effective.

In the next excerpt Arthur references a good model to use in the treatment of Michael, Jr.'s ADHD.   About Michael,Jr.'s ADHD Arthur said:

…they need a good psychoeducational model for ADHD. I'm

I'm not assuming that they havn't been educated about it

in the way they need to with the current literature, sort of thing,

but, but the reality is they probably havn't. And even though

they are in the school system and teachers, a lot of the

information that they get is outdated and, and it's very much

behavioral, behaviorally oriented, but not necessarily the

understanding of the nature of what's going on.

Using self-reference to determine expertise. The self-referent component of CT is also part of the active part of Fisher and Scriven's definition. Self-referent involves evaluating the self about a particular subject. For instance, the MFT will evaluate whether she or he is an authority on the subject at hand. In the case of the Mathews family, the MFT would evaluate whether she or he is an authority on marital therapy. Another issue would be whether the MFT feels comfortable assessing and treating a possible suicidal teenager like Michael, Jr.

In the following passage Chuck expresses CT as he applies self-reference to the affair in the marriage of Michael and Brenda Mathews.   Chuck said:

…Ah, there's an alledged affair with Michael, Sr. and Patricia.

and my point right now, you know, you cannot help them solve

their own problem without dealing with this affair first. So, I

would recommend that Michael, Sr. to please see another

therapist and deal with this affair that you have with the other

woman. That's my thing. That's my opinion as a clinician.

In the next excerpt, Sharon practices self-reference as she discusses Michael, Jr.'s situation. Sharon would prefer to refer Michael, Jr. to a psychiatrist. Because Michael Jr. is possibly suicidal, Sharon apparently feels more comfortable referring Michael, Jr. to a psychiatrist who is an expert at a assessing a suicidal teenager. Sharon also mentions information gathering as she talks with the Mathews about Michael, Jr. Sharon states:

Well, I would certainly want to find out about Michael, Jr.

since he's been talking about suicide. I don't think that could

wait. So, the first thing I would want to do is to have the family

to come in together and I would want to find out what the

mother and father were concerned about in Michael, Jr. cause

obviously they knew about it. They knew about the suicidal

talk. So, I would want to make a referral to a psychiatrist for

Michael, Jr. Just so I would be double sure that we was on the

right track with him first.

Afumai practices self-reference as he discusses himself as the therapist working with a family like the Mathews family. Specifically he talks about how he would handle strong feelings in himself while working with the Mathews family. Afumai stated

…One of my mentors in college was Nancy Boyd Franklin. Nancy

talks about therapy issues herself, and what that is essentially about is

that again, in a lot of traditional approaches to therapy is that we have

been taught to be afraid of our own emotions and also the emotion

of our client as opposed to using our emotional states, and so for me,

if I have a strong emotional reaction to a client, I want to know,

"Why?" What is it? What's and how can I use that? And, what is it

telling me about, not only my client, and my client's relationships,

but also me with other people? I wonder if others get similar responses

to this person. And I, so, I think that one of the skills that is important

for a therapist is to learn to use all of the precepts, their whole self,

their own relational responses, their own thinking, to be self-reflecting

and to ask questions of themselves as they are going through that

process. Ask, yes, Ah, yes. Ask, "why am I thinking about this

particular thing right now?" Or, why, you know, as I am talking

to this I am feeling really sad. What's happening that causes that?

And, sometimes you can also ask questions of your client.

Situations Where MFTs Use Critical Thinking in Practice

Critical thinking in practice was revealed in several situations. In other words, in

practice CT was apparent during specific interactions with the Mathews family. MFTs

use CT at the initial assessment, in joining with the family and while seeking supervision

or consultation. During the initial assessment the MFT gathers information about the

family to help to determine interventions for the family. Joining is used to get to know

and to show concern about not only the entire family but individual family members. Joining is another systematic way of gathering information. The reasons for the MFT to seek supervision or consultation include when therapy is not progressing.

At the initial assessment.   Usually the MFT will do the three generational genogram of the family in the initial assessment session. However, for this study the Mathews' three generational genogram was complete and presented to the MFT at the interview.   During the initial assessment a concentrated effort to assess the Mathews family will take place. However, according to Ericksonian therapy, the awareness of assessment of the family continues over the course of treatment. In fact, some theorists say that treatment and assessment are inseparable. It is in the initial assessment session that the MFT ask many questions about relationships, roles, rules and other family dynamics (Brock & Barnard, 1999).

In the following discussion Belinda expresses CT as she reflects about prior experiences with assessing a family like the Mathews family. Actually, Belinda inadvertently references Ericksonian therapy. Belinda displays CT by referencing knowledge of an external source, and continually gathering information in order to know how to help a family like the Mathews family. Belinda explained that she not only used CT at the initial assessment but in subsequent therapy sessions as well. Belinda states:

> In all the sessions. I'm one of those people who believe
>
> that assessment doesn't end with the first session. Um
>
> I think you are always assessing what is going on in the
>
> family. Because um no one is going to give you all of
>
> the information the first time that they meet you, or the

second time or the third time. There are so many times

that I've met with a family that in the 3rd session crucial

information comes out in that 3rd or 4th session. So, you're

always assessing whats going on, whats being said, to who,

how and those metamessages that are always there.

In the following passage Beatrice also discusses the initial assessment session

with the Mathews. Bernice portrays CT as she looks over the genogram and asks

questions to clarify, gather more history and to identify the presenting problem in the

Mathews family.

If I already have this genogram what I would

just sort of clarify some questions.   Ah, get

a little more history for sure. I definitely would get

history about their marriage, ah find out what kind

of conflict issues they have had. Yes, the initial

session is history, ah, and I'd structure the genogram

and find out what the presenting problem is, ah what

was her purpose for their coming here? Is there

something more immediate? And then start getting

all this history.

