American Psychological Association

Recovery to Practice Initiative Curriculum:
Reframing Psychology for the Emerging Health Care Environment

15. Scientific Foundations

August 2014
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Overview

In this module of the course we will discuss the issues surrounding research on recovery for people with serious mental illness, identify the pros and cons of using quantitative versus qualitative designs, and consider new methods that combine the best of both approaches.

Learning Objectives

At the end of this module you will be able to:

- Identify at least two kinds of research designs that have traditionally been used to study the recovery process and interventions
- Discuss at least three of the pros and cons of quantitative and qualitative research vis a vis the concept of recovery
- Describe two of the differences between medical research and social science research carried out in the community
- Explain at least two recent innovations in research designs for community based studies
- Discuss at least two of the potential advantages of new research methodologies and describe any challenges that may be apparent

Resources

- Lecture Notes
- Required Readings
- Lecture Notes Citations
- Sample Learning Activity
- Sample Evaluation Questions
- Additional Resources

Required Readings


**Activities**

Complete the following activities:

- Read the lecture notes
- Read the required readings
- Engage in a learning activity related to this module
- Evaluate students’ understanding of this module.
Lecture Notes

People with lived experience of serious mental illness are strongly encouraged to be part of the delivery of the curriculum including being active participants in the delivery of the lecture. Refer to the curriculum Instruction module for additional information.

Introduction

Research documenting that people with serious mental illnesses recover and live satisfying lives in the community began appearing in the literature in the mid 1970s. The early studies were conducted in countries outside the United States and long term outcome data showed that people with serious mental illnesses all over the world had similar recovery rates. In the mid 1980s, psychologist Courtenay Harding published a study of people in Vermont with serious mental illness which documented their recovery and successes in the community. Then, in the mid 1990s, Harding published a compendium of studies which pulled together the evidence from several countries, all of which documented similar rates of recovery from serious mental illness (Harding & Zahniser, 1994). A synthesis of these and more recent studies is provided in the table below:

### Schizophrenia Recovery Research

<table>
<thead>
<tr>
<th>Study</th>
<th>Sample Size</th>
<th>Average Length Years</th>
<th>Percent Recovered or Significantly Improved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bleuler 1972 to 1978 Switzerland</td>
<td>208</td>
<td>23</td>
<td>53-68</td>
</tr>
<tr>
<td>Hinterhuber 1973 Austria</td>
<td>157</td>
<td>30 apprx</td>
<td>75</td>
</tr>
<tr>
<td>Huber et al 1975 Germany</td>
<td>512</td>
<td>22</td>
<td>57</td>
</tr>
<tr>
<td>Chiompi &amp; Muller 1976 Switzerland</td>
<td>289</td>
<td>37</td>
<td>53</td>
</tr>
<tr>
<td>Kreditor 1977 Lithuania</td>
<td>115</td>
<td>20+</td>
<td>84</td>
</tr>
<tr>
<td>Tsuang et al 1977 USA</td>
<td>200</td>
<td>35</td>
<td>46</td>
</tr>
<tr>
<td>Marinow 1986 Bulgaria</td>
<td>280</td>
<td>20</td>
<td>75</td>
</tr>
<tr>
<td>Harding et al 1987b 1987c USA</td>
<td>269</td>
<td>32</td>
<td>62, 68</td>
</tr>
<tr>
<td>Ogawa et al 1987 Japan</td>
<td>140</td>
<td>22.5</td>
<td>56</td>
</tr>
<tr>
<td>Desisto et al 1995a 1995b USA</td>
<td>269</td>
<td>35</td>
<td>49</td>
</tr>
<tr>
<td>Marneros et al 1992</td>
<td>148</td>
<td>25</td>
<td>58</td>
</tr>
<tr>
<td>Harrison et al 2001 worldwide</td>
<td>1005</td>
<td>15 and 25</td>
<td>43 - 61</td>
</tr>
<tr>
<td>Hopper et al Sz only Incidence</td>
<td>502</td>
<td>13 to 17</td>
<td>67</td>
</tr>
<tr>
<td>Hopper et al Sz only Prevalence</td>
<td>142</td>
<td>26</td>
<td>63</td>
</tr>
</tbody>
</table>

More recently, several meta-analyses and summaries of newer studies have appeared and all continue to document that individuals with serious mental illnesses can, and do recover from the effects of their illness (Warner, 2010).

Since the early 1970s, and continuing to the present, psychologists, together with consumers, have led efforts to conduct research on recovery outcomes, developed and
tested instruments designed to assess functional skills, and psychologists have developed and tested interventions to assist with the recovery process.

