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Development of a resilience scale for Thai substance-dependent women: A mixed methods approach

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ABSTRACT

The purpose of this study was to develop a resilience scale based on the experiences of substance-dependent women in Thailand and evaluate its validity and reliability. A sequential exploratory mixed methods design was employed as the main methodology to develop the resilience scale according to the results from qualitative data by analyzing focus group discussions of 13 participants. Then, the scale was administered to 252 substance-dependent women from four substance-treatment centers. The psychometric properties were explored with an index of item objective congruence (IOC), Pearson correlation, second-order confirmatory factor analysis and Cronbach's alpha coefficient to estimate the quantitative data. The qualitative results showed that resilience is defined by three themes: individual, family and community factors, consisted of 13 different categories. The quantitative results also revealed that all 71 items in the resilience scale passed the IOC criteria, convergence and construct validity. The goodness-of-fit indices demonstrated that the resilience model was consistent with the empirical data. (Chi-square = 74.28, df = 59, *p*-value = 0.08, RMSEA = 0.03, SRMR = 0.04, NNFI = 0.99, CFI = 0.99, GFI = 0.96). The internal consistency, assessed by a Cronbach's alpha score of 0.92, can be interpreted as demonstrating high reliability. Furthermore, the structure of the resilience scale was confirmed by the available resilience literature. This study can help clinicians gain a more comprehensive understanding regarding the complex process of resilience among substance-dependent women and aid them in providing these women with the appropriate interventions.

1. Introduction

Several studies have explored the outcomes of substance treatment programs, although most of them have limited their research participants to men even though increasing number of women are entering substance-treatment programs. (Greenfield et al., 2007; Grella et al., 2005; Hser et al., 2003) The substance-treatment literature has examined the important factors that interfere with the outcomes of substance treatment for women and include psychological trauma from physical and/or sexual abuse, perceived stigma and psychiatric comorbidity, which differ from substance-dependent men. (Copeland, 1997; Greenfield et al., 2007; Hser et al., 2003; Messina et al., 2006; Nelson-Zlupko et al., 1995). Therefore, clinicians should consider the psychological trauma and recovery issues that correlate with resilient experiences among substance-dependent women to better understand the results of substance abuse treatment.

Resilience is a psychological concept that has been widely studied and is defined as the capacity and outcome of positive adaptation in the context of adversity. (Egeland et al., 1993; Helgason, 2008) Many studies document resilience relating to or predicting abstinence (Fadardi et al., 2010; Nintachan et al., 2011; Stajduhar et al., 2009). However, many resilience concepts currently focus on individual factor and do not address family and community factors (Gartland et al., 2011), even though the literature indicates that it manifests as both individual and external factors, such as family and the community (Adger, 2000; Flach, 1988; Masten, 2001). Therefore, the first objective of this study is to explore the resilience factors, not only the internal factors but also the external factors in Thai substance-dependent women by using focus group discussion (FGD). Then, the study used the qualitative results from the focus group discussion to draft a resilience scale and employed quantitative testing to

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investigate the psychometric properties. The scale that was constructed in this study can be used to evaluate and develop the effectiveness of therapeutic programs specifically designed for Thai substance-dependent women because the items were derived from emergent facts of qualitative data contexts.

2. Materials and methods

The study was a two-phase, sequential exploratory mixed methods design. (Creswell and Plano Clark, 2011) The purpose of the first qualitative phase was to explore the 13 substance-dependent women's views about their resilience and collect us the data to draft an initial resilience scale, which was then used to quantitatively test the psychometric properties in the second phase. This study was approved by the ethics committee of the Princess Mother National Institute on Drug Abuse Treatment, Thailand before gathering the research data.

2.1. Qualitative phase

The researcher collected the qualitative data from June 2014 to November 2014. The resilient experiences of substance-dependent women were gathered using two separate focus group discussions (FGD). Focus groups were chosen to collect the data because the viewpoints that come from the group discussions and debates were more reliable than individual in-depth interviews. (Photisita, 2011) Additionally, there were several studies that used focus group discussion in the exploratory phase of mixed methods to draft and design a quantitative test to examine the psychometric properties (Amos et al., 1997; Barbour, 2007; O'Brien, 1993; Wacherbarth et al., 2002).