In "Joining" with the family. According to Fisher and Scriven (1997), CT

involves a systematic way of gathering information about a particular subject in order to

support declared conclusions. Joining can be one systematic way of gathering

information about each family member. The MFT will adjust and accommodate his or

her own interactional and communication style to fit the family's style. The aim is to ally

with the family system and each family member (Broderick & Schrader, 1991). All of

the MFTs in this study talked about the positive effects of joining properly with the

Mathews family. During the following excerpt Sharon gets to know Amanda by asking

her questions. While joining with Amanda, Sharon will gather information specifically

about Amanda. This information will be evaluated and interpreted. This will help Sharon

to understand Amanda's personality and Amanda's role in the family system.   Joining

will help Sharon to draw conclusions about Amanda's needs in the family. Sharon

stated:

> Well, I'd ask her. First, I'd try to join her.. in some way…
>
> I'd say I've got grandchildren about your age Amanda.
>
> And I know, did you know that…I used to be a school teacher?
>
> What grade are you in? And just try to join with her. And
>
> then I would say, your family has been going through a
>
> difficult time, havn't they?   And were you aware of that?
>
> And how did it affect you? And could you tell me what
>
> it was like to be the youngest child in this family in the
>
> last 6 months? I would just want her to know that I
>
> realize that she had her own perspective and that she
>
> had her own feelings about things. That those were
>
> important and had she had difficulty sleeping or
>
> noticed any changes in herself during this time?

In the following passage, Oscar describes how he would join with a family like the Mathews. We are reminded that Fisher and Scriven (1997) define CT as… "skilled and active, interpretation and evaluation of observations and communications, information and argumentation" (p.21). As Oscar uses humor to join and gather information and communicate with the family; he will also be evaluating and interpreting the information gathering during joining to draw conclusions about the family.   Oscar states:

> Well, I, I, take um a kind of two positions I guess,
>
> hand and hand. One, the first thing I do is I try to be
>
> playful. With adults and children, so. So, use humor
>
> and allow people to, to deal with their anxiety through
>
> humor.   And, and that sort of thing, but also I like to
>
> take a position of curiosity. And, and just, wonderment
>
> about the family. And just be consistent, not, being
>
> where it's easy to make a lot of assumptions, especially
>
> when you've been doing it for a while, you know. But,
>
> basically just to learn a lot about them and be interested
>
> in them, so curiosity.

In the next passage Chuck also discusses joining. All of the MFTs interviewed expressed the importance of joining with the Mathews family, including Chuck. Chuck said:

> The first time I see them that's when I start the
>
> therapeutics because when they come to the

office and they want to get help…You start

there. Not within three sessions, two sessions,

before anything else. The key for therapy is

joining. You know what I do. I ask about

their hobbies. So what's the common

denominator? Do they love movies? Do you

watch Superman or Spiderman? Do they love

basketball? We talk about basketball.

In the next passage, Belinda describes her way of joining with a family like the

Mathews family. Belinda evaluates herself in terms of her own body language and eye

contact. We are reminded that CT involves evaluation as Belinda evaluates herself; she

is also evaluating the family. Belinda said:

And to um, to try very hard, um, in joining with

each member of the family is also very important

to me. To make eye contact, to be respectful of

what each person has to say, to give feedback to

each person and not take sides. It's very important.

Um again, my nonverbal language is very important

in the joining in making my clients feel comfortable.

Um not having closed posture, smiling, again making

eye contact. Making sure that I have the appropriate

distance, not too close, not too far away.

While seeking supervision or consultation. In MFT practice, a common action for

a therapist is to seek supervision or consultation about the problems in the family. In this

case, one reason to seek supervision or consultation would be if the Mathews' marital

problems did not improve after several sessions. Self-reference appeared to be the CT

behavior that often prompted the MFT to seek supervision or consultation. Contemplating

seeking supervision is a CT process because the MFT is pondering what has been missed

in the therapy thus far. According to Fisher and Scriven (1997), CT often begins with

looking for a missing element.

In the following Melvin describes feeling stuck and seeks supervision or

consultation about the Mathews' marital problem. Melvin states:

> Yeah. I wished I could get supervision every day. You
>
> know 5 minds or 4 minds are better than one…Ah
>
> obviously you want supervision when you feel stuck.
>
> I don't know whether it's me or them or both of us.
>
> We're all stuck together. Well, that we don't know
>
> where to go next. Like with this couple. She's left
>
> with some feelings. She's come to a 4th session saying
>
> "I know he's asked for forgiveness, and I don't know.
>
> I don't know if I can get over it or not." Just leave
>
> it right there. It's like how are you going to do that?

In the next passage Chuck says that he would seek supervision or consultation

after six to ten sessions if the family is not better. Chuck states

Yeah, I think when, when we had a brief therapy. Lets

say its eight to ten sessions or six to ten, and we already

had about 70% of the sessions…and that is what we

called therapeutic and past during that time period.

Its seems like, in my judgment, there is a wall. You

can feel that wall with Michael, Sr. and Brenda and

the kids. I think that in spite of using all the inter-

ventions needed to help them solve their issues, and

I think it's not impacting them. So that's a time when

I say did I miss something? So, I need to talk to

somebody else about. Yes, and I have to and I have

to inform them that I need to consult with somebody

else.

In the next passage Afumai discusses when he would seek supervision or

consultation. Afumai says that he would not only seek consultation about theoretical

things but about things that may involve him as a person. Afumai stated

Things that, ah, are not just theoretical things, but also

might be emotional spaces for me or might be cultural

spaces for me. Ah, and so, and I feel like maybe I just

might need to get a checkup. Ah, I have gone through

consultation with, ah, I have working with a client, a

female client, and issues of gender differences or you

know a client may tell me, "Well, I don't think that

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you understand because you are a man." And the

client may be right and I need to talk to a female

colleague. Ah, and this is what I said to my client

and this is what she said. So, in those areas where

I may not feel, if I were working with a client who

is gay on some issues in terms of their relation-

ship and I am not quite clear and I get the sense

that we are missing something, then I might go

talk to one of my colleagues whose gay or who

has done more work with, ah gay clients. And

so for me, I look for consultation in those spaces

where I am feeling I got a blind spot. Something

I may be missing or not understanding.

While the interview questions were related to the Mathews family, the MFTs

often responded by reflecting upon other cases. For example, in the following passage,

Glenda talks about a case where she was baffled. She had a client that she did not

understand and she had to refer him to a psychologist. The interviewer asked Glenda,

"When would you seek supervision or consultation if you were the treating therapist for

the Mathews family?" Glenda answered this question with the following statements

When I'm baffled. The first time that I had an adult who was

diagnosed with Asperger's Syndrome, I couldn't figure it out

I just couldn't figure it out. He would just obsess and obsess

about certain things. Something happened to him in high

school and he couldn't let it go. So, I sent him to a psychologist.

