SOCIAL SUPPORT AVAILABILITY, PSYCHOLOGICAL DISTRESS SYMPTOMS AND LEVEL OF MOTIVATION AFFECTING THAI ADDICTS' SELF-ESTEEM AS MODERATED BY THEIR HIERARCHICAL POSITION IN AN INSTITUTIONAL THERAPEUTIC COMMUNITY REHAB MODEL

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Abstract: A prominent drug and alcohol rehabilitation method worldwide is the Therapeutic Community (TC), which employs a hierarchal system to promote member addicts to leadership positions. All addicts begin the TC program at the bottom of this hierarchy and move up the ladder throughout their stay. Some eventually become work leaders and mentors for the newer members of the addict community. However, with shorter rehabilitation durations, member addicts often finish the program without having experienced the top tiers of the hierarchy.

Although research is abundant regarding relapse of TC community members, there is little on the self-esteem of these patients resulting from poor social support, the presence of psychological distress symptoms, poor motivation, and poor hierarchy positions. The current study attempted to examine why some addicts were leaving the program with low self-esteem, hypothesizing that *perceived social support, achievement motivation*, and *psychological distress symptoms* all play a role. This relationship is moderated by the patients' position in the social hierarchy.

Findings suggest that *perceived social support* and *psychological distress symptoms* (specifically *depression* and *hostility*) significantly affected patient self-esteem upon exiting the community. Still, social hierarchy did not play a role in moderating this relationship, nor was it a significant predictor of self-esteem. Further research could benefit from a longitudinal study that monitors self-esteem at multiple patient rehabilitation intervals.

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Introduction

There are a variety of approaches worldwide to drug and alcohol rehabilitation. One highly successful treatment style, the Therapeutic Community (TC), helps to bolster the self-esteem (Ravndal & Valgum, 1994) and self-efficacy of clients (Perfas, 2012). The core philosophy of all TC's is the concept of "community as method" (De Leon, 1997), meaning that peer members work with one another in an open, honest, and authentic manner – encouraging open dialogue and positive, productive behavior. High-ranking member addicts in the TC hierarchy are encouraged to suggest new behaviors and character modifications to the newer members and *model* those modifications and behaviors. They remain open to their possible areas of personal improvement (De Leon, 1997).

The concepts of trust and transparency are also consistent themes in the TC (Perfas, 2012), with members reciting daily mottos such as, "Never keep your feelings to yourself" and "Help yourself by helping others." Members are encouraged to participate in every role available in the TC. "Peer, friend, coordinator, and tutor" (De Leon, 1997, p. 5), and it is the responsibility of all members to give feedback to one another regarding their observations of the behavior and mental states of fellow addicts in the program.

The therapeutic process unfolds in TC's (De Leon, 1997). Through activities such as group meetings, recreation, work duties, and common daily living tasks, peer addicts enter into a social system that offers them a structured hierarchy in which to advance – first starting as a worker and subordinate, and then through good behavior, positive steps towards personal improvement, and showing the ability to learn the basic tasks at the next level (and communicate those tasks to others) (Perfas, 2014) patients are allowed to advance to the highest levels of the hierarchy, thus completing the metaphoric journey from *child* to *adult* (Bell, 1994).

But because of the cost burdens to patients, therapeutic communities have begun to modify their programs in recent years by offering much shorter treatment durations. Decades ago, the recommended time of treatment for a patient entering a TC was over one year (Perngparn, 2009), whereas, in the present day, there are treatment times of six months, four months, and even one month. And with significantly shorter treatment times comes considerably fewer reports of success, such as one American TC program reported on by Bleiberg, Briscoe, Croan & Devlin (1994), whose success rates

dropped significantly after an administrative mandate to lessen the total treatment duration of the program from six months to one month (Bleiberg et al., 1994).

The sheer statistics regarding relapse are not the only variable affected by shorter treatment durations. There are also many instances where, because of the shorter time frame, patients cannot participate in all of the therapeutic functions of the TC (Perfas, 2014) and thus do not get some of the self-esteem bolstering experiences that they would have obtained otherwise.