Research designed to identify specific interventions to help people recover from serious mental illness and achieve a satisfying life in the community is relatively new, having taken place primarily in the last fifteen to twenty years. While research to date has not identified a complete picture of what is needed to help people recover, research supports several service models which some experts now consider to be evidence based practices (EBPs) in that they consistently have shown positive results in multiple research studies for the population of people with serious mental illness (Dixon, Dickerson, Bellack, Bennett, et al., 2010). In addition to the EBPs, there are interventions that have not yet achieved the level of evidence that some experts consider necessary to be called an EBP but which have shown considerable promise. These are variously labeled as promising practices or emerging interventions. The specifics of these and other interventions are discussed in greater detail in the modules on Interventions. With that introduction in mind, this module will concentrate on the science that has led to the designation of these categories of service models and highlight the opportunities and challenges of the current state of this science.

**Research Designs for Recovery Oriented Mental Health Services**

As mentioned, research on how to help people recover from the effects of serious mental illness and achieve a satisfying life in the community is relatively recent. During this time, there have been several studies of community interventions that have adhered to the highest standard of research design, the randomized controlled trial (RCT), and that have produced favorable results. Moreover, these studies have been replicated in subsequent RCTs, indicating that the results can be achieved when fidelity to the researched practice is maintained. This research has changed the landscape of interventions available to people with serious mental illness. Most experts agree that RCTs demonstrating efficacy are necessary before a practice can be considered evidence based and so it is from these studies that the EBPs referred to in the introduction to this module have been identified.

There are many different ways to categorize types of research, such as experimental vs. non-experimental, quantitative vs. qualitative, etc. The first section below details some examples of the types of traditional research methods and designs that are used to advance the knowledge base. As will be seen, none of these approaches, when used separately or sequentially, has the capability to answer the myriad of questions that arise when attempting to discern the best approach to services offered to people with serious mental illnesses. To do that, a combination of approaches, carried out in one single study, offers the best hope. The section following the one below on traditional methods details this relatively new combination approach, known as mixed methods research.
Quantitative Studies – Experimental Designs

As in other scientific fields of study, the RCT is considered the gold standard for research on the recovery process and interventions designed to help people recover. But the use of RCTs in research on recovery and rehabilitation interventions emerged from the RCT standard used to test medical interventions, where only one or very few variables are under study, where the variable(s) can be controlled, and where one outcome is typically desired. In medical research, RCTs are relatively easy to design and carry out. In such studies, extraneous variables are either controlled or are not relevant to the outcome. The interventions in these studies are principally pharmacotherapies and once safety has been determined, the variables to be manipulated are relatively straightforward and easy to manipulate and monitor. Examples of such variables include dosage level, frequency of administration, and duration of the intervention. Finally, in medical research, it is well known that even after a best practice has been identified, new research that emerges often changes the view of that best practice and it is either recalled or superseded by a different practice.

Drawbacks to Use of RCTs for Recovery Oriented Interventions

While noting that RCTs are the research gold standard, there are several drawbacks to using RCTs in community settings where recovery and intervention research is carried out. This is principally due to the large number of variables that must be accounted for and the complexity of the variables and the interactions that occur. Impediments include generalizability to populations or settings different from those of the original research (population characteristics, geographical areas, client characteristics, etc.), cost and length of time required to complete the study, the multitude of variables usually under study in community research and those not under study but that can influence the outcome, and the difficulty of maintaining subjects for long periods of time especially when intervening factors may emerge such as changes in life situation and symptom exacerbation. These are but a few of the difficulties with using RCTs in community research.

If we contrast the relatively straightforward research on a drug treatment or other medical intervention with the highly complex and multi-component characteristics of the psychosocial rehabilitation (PSR) EBPs, dramatic differences become apparent. While significantly advancing our efforts to help people with serious mental illness achieve the goals they have identified for themselves, the current state of research on EBPs and other interventions has many unanswered questions. Like much of social science community research, the EBPs are, for the most part, multi-component interventions that can be difficult to implement with fidelity in non-research environments. Often the EBPs are resource intensive and can require that individuals remain committed to the intervention for long periods of time. It may be that some, but not all, of the components contribute most to the outcomes observed. But, to date, there has been virtually no research designed to tease apart the efficacy or effectiveness of the component parts of the EBPs. Such research could potentially help clinicians know which components are critical to achieve a
given result, making the potential for providing an effective intervention with fewer resources more likely. There has also been little research to identify the components of a given intervention that people with serious mental illness value most, i.e., those that individuals think were most helpful such as a hopeful, valuing environment and an empathic, trusting relationship. Such research could help to increase the likelihood that people with serious mental illness would accept the intervention, or specific components of the intervention, in a non-research environment, i.e., a community mental health setting.