The psychologist called me and said this is Asperger's Syndrome.

They are all obsessive compulsive. Its that severe side of Geek.

Yes this man had no social life. I'm talking about no social life.

Like my brother and my son.   They have these symptoms.

Factors That Influence CT in MFT Practice.

Several factors appear to influence CT in MFT practice. In other words, what prompts the MFT to think critically in practice?   The factors that influence CT in MFT practice are the development of a genogram, communications between the MFT and the family and the necessity for observation of the family during the session. We are reminded that according to Fisher and Scriven (1997) evaluation is the method of determining the value, quality, worth, or merit of something. Interpretation is how one understands, clarifies, or accurately describes actions, behavior or body language.

During the drafting of the genogram, the therapist will evaluate and interpret relationships, roles, rules, and other family dynamics. Communications in the family therapy session also influence CT.   The MFT would be evaluating and interpreting what the Mathews' family members say in the family therapy sessions. In fact, evaluating and interpreting communications began when Mrs. Mathews phoned the office for the appointment. Along with communications, the MFT will also be evaluating and interpreting observations in the family therapy session.

The development of a genogram.   Drafting, reviewing and using the genogram is a factor that influences CT in MFT practice. According to Fisher and Scriven CT involves gathering information in a systematic manner.   The use of the genogram is a

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systematic way of gathering information from 3 generations of the Mathews family.

The genogram provides an avenue to look at messages and dysfunctional patterns carried

over from one generation to the next.

The MFT will evaluate and interpret, the information gathered on the genogram.

The information will be used as a guide to determine interventions in order to help the

Mathews family to solve its problems. Some MFTs say that they will not begin therapy

with a family without a genogram. For example, in the next excerpt, Jade talks briefly

about the importance of the Mathews' genogram. Jade states,

So it's a way of …it's a tool for me. This genogram

is my tool that gives the information right off the bat.

I don't even want to talk to nobody without a genogram.

In the next brief passage Melvin also talks about conducting a genogram of

of 3 generations on all of his clients in therapy. Additionally, Melvin tells us that it is

viable for the MFT to be aware of his or her own genogram while working with the

Mathews family. Melvin states

Well, I do a genogram on everybody. For 3 generations.

That's just standard operating procedure. And I go from

there…You know, the original idea in systems thinking

was you hold the therapist's genogram up on one hand and

the client's genogram in the other hand and you keep them

them there. You always keep something like that. Literally,

I don't think that I do that as much anymore, but I think that

its viable. Someone could talk about a father with anger

problems and I mean right away, I had a father with anger

issues.

In the next excerpt Bernice talks about how she would use the Mathews'

genogram. Bernice mentions gathering more information about history and especially the

history of Brenda and Michael's marriage. We are reminded that Bernice will be

evaluating and interpreting the information gathered. Bernice states:

I would already have the genogram. If I already have this

genogram, what I would do, I would just sort of clarify

some questions. Ah, get a little more history for sure.

I definitely would get history about their marriage, ah

find out what kind of conflict issues they have had. Yes,

the initial session is history, ah and I'd structure the

genogram and find out what the presenting problem is.

Ah, what was her purpose for their coming here? Is

there something more immediate? And then starting

getting all this history

Communications between the MFT and the family. Another factor that influences

CT in MFT practice is communications in the family therapy session. During the

Mathews' family therapy sessions, the MFT is constantly communicating back and forth

with the family or the couple. Therefore, the MFT evaluates and interprets what the

family members are communicating among themselves as well as to the MFT. The MFT

seeks good understanding of communication patterns in the family. In fact both verbal

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and non-verbal communications in the therapy session help to determine interventions for the family.

In the following passage, Arthur demonstrates his ideas about verbal and non-verbal communications in therapy. Arthur also is evaluating and interpreting the communications in the session with a family like the Mathews. Arthur states,

> But I'm constantly aware of, of the dynamics and
>
> who says what to whom and when and whoever and
>
> if I offer a question, how does one answer it. And, and
>
> that sort of thing. Um I try to find meaning. To me
>
> there is meaning in everything that I see that's that's
>
> going on around me including the context. Like what
>
> might be going on with the person, just had a bad day
>
> at work and they're coming into a therapy session and
>
> so they're a little bit more intense than they usually are
>
> for example. Does that mean they're feeling worse or
>
> just a bad day? You know that kind of thing. So
>
> constantly observing all the circumstances. And factors
>
> as much as I can absorb it.

In the next excerpt Jade illustrates nonverbal communications in the therapy session. Jade also taps into observing the family in the therapy room. Jade stated

> Because there is, there is, non-verbal communication
>
> signals that are being sent all the time. Who's sitting

who? Why? You know, where did Michael, Jr., sit?

Where did he sit or any of them? Where are they sitting?

Ah, when one is speaking, what is the other one doing?

Is the other one looking at the other one? What body

language are they sending? You know.

In the following passage, Afuami also discusses communications in the Mathews

family in a family therapy session. Afuami states,

..Ah, and more, I work much more from, ah, I guess what's

called a post structural or narrative approach to doing, work

with folk, but I do pay attention to visual clues with the

family. I see how people are sitting, what's their level of

comfort when sitting with each other, if they touch each

other or if there are smiles in the conversation. Ah, I, the

most important thing in the conversation is, to me, how

they tell the story of how they came to be here. Ah, I

listen for what's said about that. Ah, if this seems to be

hopeless in their telling of the story or if the story seems

to be primarily, and I call it doom and gloom story, if it

seems to express hopelessness. I am listening for that.

Cause I believe that the most important thing is that, that

a client needs to be able to get to the place they say they

want to be, in a sense of hopefulness. And, I start

listening for hopefulness.

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In the next passage, Belinda echoes some of Afumai's thoughts in regards to communications. Belinda is also observing the family, in the session. Belinda states

> One of the things that the therapist has to do is to
>
> constantly be aware that there are things that the client
>
> is not saying. There are things that they are saying um
>
> that probably are those things are pretty apparent and um
>
> are surface kinds of issues. But the metamessages in my
>
> mind are those things that the therapist has to pay attention
>
> to um that are on another level. The way the client looks
>
> when he's saying those things, the way the client moves,
>
> um and the gaps in the information that the client is
>
> giving. All of that is another message that I call the
>
> metamessage that the therapist has to be very aware of

Necessity for observation of the family. Observation is another factor that influences CT in MFT practice. In fact, Fisher and Scriven (1997) say that CT is needed for interpretation and evaluation of observations and information. The MFT may use information from observation of the family to implement interventions with a family like the Mathews family. In the following passage Jade discusses observation

> And, and Michael, Jr. and Amanda, I also would be
>
> gauging mom and dad to see how much information
>
> the children know. And then by looking at them, I
>
> would see this stunning look on the kids face, every
>
> body's face, because they start giving out information.