Moreover, the issue of low self-esteem for patients in the TC is potentially most salient for the individuals in the program who leave without completing all of the steps in the social hierarchy (Bell, 1994). Shorter treatment durations may cause this to happen. Still, there are other instances where individuals are left in the bottom tiers for different reasons, such as poor social skills (Ravndal & Vaglum, 1994), low levels of motivation, the presence of psychological distress symptoms, and/or low levels of social support from family, friends, or a significant other.

Purpose of the Study

The purpose of the study was to 1. To examine possible relationships between TC patients' motivation, psychological distress symptoms, and social support with their level of self-esteem at their time of departure from the 4-month TC program; and 2. To check if the TC hierarchal position is moderated the relationship between motivation, psychological distress symptoms, and social support upon self-esteem.

The classic therapeutic community as well as present-day modified TC's, which support specific needs of certain populations, or have been shortened for the sake of cost and convenience, have reports of success in both relapse and recidivism rates as well as more nuanced factors such as pro-social behavior and increased interest in employment and education upon addicts' completion of a TC program (De Leon, 1985).

Possible Reasons for Slow Promotion into the TC Hierarchy

Poor social support may be a principal reason for poor TC hierarchy promotion. Measures of perceived social support have been used in many studies, including prostitution, addiction, and more. A 2015 study by Atadokht, Hajloo, Karimi & Narimani determined (using the MSPSS questionnaire) that a high level of perceived social support, in tandem with the expressed emotions of family, was associated with lower instances of relapse

in former drug addicts. Past studies have also pointed out the salience of social support related to depression. A survey by Cates, Rehman, Risser & Risser (2010) purported that both men and women were more susceptible to symptoms of depression when self-reporting a lack of closeness to a particular person (significant other) (Cates et al., 2010).

The salient effects of social support related to depression have still been shown to be valid today. The positive results of perceived social support are reported in ever-expanding psychology and social science areas. A 2011 study in London by Head, Klineberg, Rothon and Stansfeld used the MSPSS questionnaire to examine the link between bullying, achievement, and social support. They found that when participants reported high levels of help from friends, they were more likely to attain high levels of school achievement even when they were the victim of bullying (Head et al., 2011).

Past researchers have also recommended interventions involving increased social support in Therapeutic Communities. In one study by Soyez et al. (2006), significant others of some drug-addicted patients were asked to participate in social networking within the TC. After this period of enhancing social networks, results from the study indicated that those patients who had received social enhancements were more likely to stay in the program (Soyez et al., 2006).

Achievement motivation has shown to be a salient factor in all sorts of life activities and varying levels of mental health (Cambria & Wigfield, 2010). Motivation is nuanced and has many facets and origins, and varies widely among individuals depending on what activity they are engaging in, the genuine interest they have in that particular activity, the state of their current mental health, and the life outcomes that they perceive may be possible if they succeed at a given activity. Motivation correlates to academic success, sports, and exercise (Frederick & Ryan, 1993) and promotion and success in the workplace (Cambria & Wigfield, 2010). Precisely, achievement motivation can measure how "charged-up" someone is to complete a task, e.g., how persistent they are, the choices they make, and the amount of effort they put in (Cambria & Wigfield, 2010). When the task at hand is something measurable through specific criteria (e.g., the amount of money one makes, the grades someone receives in class, one's job title, or the time it takes someone to run the 100-yard dash), then scales measuring motivation may be employed to find out if subjects with higher rates of motivational achievement are *achieving* more in the measurable facets of life they are currently participating in.

Psychological distress can also inhibit promotion in the TC hierarchy. The upper hierarchy in the Therapeutic Community oversees an addictive work system. It contains levels of work-related positions which reflect the addict's place in the hierarchy and dictate what work gets done by each member of the TC (Perfas, 2014). Although no research exists currently as to what exact factors go the furthest in predicting placement into the hierarchy, we may apply former employment aptitude studies to the current research when we view the TC as a workplace. Hoffmann, Kupper, and Zbinden (2003) found that people with mental health challenges (specifically symptoms associated with schizophrenia) often have fatalistic control beliefs, which are highly detrimental to their vocational functioning (Hoffmann et al., 2003). Given that the current research focuses on a TC which employs the terms "worker, work leader, and expeditor" (among others) and arranges work duties among addicts accordingly, *vocational functioning* is a vital part of this TC and may easily be affected by the presence or absence of psychological distress symptoms.