Also important is the fact that some of the factors mentioned by people with serious mental illness as critically important for recovery are difficult if not impossible to measure quantitatively as is necessary in an RCT, sometimes due to ethical reasons (Anthony, Rogers & Farkas, 2003; Drake, Goldman, Leff, Lehman, et al., 2001; Hogan, 2010; Rogers, Farkas & Anthony, 2004). Examples include a person’s sense of hope that recovery is possible, the relationship between the person with the illness and his or her mental health practitioner, and the person’s perceptions about his or her quality of life. Clearly it would not be ethical to encourage hope of recovery in one group but discourage that sense of hope in another group. Nor would it be ethical to work toward establishing a trusting relationship in one group of people and work against that kind of relationship in another group of people. So, while it is always desirable to conduct research using the highest standard, i.e., an RCT, doing so in certain research endeavors is considerably more difficult and may not be practical or ethical.

**Quantitative Studies – Quasi-experimental Designs**

Given that it may not always be feasible to use an RCT design for research on recovery oriented interventions, the next most rigorous design within the category of quantitative research is the quasi-experimental design. Unlike in an RCT, random assignment to groups (e.g., experimental and control groups) does not occur in a quasi-experimental design. One common example of the quasi-experimental study is the nonequivalent groups design, in which two (or more) naturally occurring groups that are thought to be similar are selected for investigation. One group receives a treatment or participates in an intervention; the other does not. Then pre- and post-test scores from groups are compared to see if the intervention group showed a differential effect than the non-intervention group. Although causality cannot be ascribed to one variable or another in a quasi-experimental study, these are the types of studies often undertaken in community settings because of the many variables that often cannot be completely controlled. Despite not being able to make definitive causal inferences, these studies have the advantage of providing valuable and often necessary information that could not be obtained through purely experimental methods. For applied research questions such as those related to recovery from serious mental illness, quasi experimental studies offer the possibility of obtaining information that may not be obtained from a purely experimental study.
Non-experimental Quantitative Studies – Observational Research, Survey Research, Program Evaluation and Other Methods

Non-experimental research, sometimes also called correlational research, describes behavior and looks for relationships between variables. Although causality cannot be ascribed to one variable or another in a correlational study, these studies are also often undertaken in community settings because of the challenges of assigning individuals to groups. Observational research consists of the systematic observation of behavior and while no intervention is provided, can be useful for gathering information about the occurrence of one or more behaviors or patterns of behavior. In an observational study, data are collected and analyzed, and the researcher looks for relationships between the variables of interest. For example, although most often used to look at a condition’s prevalence, incidence, correlation with other variables, or prognosis (Mann, 2003), observational methods such as case controlled studies can be used to generate hypotheses that can be experimentally tested after initial information is obtained. If subjects can be contacted over time, longitudinal case controlled studies can be especially useful. Despite not being able to make definitive causal inferences, these studies have the advantage of providing valuable and often necessary information that could not be obtained through purely experimental methods. One grading scheme that has been developed to assess how rigorous and meaningful a non-experimental research finding may be is the Standards for Rating Program Evaluation, Policy or Survey Research, Pre-Post and Correlational Human Subjects Studies, which is one component of the Quality of Disability Research Instruments (QDRI) scale (Rogers, Anthony, Kash & Farkas, 2008). The scale provides a mechanism for assessing a variety of factors that can impact on the quality of non-experimental research.

Qualitative Studies

All of the above methods have limitations that impact their usability and applicability. RCTs frequently cannot be applied to real world settings and quasi experimental and non-experimental methods often encounter selection bias and other complexities that confound the study and its results. Having discussed the most frequently used quantitative research designs, it is equally important to discuss qualitative research methods because of the value they add to quantitative data.