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And then mom says, I didn't know that. And

the kids will give me information as well.

In the next brief passage Sharon talks about how she would observe the Mathews

family. Sharon stated

…Who sits by whom? You know, I go back to my

structural therapy ideas too.   When they come into

the room the first time, where do they sit? Um—And

who goes to whose defense? Notice who speaks for

whom, sometimes the parents do that for the children.

Arthur gives an expanded view of observation in the family session. He stated

…Um, I learn a lot from just watching, and, and, and

observing, not just visually and, and behaviorally. But also

listening to what people are saying: observing people's

interactions. Um, in basic sense, boundaries and that

kind of thing. But not just to assess what it looks like

is going on in a family in terms of relational dynamics,

but also to gain a lot of information so that I can teach

the family and reflect back on them. Almost like if

they were watching themselves on a video camera or

video tape. Ah, what I see happening and to help them

make sense, um, what they think if going on and match

that up with what I'm seeing.

In the next passage Jade also discusses the things that she observes while she is working with the Mathews family. Jade said

Because there is, there is, non-communication signals

being sent all the time. Whose sitting with who? Why?

You know, where did Michael, Jr. sit?   Where did he

sit or any of them?   Where are they sitting? Ah, when

one is speaking, what is the other one doing? Is the other

one looking at the other one? What body language are they

sending? You know.

Summary

This chapter describes critical thinking (CT) in the practice of marriage and family therapy (MFT). It is evident from the participants in this study that CT does occur in MFT practice. In fact, six CT behaviors used by MFTs in practice emerged from this study. The CT behaviors used by MFTs in practice are making an argument for the selected therapeutic approach, showing empathy for the family and ensuring fairness to all the family members. Additionally, asking questions, employing metacognition to identify treatment resources and using self-reference to determine expertise were revealed as CT behaviors. As the MFTs used CT behaviors, it became apparent that there were three situations in which MFTs used CT behaviors. The situations where MFTs use CT in practice are at the initial assessment, in joining with the family and seeking supervision or consultation. The factors that influence CT in MFT practice are the development of the genogram, communications between the MFT and the family, and the necessity for observation.

We are reminded that Fisher and Scriven (1997) define CT as…"skilled and active, interpretation and evaluation of observations and communications, information and argumentation" (p. 21). The definition is further broken down into component parts. The component parts are skilled and active. The skilled component simply means that good thinking meets the standards of clarity, relevance, fairness, accuracy, adequacy and reasonableness. The active component of CT involves questioning what is read, seen, or heard. The active component also involves metacognition or thinking about one's thinking. The remaining components of the definition involve interpreting and evaluating what is seen read, heard or judging the validity of an argument. All of the CT behaviors described in this study are part of the active component of CT.

During the initial assessment MFTs gather information in a systematic way which according to Fisher and Scriven is a CT function. It is during the initial assessment that the genogram is developed. One factor that influences CT in practice is the development of the genogram. Questioning appeared to be the CT behavior used most frequently by the MFT. In fact questioning was used frequently at the initial assessment. At least one MFT said that she assesses the family throughout treatment. The MFT ask questions to clarify, explain or gather information. Questioning will help the MFT to state premises about the Mathews' marriage and about Michael, Jr.'s problems. It can also help the MFT to decide which interventions to use with the family. Joining with the family is another situation where MFTs use CT behaviors. In fact, joining is another systematic way of gathering information about each family member in order to support conclusions about the family. Along with the CT behavior of

questioning, the MFT also used self-reference at both the initial assessment and in the

joining process.

CHAPTER 5

SUMMARY, CONCLUSIONS AND DISCUSSION, IMPLICATIONS AND

RECOMMENDATIONS

The purpose of this study was to examine critical thinking (CT) in the practice of marriage and family therapy (MFT) employing a qualitative research approach. The following questions guided this study:

1. What are the CT behaviors used by MFTs in practice?

2. In what situations do MFTs use CT in practice?

3. What factors appear to influence CT in MFT practice?

To respond to the research questions, a qualitative research approach was used in order to study a problem about which relatively little information existed. A purposive sampling was selected to search for MFTs in one southeastern state. To begin this process, I had to decide the selection criteria for the participant. First, the participant had to be a licensed MFT. A licensed MFT has fulfilled a rigorous process to obtain the license credential. Secondly, the participants had to have at least five years of experience in practice. Benner (1984) suggests that a competent professional has been on the job for two to three years. According to Patton (1990) the use of interviews and written documents are two of three types of ways to collect data. To examine CT in MFT practice, I used as research tools a combination of the interview and a document analysis to gather the data for the research. I conducted ten interviews with licensed MFTs. Field notes were documented after each interview.

According to Merriam (1998), the researcher may generate a document for a qualitative research study. A document called the genogram was generated.   MFTs use genograms in practice to assess and treat the family.   Consequently, MFTs are very familiar with the genogram. Moreover, genograms are an integral part of MFT practice. The genogram is like a family map which provides an avenue to look at the messages that are carried from generation to generation of families.   By carefully examining the genogram, the MFT and the family can identify maladaptive and adaptive patterns of interactions (Brock & Barnard, 1999).   The genogram generated for this study was of a fictitious family named Mathews.   Each interviewee was given a copy of the Mathews' family genogram.   Michael, Sr and Brenda Mathews are the father and mother in the family. The children in the family are Michael, Jr., age 14 and Amanda age nine. Participants were informed that Brenda Mathews phoned the MFT's office stating that her marriage was in trouble because Michael, Sr had an affair. Her son, Michael, Jr was writing suicide notes at school. He had been kept after school   detention and he was also failing several classes.   Amanda is described as the good child with no problems

The findings in chapter 4 revealed that MFTs use six CT behaviors in practice: 1) making an argument for the selected therapeutic approach, 2) showing empathy for the family, 3) ensuring fairness to all family members, 4) asking questions, 5) employing metacognition to identify treatment resources and 6) using self- reference to determine expertise. The findings also suggest that there are at least three situations where MFTs use CT in practice: 1) at the initial assessment, 2) in joining with the family and 3) while seeking supervision or consultation. Additional findings revealed at least three factors

that influence CT in practice: 1) the development of the genogram, 2) communications between the MFT and the family and 3) necessity for observation.