2.1.1. Participants and setting

Thirteen participants recruited from the Princess Mother National Institute on Drug Abuse Treatment were divided into two focus group discussions and run separately by the same research team, which consisted of two group moderators and a note taker. The researcher served as the main group moderator and had two assistants who served as the co-group moderator and a note taker. The participants were between the ages of 14 and -36, single, and employed and were secondary school graduates. The 13 participants were selected based on the following five criteria: (1) diagnosed by medical doctor as an amphetamine-dependent woman; (2) scored more than 75% on a resilience checklist as reported by a clinician at the the Princess Mother National Institute on Drug Abuse Treatment; (3) scored more than 75% on a resilience checklist as reported by amphetamine-dependent woman; (4) scored less than six points, which means the participant suffered from no mental health problems, as measured by the General Health Questionnaire–Thai version 28 items; and (5) signed consent form to be a participant in this study. Each focus group discussion was run three times for 2 h in a quiet room with two tape recorders. The resilience checklist cut-off point (75%) was determined by the researcher to collect enough participants for the focus group discussions (Photisita, 2011) with the highest resilience checklist scores.

Before running the focus group discussion, the researcher developed a rapport and research relationship with the staff and all of the women who received rehabilitative program from the Princess Mother National Institute on Drug Abuse Treatment for 2 weeks by being introduced as a researcher and a psychologist in the morning meetings and by joining activities. The researcher realized that values and biases can influence the process of conducting and interpreting this research (Photisita, 2011); hence, the researcher journaled about worldview awareness, intuitions and past experiences while gathering and interpreting the qualitative data. The focus group discussions were run with the following interview questions: (1) What are the largest challenges and adversities you have faced in your life? Give me a few examples; (2) How can you go through those experiences? and (3) What sorts of things regarding your capacities or external supports help you to succeed?

2.1.2. Data analysis

The focus group discussions were tape-recorded onto audio files and transcribed verbatim. The data analysis process considered both the transcripts and researcher's journal with deductive strategies according to the main research questions. The Aliases were used instead of the real names of participants in the transcripts. Trustworthiness was established (Lincoln and Guba, 1985) through the following process (1) Credibility. After coding, categorizing and generating themes, the researcher employed member-checking techniques to ensure the credibility of the research by bringing the results back to participants and treatment staff to check the validity of the data interpretation. Triangulation was also utilized by running the two focus group discussions separately as multiple sources and comparing coding and categorizing to ensured emergent facts. The researcher had debriefing sessions with experts in qualitative research throughout the process to ensure the validity of the qualitative process. (2) Transferability. The researcher described the thick context, procedures, and participants to other researchers to transfer the research findings from this study; and (3) Dependability and (4) Confirmability were ensured by an audit trail that could be investigated by verbatim transcripts from audio tapes and journals or field notes that included the researcher's assumptions, expectations, feelings and bias while gathering and interpreting the data. Moreover, the results from the qualitative data analysis were described in the participants'wording in quotations to confirm the researcher's interpretations.

2.2. Quantitative phase

The researcher collected the quantitative data from December 2014 to February 2015. After drafting a 5-point Likert resilience scale from the qualitative data, the researcher estimated the reliability and validity of the scale with quantitative method.

2.2.1. Content validity

This step aimed to determine the relevance of the operational definitions and items by experts in the fields of counseling psychology, addiction and qualitative research. Five experts were invited to review the item contents developed from the operational definitions that were drafted based on the qualitative results. The index of item objective congruence (IOC) (Kamket, 2006) was utilized to perform the content validity. If any item did not meet a 0.50 level rating by five experts, it was removed from the scale. Furthermore, the experts were asked to write comments regarding how to edit wordings, as the researcher considered them to improve the items appropriately.

2.2.2. Item discrimination

The resilience scale was distributed to four substance treatment centers for women across Thailand. The 252 samples were used to estimate the item discriminations by item-total correlation. The items with more than a 0.2 item total correlation and a statistical significance of 0.05 were chosen to ensure the validity in the next stage.

2.2.3. Convergent validity

To establish the convergent validity, the researcher examined the relationship between the resilience scale and the general perceived self-efficacy scale–Thai version (Sukmak et al., 2001)

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