Qualitative research refers to a diverse method of inquiry where data consist of something other than numbers, most commonly text. Examples of qualitative methodology include focus groups, interviews, or analysis of written narrative documents. Qualitative studies are often considered hypothesis-generating. This means that researchers might do a qualitative study when there is no obvious hypothesis, or when the area of investigation is new. By learning more about the area of interest, the researcher can begin to develop hypotheses that can then be studied using quantitative methods. Some of the results from qualitative studies have been the driving force behind development of the EBPs. These include the importance of several factors such as the person’s relationship with mental health practitioners, setting goals that are important to the individual, development of skills to
assist the person attain his or her desired goals, and helping the individual to develop resources needed for support and goal accomplishment (Farkas & Anthony, 2010; Rogers, Farkas & Anthony, 2004). Qualitative studies can be a good place to start when attempting to understand a complicated construct like recovery. By asking people about their experience of recovery and looking for themes, researchers can begin to understand the construct before deciding on study designs that allow for quantitative study. Qualitative data can also provide information that is highly descriptive and allows the researcher to understand why something is the way it is, i.e., qualitative data add contextual detail.

What Does it All Mean and What is the Best Way Forward?

From the discussion above, it should be clear that there are advantages and disadvantages to both categories of research. The debate about which kind of research design to use is one that has taken place for the past several years, continues to this day, and will likely continue for some time to come. Recently however, suggestions have emerged about how to move forward in carrying out social science research especially in the community (Creswell, Klassen, Plano Clark & Smith, 2011). These suggestions seem particularly appropriate for our efforts to learn which interventions work best for people with serious mental illnesses.

In any research endeavor, it is important to use the strongest research design that is also best suited to answer the questions of interest. The researcher, and ultimately, the user or person evaluating the usefulness of that research, should be able to appraise the research findings based on the characteristics of the question(s) that were under study. In order to obtain the best answer(s) to complex questions such as those posed in recovery and rehabilitation intervention research, it may be necessary to use more than one approach – this is in fact what many experts in the field are calling for (Anthony, Rogers & Farkas, 2003; Essock, Goldman, Van Tosh, Anthony, et al., 2003, Farkas & Anthony, 2010). This has been stated succinctly by the NIH Office of Behavioral and Social Sciences Research:

Furthermore, while randomized clinical trials allow for a causative interpretation of what studied factors bring about change, it is through qualitative, ethnographic, and process analyses that one can focus specifically on what the participant perceives and experiences as the change process. These essential ingredients in the change process may not be evident unless subjective measures and qualitative approaches are included in our research repertoire. The point is not whether qualitative or quantitative measures are better; rather it is that they are complementary and not duplicative (Office of Behavioral and Social Sciences Research, 2001).

Using Multiple Approaches to Find the Best Answers: Mixed Methods Research

Applying research outcomes to benefit practice is the reason for conducting the research in the first place. While research following the highest scientific standards is always the goal, the results of research studies must be applicable to the intended beneficiaries, in this case, people with serious mental illnesses. In some cases, neither purely experimental research
nor purely non-experimental research has satisfied the criteria (Tanenbaum, 2005). Finding the right mix of science, practicality, usability, generalizability, etc. can be difficult, but may not be impossible. Enter the relatively new world of mixed methods research.

In response to the debate about the best way to obtain evidence on what works in social service, health, and community research, some researchers have suggested and begun using more than one approach in studies where there are multidimensional variables, potentially complex interactions, and where the research conditions cannot be tightly controlled. This new approach has been termed mixed methods research (Creswell & Plano Clark, 2011; Tashakkori & Teddlie, 2003; Teddlie & Tashakkori, 2009).

In mixed methods research, quantitative and qualitative data collection and analysis are combined in the same study, not in sequential processes, but as part of one overall design. The central premise of mixed methods research is that using quantitative and qualitative approaches at the same time provides a stronger design and a better way to view the research question and the study results than either approach alone. This is the distinctive feature of mixed methods research and when carried out in this way, studies are said to have used a mixed method design. While researchers have collected and analyzed both kinds of data for many years, putting both together in the same research design has not typically been the case, although use of this approach has been increasing in recent years (Palinkas, Horwitz, Chamberlain, Hurlburt, & Landsverk, 2011). In fact, the Office of Behavioral and Social Sciences Research at NIH recently sponsored development of a guidance document aimed at helping potential grantees understand and use mixed methods research. The authors of the document defined mixed methods research as follows:

...a research approach or methodology:

focusing on research questions that call for real-life contextual understandings, multi-level perspectives, and cultural influences;

employing rigorous quantitative research assessing magnitude and frequency of constructs and rigorous qualitative research exploring the meaning and understanding of constructs;

utilizing multiple methods (e.g., intervention trials and in-depth interviews);

intentionally integrating or combining these methods to draw on the strengths of each; and

framing the investigation within philosophical and theoretical positions (Creswell, Klassen, Plano Clark & Smith, 2011).