<center>Conclusions and Discussions</center>

Two conclusions are evident from these findings.   The first conclusion is that CT behaviors in MFT practice are interrelated and emerge often in practice.   The second conclusion is that situations where CT occurs in MFT practice are a consequence of three factors.

Conclusion one: (CT) behaviors are interrelated and emerge often in practice

The CT behaviors appear to be interrelated and emerge often in MFT   practice. In a related study of respiratory care therapists, Mishoe (1995) found a similar conclusion. Mishoe (1995) suggested that, "In professional practice, one skill for CT can lead to another and one skill can influence another. Also, there are situations in clinical practice which require a specific skill as well as a combination of skills" (Mishoe, 1995 p.226).   Additionally, Mishoe (1995) says that there is constant movement back and forth among the different skills for CT. In the present study, there also appears to be continual motion back and forth among the various CT behaviors. In fact, as the MFT reviews the case study for this research, the CT behaviors of self-reference, metacognition, questioning, empathy and fairness appear to be interrelated.   According to Fisher and Scriven (1997), fairness is one of the standards of good thinking. Empathy and questioning are a part of the investigatory and proactive component of CT. Metacognition is part of the analytical or reflective level or level 4 of CT. The MFT in the present study is faced with an affair in the Mathews' marriage. It appears that the

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interrelatedness of self-reference, metacognition, questioning, empathy and fairness are demonstrated as the MFT addresses the affair in the marriage.

Bernice is one of the participants in the study who used self-reference to determine her expertise in marital therapy involving an affair. Bernice commented that she would begin by questioning the Mathews' to gain more history about their marriage. As Bernice questions the couple, she is assessing her expertise or practicing self-reference. The CT behavior of questioning was one of the most frequently used CT behaviors by the MFTs in this study. The MFT is likely to practice questioning in each therapy session. The MFT has to ask questions to gain a better understanding of the dynamics of the marriage or the family. One way that the MFT uses questioning is to understand the couple's language. Questioning the couple and the various family members leads to empathy. It appears that empathy and fairness maybe more interrelated. For instance, Ericksonian family therapy suggests that the show of empathy to each family member appears to encourage fairness (Lankton, S., Lankton, C. & Matthews, W.,1991). The MFTs in this study had various ways of ensuring fairness with the Mathews family. For instance, Arthur ensured fairness by giving air time to each family member. On the other hand, Belinda ensured fairness by questioning each family member for their perspectives. A therapist has to place him or herself in the shoes of others' situations.

In other words, the MFT must be able to empathize with the problems that brought the family in for therapy (Lankton, S. Lankton, C. & Mathews, W. 1991). Regardless of the answers to the questions about the affair, the MFT will show the CT behavior of empathy for both Mrs. Mathews and for Mrs. Mathews. For example, the

MFT should show empathy in regards to Mrs. Mathews' feelings of betrayal and emotional pain about her husband's affair.   On the other hand, the MFT must also show empathy for Mr. Mathews' struggle to end the affair and save his marriage. If the MFT aligns with 1 or the other spouse and does not show empathy and fairness to the other spouse; the therapy may be compromised.

Thus far Bernice, the MFT has used the CT behaviors of questioning, self-reference, empathy and fairness in the Mathews case. In fact, the MFT will use several CT behaviors simultaneously to address the Mathews problems. Actually while the MFT uses these CT behaviors, she also practices metacognition. Metacognition is a part of the 3rd and 4th levels of Fisher and Scriven's (1997) definition.   It involves thinking in terms of describing similar patterns or features in past successes or failures in practice and the explanation for these. Metacognition is similar to thinking about one's thinking. This is akin to self-reference in that the MFT reflects about successes or failures marital or family therapy. Consequently, metacognition in practice is similar to reflection in practice. Mishoe (1995) says that reflecting in practice involves the therapist's ability to analyze decisions, biases, opinions and assumptions. Reflection also helps the therapist to come up with solutions to problems.   In other words, for the Mathews' case Bernice, MFT will think about her successes or failures in marital therapy and think about the best approach for solutions to the Mathews' problems.   Moreover, as the MFT practices metacognition; the MFT explores various treatment resources or authorities to work with the Mathews. For instance, Melvin, one of the participants in the study said that he had been successful using the book by Orville Hendrix, titled *"Getting the Love You Want."*

Melvin commented that this book would be a treatment resource that he would use with the Mathews couple.

So, for the Mathews' case MFT have utilized self-reference, fairness, empathy, metacognition and asking questions to solve the Mathews' problems. Additionally, the CT behavior of making an argument for the selected therapeutic approach is also contemplated. Stating an argument for the selected therapeutic approach is part of Fisher and Scriven's 4th level of CT. The 4th level expands metacognition to thinking about CT. Thinking about CT can lead to the creation of new principles or concepts in CT. It is during the practice of metacognition that a hypothesis about something is stated. Stating a hypothesis is akin to making an argument for the selected therapeutic approach. In other words, the MFT would use clinical knowledge and experience to take a guess about which interventions to use to solve the Mathews' problems. While practicing metacognition, or thinking about thinking, the MFT has to consider self-reference because this involves thinking about past clinical knowledge and experience.

For example, Arthur and Glenda, 2 of the participants in this study, hypothesize that Michael Jr. could be experiencing depression or anxiety underneath the ADHD diagnosis. Arthur and Glenda are using self-reference and metacognition to make the argument for the selected therapeutic approach for Michael Jr. Arthur and Glenda are making the argument to treat Michael, Jr not only for his obvious ADHD but to also treat him for depression or anxiety. Both MFTs concluded that it was their experience that underneath ADHD symptoms is often depression or anxiety in teenagers. Barry another participant in the study suggests that any type of intervention with the Mathews family is based on a hypothesis. He hypothesized that the couple's behavior in the marriage is

related to their sibling order in their family of origin. He says that he looks at the feedback from the family and his hypothesis is either confirmed or disconfirmed. Barry says that hypothesis may have to be reshaped depending upon the feedback from the family.

In a related study, Mishoe (1995) found that the skill of anticipating involved thinking and planning ahead. In a follow up study to Mishoe's work, Goodfellow conducted a study asking respiratory therapists to self-assess their CT skills by rating themselves using Mishoe's seven CT skills. Interestingly, Goodfellow found that the respiratory therapist rated anticipating as the lowest rated CT behavior.   Goodfellow suggested that anticipating is a difficult skill to teach to students training to be respiratory therapist. She believed that experience was the key to respiratory therapists practicing CT skills. Consequently, she concluded that the more experienced therapist would practice anticipating more easily.   The present study reveals that MFTs, too, think and plan ahead in regards to their attempt to solve the Mathews family's problems. Glenda, one of the participants commented that she would love to know what's going on with the closeness between Mrs. Mathews and her mother. Glenda inquired as to whether Mrs. Mathews was spending time with her mother and neglecting her marriage. She also planned to examine the couple's parenting styles to look into how the Mathews related to their children.

Conclusion two: Situations where CT occurs in MFT practice are a consequence of three factors

Situations where CT occurs in MFT practice are a consequence of 3 factors. The situations where MFTs use CT in practice are at the initial assessment, in joining with the

family and while seeking supervision or consultation. The factors that influence CT in practice are the development of the genogram, communications between the MFT and the family and the necessity for observation. We are reminded that Fisher and Scriven (1997) define CT as … "skilled and active interpretation and evaluation of observations and communications, information and argumentation" (p.21). In other words, CT is used to evaluate and interpret information, communications, observations and argumentation. Evaluation is simply judging the plausibility of an argument. Interpretation is how one comes to understand, clarify, or accurately describe actions, behavior or body language. Additionally, CT involves a systematic way of information gathering. In a related study, Mishoe (1995) found that respiratory care therapists must seek the right information to explain, infer or interpret the patient's status. Consequently, CT behaviors emerge in practice as the MFT reviews the information about relationships, rules, roles, beliefs, functioning patterns or events about the Mathews' family and extended families as displayed on the 3 generational genogram.

The initial assessment of the family is a guide to intervention for the Mathews family. The structural family therapy approach focuses on change rather than pathology of the family. In a related study Mishoe (1999) suggests that respiratory care therapist perform on going assessments of the patient in order to anticipate solutions and problems. Similarly, structural family therapists also do on going assessments at every session with the family. For instance, Belinda and Arthur, 2 MFTs who were interviewed for this study said that they used CT not only at the initial assessment but in subsequent therapy sessions as well.

It is during the situation of the initial assessment that the 3 generational genogram is developed. The genogram is like a visual family map. The use of the genogram is a systematic way of information gathering.   One of the most frequently occurring CT behaviors emerging at the initial assessment is questioning. According to the systemic family therapy model, the MFT presents to the family as a naïve questioner. In other words, the MFT presents as someone who needs information in order to draw conclusions about the family. Questioning can also help the MFT with time frames of events in the family. As the family members answer the MFT's questions, the MFT introduces flexibility into what the family believes. Introducing new information can create positive change in the family members (Campbell, D. Draper, R. & Cruthchley, E., 1991). In other words introducing new information can serve as an intervention for the family.

 The 3 generational genogram results an enormous amount of information about the Mathews' family and extended family. In fact, the 3 generational genogram reveals information about up to fifteen or more families and extended families. The genogram will help to determine the origin of the presenting problems in the Mathews family. It will reveal coalitions, alliances, and triangles among family members. In other words, the genogram will help the MFT to draw conclusions about the dynamics in the family and extended family. Moreover, the genogram will reveal drug and alcohol history as well as medical history of the family.

As the MFT gathers the information for the genogram, the CT behaviors of self-reference, empathy, fairness, metacognition, questioning and making arguments for the selected therapeutic approach emerge. At the initial assessment, it is possible for the

MFT to not only contemplate the argument for the selected therapeutic approach but to judge the plausibility of the selected therapeutic approach. In other words, the MFT will determine whether the argument or arguments for the selected therapeutic approaches to treat the Mathews' problems are reasonable. The MFT will also determine whether seeking supervision or consultation will be necessary.

Drawing inferences from the Mathews' genogram involves finding and securing components needed to come to reasonable conclusions about the family. Drawing inferences are a part of Fisher and Scriven (1997) 3rd level of CT which is also the analytical and reflective level of CT. This level also involves speculating about the information gathered from the genogram. In a related study, Mishoe (1995) found that respiratory care therapists must seek the right information to explain, judge evaluate infer, analyze, or interpret the patient's status. The way that respiratory care therapist seeks the right information is by communicating with other therapists, other clinicians, the patients and the doctors. In a follow up study Goodfellow (1999) asked respiratory care therapists to do a self-assessment of CT behaviors using Mishoe's findings. The respiratory care therapist in Goodfellow's study confirmed Mishoe's findings in regards to the importance of communicating to seek the right information. In fact, communicating rank among the highest Ct behaviors among respiratory care therapists in Goodfellow's study. Kenimer (1999) followed Goodfellow in the profession of clinical laboratory science. Kenimer's study also confirmed the importance of communications in order to seek the right information to explain, judge, evaluate, infer, analyze, or interpret.

Fisher and Scriven (1997) say that CT is used to evaluate and interpret communications. It is during the situation of joining with the family that communications with each family member is critical. Joining is that emotional connection that the MFT makes with each member of the Mathews' family including Michael, Sr and Brenda Mathews, Michael, Jr and Amanada. Joining sets the tone for the entire therapy experience. Sharon, one of the MFT interviewed for this study, suggested that she joins with the various family members by asking questions. This researcher suggests that the joining process can lead to empathy. For example, as Sharon joins with Mrs. Mathews, Sharon feels more empathy about her feelings of being the victim of the affair. Sharon joins with Amanda, the 9 year old by asking questions about school and asking her about her feelings about her family in recent months. During the joining process the CT behaviors of fairness, empathy, metacognition, self-reference, questioning or making an argument for the therapeutic approach emerge in practice.