Since a narrow view of any question or concept can lead to misleading or incorrect conclusions, broadening the way research questions are looked at would seem to enhance the possibilities for gaining the most from studies of recovery and PSR services. Proponents of the mixed method approach believe that such research broadens the array of questions
that can be asked and potentially answered and offers the possibility to do so all within the same study. The approach also may be able to provide stronger inferences, offer the potential to present a wider range of views based on the results of such studies, and allows investigators the possibility to answer both exploratory and confirmatory questions in the same study thereby permitting verification and generation of theory in the same study (Kemper, Stringfield & Teddlie, 2003). Although not routinely used by those studying recovery and rehabilitation interventions, combining quantitative and qualitative designs may be the approach of choice for studying the variables of interest in the recovery paradigm and PSR interventions. Due to the potential to more quickly answer many of the remaining questions about what works best for whom and under which conditions, it is hoped that use of mixed methods designs will increase in frequency.

**Challenges**

Research on the recovery process and interventions in community settings is very complex and typically has a large number of variables to be controlled. Identifying the best method to conduct such research in order to find answers to the questions under study is the overarching challenge.

Although several challenges could be identified, two of the most obvious ones will be discussed here. These are, first, what should we be studying, and secondly, how should we be studying it? Within each of these, there are additional questions that are equally important and add to the complexity of these two primary questions.

Regarding the first, the interventions that have been designated as EBPs and promising practices emerged from two sources, a) the concrete targets identified by people with serious mental illness as necessary to achieve a satisfying life in the community, i.e., good relationships with family and friends, satisfying work, an ability to manage symptoms, etc., and b) the somewhat more intrinsic characteristics and helping processes identified by people with serious mental illness as crucial for recovery such as a sense of hope, respect, self-direction, etc. As targets of research, both of these have been equally applauded and criticized for one reason or another.

While no one takes a strictly either/or position, many psychologists can be found on one side or the other in the debate about the value of studying each of these. Those in favor of studying the interventions believe that the best way help people recover is to assist them with the skills necessary for successful community living. Those in favor of studying the characteristics of recovery believe that no intervention will be helpful if these underlying values and supports are not present. Logic would dictate that both are correct.

Embedded within this first challenge is yet another question that is related to intervention research. This has to do with teasing apart the components of those interventions found to be effective to determine which contribute to the success of the overall intervention, and which if any, are not crucial to achieve the desired outcome.
The second major challenge is very much linked to the first. It concerns the best way to study the variables of choice, i.e., interventions or underlying values and characteristics. Some believe that quantitative studies have the most value because if done properly, causality can be ascribed based on the outcome. Others believe that qualitative studies have the most value because of the richness of the information that can be gathered and the ability to link this information directly to individuals’ beliefs about the variables under study. To date, research has tended to concentrate on one or the other, with most intervention research carried out using quantitative methods and most studies looking at characteristics and values of the recovery paradigm using qualitative methods. Often when one method is the primary approach, additional data will be collected using the other method, but this has not been truly satisfying because the data and analyses are not fully integrated, leaving many unanswered questions. The recent development of mixed methods approaches holds promise for resolving some of these dilemmas, but the techniques are not well known and are not used as frequently as might be desired. Most psychologists are trained in the methods associated with quantitative research although there is increasing interest among psychologists in studying quantitative research techniques. Fewer psychologists yet are trained in mixed methods approaches; this approach may be the most valuable however.

While all of the issues will likely not be solved in the very near future, our knowledge about how best to assist people with serious mental illness will be advanced by a broadened and more comprehensive view of the kinds of questions that should be asked and the research methods best suited to find answers to those questions. Training psychologists to embrace all possible research methodologies may be a significant challenge in and of itself. Training psychologists in the skills needed to carry out mixed methods research may be the best answer and offer the best of both worlds.

**Summary**

While recovery oriented research is relatively recent, significant gains have been made in our knowledge about the interventions and processes that are available to help people with serious mental illness achieve the kind of life they choose. Examples include the EBPs, promising or emerging practices, and the components of the recovery paradigm. This knowledge has been gained through quantitative and qualitative research and despite the continuing debate about which has more value, neither approach has contributed more than the other – each approach has advantages and limitations.