Fisher and Scriven (1997) say that CT is also applied to communications. In other words communication is part of what one evaluates and interprets. Moreover, CT is applied and manifested through communications. In a similar study, Mishoe (1995) says that it takes skill for effective communication. The respiratory care therapist has to know what to say, how to say it and when to say it. According to Ennis (1996), clear speaking is part of the process of CT. In fact, he suggests clarifying meanings of terms to ensure that the terms are defined the same by all involved. For this purpose, the MFT will use such vital requisites as concision, clarity, and the pairing of vocabulary to the Mathews family to the MFT's own communication. Through a process called tracking the MFT embraces symbols of the family's life through which to build relationships and to

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communicate with the family.   For example by communicating with the Mathews family, the MFT will track the values of the family, the history, the life themes and the language of the family. The way in which the family relates and functions is wrapped within these symbols. During the therapy session, the MFT will communicate with the family members and the family members will communicate with the MFT. The MFT will evaluate and interpret the family's communications. As a result, CT behaviors will emerge and the MFT will gain insight as to the therapeutic goals for the Mathews family.

Observation is the last factor where CT occurs in situations in MFT practice. Fisher and Scriven (1997) say that part of what one evaluates and interprets is observations. Historically, CT is only applied to what is said or read. However, Fisher and Scriven's concept of CT is unique in that their concept suggests that CT can be applied to observations. Observation involves the use of the senses such as feeling, seeing or hearing. This includes any type of sensing. During observation of the family, the MFT considers the nonverbal communications   that the family members display. Jade, an MFT, stated that there is always none verbal communication signals among the family. In the family therapy session with the Mathews family, the MFT will observe the interactions of the family members. Jade will also observe body language of the family members. The seating arrangement of each family member will be observed.   For example, Mrs. Mathews may choose to sit closer to Michael, Jr than to her husband, Michael, Sr. One conclusion that the MFT may draw is that the mother and son are a little too close and the mother and father are not close enough. Therefore the MFT would work with the family to restore a more healthy balance of closeness in the family. The MFT will observe various interactions among the Mathews family members. For

example, the MFT observes who comforts whom in the family therapy session or who speaks for whom. Information from observations will help to determine interventions.

The necessity for observation is one of the factors that influence CT in MFT practice. Actually, observation of the Mathews family in the therapy session is another way of gathering information. According to Fisher and Scriven (1997) observation is what one can interpret and evaluate as CT is used. Observation involves the use of the senses such as feeling, seeing or hearing. This includes any type of sensing. During observation of the family, the MFT considers nonverbal communications that the family members display. For instance, Jade, one of the participants commented that during therapy there is, nonverbal communication signals that are being sent all the time. Jade pays attention to where the various family members are sitting. She also looks at the family's body language.

As the MFT observes the Mathews family, the MFT may contemplate alternative meanings of what was seen or heard. The MFT may have to ask questions to clarify an observation. Self-reference will be used to determine whether the MFT has the experience to address the family's observed issues. Other CT behaviors will emerge as the MFT observes the family. As the MFT observes the Mathews family in the therapy room, the MFT can determine politeness such as whether one family member can talk without being interrupted. The family will reveal information about age appropriate behaviors. The family may exhibit whether they avoid conflict or whether they deal with conflict directly. The MFT will also be able to gauge which family members are under involved or over involved. All of this information will help the MFT to draw conclusions about the family and plan interventions for the family's problems. Arthur

says he gains a lot of information by watching and observing the various family members during the therapy session.

Implications for Practice

This study has implications for marriage and family therapists, other healthcare professionals, educators, and managers. The findings from this study adds to the knowledge base about CT in marriage and family therapy and other professions. Educators in healthcare and other professions can use these findings to teach CT skills in various practice settings.

Educators in MFT graduate programs can use these findings to develop CT curriculum. The graduate student who seeks to practice in the MFT field has to meet the requirement of a 1 year internship which includes course work and practice hours with clients. Adding CT to the curriculum will enhance and accelerate the learning process. These findings also provide a language for CT in MFT practice. Perhaps this CT language and the MFT language can be synthesized as a learning tool for MFT students. One approach would be to construct a work book to include case studies of families for the students to use before they begin practice with real clients. The students could apply CT behaviors to the case studies of families in the workbook.

We live in a high tech global world with instant, massive, and continuous availability of information. The CT behaviors found in this study can be a guide for educators and students to sort the abundance of information. In fact, CT behaviors found in this study can be applied to what is read, seen, heard or observed. Applying CT behaviors can help educators and students to draw accurate conclusions. After investigating CT for eleven years, Borup (2000) says that CT should be a distinct

academic course.   This researcher echoes Borup's suggestion.   Perhaps the various

scholars who offer different but similar concepts of CT can collaborate towards 1

definition of CT. Determining 1 comprehensive definition of CT could be the start of an

academic course in CT.

The findings from this study can be used by managers in professions other than

the health care professions. Bickham (1998) suggests professionals should be concerned

with CT in their professions. Knowles (1980) says that current practice knowledge is

only good for approximately ten years. This suggests the possibility that training of

adults in work environments is more crucial than once believed. It would likely be useful

for managers or business people to develop CT training programs for employees about

day to day practice situations. CT about day to day practice situations can enhance

knowledge in practice. It can also lead to new principles and practices.

Licensed MFTs are required to obtain thirty five continuing education units

(CEU) every 2 years. Future MFT scholars could organize conferences to discuss CT

behaviors and offer CEUs. Other healthcare professionals such as nurses, doctors, or

social workers can also benefit from CEU hours earned at MFTs' conferences.   Adult

learners live in a fast paced and hurried society. They normally seek more education for

increase salary or promotion opportunities. Perhaps adult learners' attention spans are

short due to the mundane stresses of jobs and day to day life. It is recommended that real

life scenarios from practice   be presented for discussions and treatment planning at the

various continuing education conferences. This researcher suggests that adult learners

engage and invest more in the learning process with real life practice situations as

learning props with vivid visuals and interactive components are used.

Recommendations for Future Research

This researcher recommends additional studies about CT in professional practice. CT is a way for professionals to encourage the use of their collection of experiences and knowledge to comprehend day to day practice situations (Bickham, 1998). Research in the health care professions of respiratory care therapy was conducted by Mishoe (1995) and Goodfellow (1999). Additionally, CT in the profession of clinical laboratory science was conducted by Kenimer (1999). All of these health care professionals call for additional research about CT in the professions. This study about CT in the profession of marriage and family therapy adds to the knowledge base about CT in the healthcare profession. However, it appears that research and conclusions about CT in the professions should continue.

First, are the CT behaviors found in this study transferable to other professions? For example, is making an argument for the selected therapeutic approach, showing empathy, ensuring fairness and asking questions transferable to other healthcare professions? Additionally, is employing metacognition to identify treatment resources and using self-reference to determine expertise transferable to other professions? In a related study Goodfellow wondered whether CT skills are apparent in multiple contexts and, therefore, called for more studies to find out the degree of CT in other health care professions. Goodfellow (1999) also recommended further research to determine whether CT skills can stand alone in various professions. Kenimer (1999) also recommended more studies to determine whether CT skills are transferrable. Future scholars could develop an instrument with CT behaviors such as a survey form to be

completed by members of various professions. The results of such a study could possibly

confirm the transferability of CT behaviors to other professions.

Secondly, more research is needed to determine the importance of CT in MFT

practice. For example, in what ways does CT influence diagnosis and treatment in MFT

practice? In other words, research could be done to examine how CT influences practice

toward identifying diagnoses and treatment for specific problems such as suicidal ideas,

attention deficit disorder, marital problems, depression, anxiety or PTSD. Perhaps the

use of CT behaviors can help to develop specific models for specific diagnosis and

treatment. The results of the present study appear to suggest that CT behaviors may

emerge more frequently at the initial assessment with the family. In conjunction with the

use of CT behaviors and the genogram, perhaps a specific assessment tool can be

developed to examine more carefully parenting styles and/or relationship styles in

marriages. Further, perhaps CT behaviors can be assessed at the beginning of the therapy

experience, midway the therapy experience and at the end of the therapy experience.   It

may be beneficial to the treatment process to understand why CT behaviors appear to

emerge more frequently at the initial assessment.

Thirdly, more research is needed to determine whether novice MFTs use CT

behaviors as often as more experienced or expert MFTs. For example, a case study of a

family could be presented to an experienced group of MFTs and the same case study be

presented to a group of novice MFTs. The study could examine the frequency of the use

of CT behaviors among the expert group and among the novice group. The results could

be used to excel learning experiences among novice MFTs. Perhaps the language of CT

behaviors and MFT language can be synthesized for training of novice MFTs. To this

end, future educators of MFT students could develop a course with text and a workbook for practice using the CT behaviors found in the present study.

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APPENDIX A

CONSENT FORM

I_____ agree to participate in the research, "Critical Thinking in Marriage & Family Therapy," conducted by Mattie G. Bush, LMFT, a graduate student in the Department of Adult Education, The University of Georgia, 706-542-2214. I understand that this participation is entirely voluntary; I can withdraw my consent at any time without penalty and have the results of the participation, to the extent that it can be identified as mine, returned to me, removed from the research records, or destroyed.

The following points have been explained to me:

1. The reason for the research is to examine critical thinking in the field of Marriage & Family Therapy. I can expect to have the opportunity to add to the knowledge gap in the area of critical thinking in the professions.

2. The procedures are as follows: I will be expected to meet with the researcher at a mutually agreed upon time and location and discuss semi-structured questions pertaining to the above stated research for approximately one hour. The interview will be taped.

3. The only foreseen risk is the possibility that you may be reminded of some of your own family's dynamics as you study the family dynamic's of the case in this research project.

4. I will be assigned a pseudonym for my protection. My identity will not be revealed by the researcher for any reason.

5. The results of this participation will be confidential, and will not be released in any individually identifiable form without my prior consent, unless otherwise required by law.

6. The investigator will answer any further questions about the research, now or during the course of the project. My interview will be transcribed and the data will be held until 4-30-07.

Signature of Investigator/Date   Signature of Participant/Date

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APPENDIX B

BIOGRAPHICAL DATA SHEET

Personal Data Sheet

(Check One) Dr.__ Mrs.__ Ms.__Mr.___

Type of Practice
__Private Practice (Solo)
__Private Practice (Partnership)
__Public Mental Health Center
__other_____

Years in Practice___

Degrees Completed

Master's Degree in _____yr_____
Ed.D./Ph.D. in_____yr_____

Degree Granting Institution_____

Family Information

Marital Status (circle one) Optional

Married   Children   yes no
Single   Ages ___, ___, ____,___
Divorced
Committed relationship

Racial Background (circle one)

African American   Hispanic/ American
Caucasian   Asian American

Percentage(%) of clientele you serve

_____%African American ____%Hispanic American
_____%Caucasian   ____%Asian American

APPENDIX C

INTERVIEW GUIDE

1. What are the critical thinking behaviors used by Licensed Marriage & Family Therapists in practice?

The Mathews' family presents with some very serious problems. In your opinion what would a preliminary evaluation of the Mathews family look like?

How would you decide which problem to deal with first with the Mathews?

When would you ask questions to various family members?

How would you ensure fairness to each family member?

If a family member reports what you think is an ambiguity, what would you do?

At what point would you feel completely comfortable with your assessment of the Mathews family?

When would you seek supervision or consultation if you were the treating therapist?

2. In what situations do Licensed Marriage & Family Therapists use critical thinking in practice?

What kinds of things will you be evaluating and interpreting as you do therapy with the Mathews family communications, (the way the family speak to one another), observations, (who comforts who, who praises who, who is aligned etc.).

Does empathy for one family member resonate with you more so than for other family members? If so why?

If you find yourself having strong feelings about an issue with this family, what would you do about the strong feelings to ensure that you can remain objective?

If your family has some of the same problems as the Mathews family, how would you feel about treating the Mathews family?

Do you find yourself more angry at one family member than at others and if so why?

How would you decide whether to treat the Mathews family or refer them?

From your experience, what is the most reliable intervention with a family like this one?

Could you describe what would have to happen in this family for you to know that the interventions were working?

At what point would you recommend that the therapy end?

What would you do to bring therapy to a close with this family?

3. What factors appear to influence critical thinking in Licensed Marriage & family Therapy practice?

Do you feel that you have enough information to begin the work with the Mathews family?

How will the intergenerational information from the genogram help you treat the Mathews family?

At what point would you bring in members of the extended families to help with interventions?

What would your argument (conclusion) be as to why Michael, Jr. is having problems? Give reasons for drawing your conclusions.

Suppose one of the family members reports something and you are not clear about what they are reporting. What would you do?

What would your argument (conclusion) be as to the meaning of the affair that Mr. Mathews was having?

How often during the family session would you evaluate and interpret what you observe in the family?