Neither of these research approaches is singularly capable of producing the kinds of results that are needed to truly advance the field and enable widespread use of the knowledge gained. A relatively new methodology called mixed methods research is increasingly being promoted as one solution to the problems encountered in complex community based research. This methodology combines both quantitative methods and qualitative methods within one study design and proponents argue that this approach substantially strengthens...
the inferences that can be made from the results of a single study. While the final answer is not likely to appear in the very near future, use of this new design approach may hold promise for adding more quickly and more thoroughly to our knowledge of recovery and rehabilitation, ultimately enhancing psychologists’ ability to assist people in their recovery from serious mental illness.
Sample Learning Activity

For this activity, a consumer participant is asked to list six things that he or she considers to be most important for his or her recovery. The items can be such things as feeling hopeful, having good social skills, having meaningful work, being able to direct one’s own recovery services, etc. There are no restrictions on the items that can be listed. The items listed should be written on two large sheets of paper that all can see. The consumer participant should very briefly describe the items that he or she listed. This portion of the learning activity should take no more than fifteen minutes – in the interest of time, the consumer participant could be asked to come prepared with the list.

Once the list is completed, all participants are split into two groups, and the consumer participant will move back and forth between each group. Each group is to design a research study that is best able to determine the impact of all the listed items for people with serious mental illnesses. The limitations of each of the designs should be highlighted and solutions to those limitations offered.
Sample Evaluation Questions

<table>
<thead>
<tr>
<th>Question</th>
<th>Correct Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The primary advantage of using an RCT in community based research is:</td>
<td>b) is correct</td>
</tr>
<tr>
<td>a) the control over complex variables that can be achieved</td>
<td></td>
</tr>
<tr>
<td>b) causality can be determined</td>
<td></td>
</tr>
<tr>
<td>c) generalizability is assured</td>
<td></td>
</tr>
<tr>
<td>d) all of the above</td>
<td></td>
</tr>
<tr>
<td>e) none of the above</td>
<td></td>
</tr>
<tr>
<td>2. Qualitative studies have been praised for their ability to:</td>
<td>d) is correct</td>
</tr>
<tr>
<td>a) provide contextual information</td>
<td></td>
</tr>
<tr>
<td>b) allow the researcher to understand why a finding has emerged</td>
<td></td>
</tr>
<tr>
<td>c) identify emerging areas of study</td>
<td></td>
</tr>
<tr>
<td>d) all of the above</td>
<td></td>
</tr>
<tr>
<td>e) none of the above</td>
<td></td>
</tr>
<tr>
<td>3. Research on the evidence based practices has advanced the knowledge base because:</td>
<td>e) is correct</td>
</tr>
<tr>
<td>a) it has provided insight into the components of recovery and the characteristics people with serious mental illness have identified including the importance of hope, self direction, respect and empowerment</td>
<td></td>
</tr>
<tr>
<td>b) the relative value of each of the components within the practices has been identified</td>
<td></td>
</tr>
<tr>
<td>c) the importance of a trusting relationship with the practitioner has been firmly established</td>
<td></td>
</tr>
<tr>
<td>d) all of the above</td>
<td></td>
</tr>
<tr>
<td>e) none of the above</td>
<td></td>
</tr>
<tr>
<td>4. The biggest challenge to research on recovery and community rehabilitation interventions is:</td>
<td>e) is correct</td>
</tr>
<tr>
<td>a) researchers’ inability to resolve the debate about quantitative vs. qualitative approaches</td>
<td></td>
</tr>
<tr>
<td>b) the lack of a research method that can definitively answer all questions</td>
<td></td>
</tr>
<tr>
<td>c) researchers’ and consumers’ differing views of the topics that should frame the research</td>
<td></td>
</tr>
<tr>
<td>d) all of the above</td>
<td></td>
</tr>
<tr>
<td>e) none of the above</td>
<td></td>
</tr>
<tr>
<td>5. In mixed methods research designs:</td>
<td></td>
</tr>
</tbody>
</table>
a) quantitative and qualitative design, methods, data collection and analyses are combined under one design

b) complex constructs and variables can be investigated at the same time that contextual constructs and variables are investigated

c) a broader array of research questions can be asked

d) the researcher has the possibility to both verify and generate theory in the same study

e) all of the above e) is correct
**Lecture Notes Citations**


Warner, R. (2010). Does the scientific evidence support the recovery model? The Psychiatrist Online, 34, 3-5.

**Additional Resources**

American Psychological Association Recovery to Practice Initiative.  
http://www.apa.org/pi/rtp


Citing the Curriculum

Citation for this Module:

Citation for the full Curriculum:

For additional information, contact:
Recovery to Practice initiative at the American Psychological Association, www.apa.org/pi/rtp
or
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