Relationship Between Social Support, Motivation, Psychological Distress, and Self-Esteem

Social Support and Psychological Distress Symptoms

There is no argument between researchers about the significant correlation between social support and psychological distress symptoms; however, the causal nature of the relationship is still up for debate. Calsyn and Winter (2002) reported widespread disagreement among researchers about the causal relationship between poor social support and psychiatric symptoms. They examined 12 prior studies, which yielded three distinct views on this relationship. The most common view is the social causation model, which states that lack of social support is the cause of psychiatric symptoms, thus spawning efforts by clinicians to bolster the social networks in clients' lives while simultaneously attempting to remove social relationships that are harmful to them.

However, another view offered by Calsyn & Winter (2002) is referred to as the *social selection model*. In this view, psychiatric symptoms are the causal factor leading to low social support. One example of this phenomenon would be the tendency of depressive individuals to display inconsistent moods, and demand constant reassurance and support from others, thus driving away potential social supporters in their lives. Another example would be instances where individuals with psychiatric symptoms display over-sensitivity and cognitive styles which are naturally accusatory and misinterpreting others' attempts at connection, such as a tendency for a depressed person to ask, "Why are you trying to help me? Don't you think I can help myself?"

The final view offered by Calsyn & Winter (2002) was affirmed in 7 of the 12 studies which were examined. The *reciprocal effects model* purports a causal relationship between the presence of social support and psychiatric symptoms, but that this relationship is not directional but reciprocal, i.e., the lack of social support may lead to psychiatric symptoms, and the latter may lead to the latter to the former as well.

The complexity of the relationship between psychiatric symptoms and social support is affirmed by Cohen (1992), who postulates that lack of social support has been reported to lead to stressful events, coping difficulties during stressful events, the perception of high threat-level spawned by those events, and the tendency to avoid potentially stressful events. However, he mentions that these stressful events and feelings themselves affect the future formation of social networks and the stability of existing networks (Cohen, 1992), thus reaffirming the reciprocal relationship between the two.

A more basic view of the relationship between these two variables was offered by Thoits (1985), who explored the theoretical possibilities in the relationship between social support and psychological stressors, and asserted that there are two main views from theorists: One theory is that social support has no causal relationship to psychological distress symptoms and that it only offers a buffer when adverse circumstances arise in one's life. Still, other researchers point out that the lack of social support and changes in support over time in and of itself is a stressor and a precursor for psychological distress symptoms.

A study by Chen et al. (2013) supports the assertion that social support is a buffer for psychological stress. Chen et al. purported that patients suffering anxiety and depression associated with end-stage renal disease found social support to alleviate their symptoms significantly. Ystgaard, Tambs also supported the buffering hypothesis, and Dalgard (1999) reported that boys who had gone through adverse life events were significantly more likely to suffer psychological stress when support from peers was low, and when facing long-lasting life adversities, were also more likely to feel anxiety when parental support was low (Ystgaard et al., 1999)

Motivation and Psychological Distress Symptoms

In groups of people who have gone through highly stressful life events, the fear of failure to achieve may be a coping mechanism that allows them to get past their stressful memories, thus enhancing their levels of achievement motivation. Cohen, Brom, and Dasberg (2001) studied holocaust survivors and found that although they displayed higher levels of psychosocial symptoms and post-traumatic stress, their achievement motivation was

significantly higher, due to possible fear of failure, than the control group who had no such stressful childhood experience (Cohen et al., 2001). But the Cohen et al. study (2001) seems to be an anomaly, as most studies examining the relationship between achievement motivation and psychological distress symptoms report otherwise. Fervaha et al. (2018) asserted that patients with early-stage schizophrenia, i.e., patients just beginning to show symptoms, displayed significantly lower levels of motivation–both self-reported and doctor-reported (Fervaha et al., 2018), reaffirming Reddy, Horan, and Green's (2015) report which reports low motivation to be central to the disease of schizophrenia.

However, low motivation is not only associated with symptoms present in diseases such as schizophrenia; it has also been found to have a direct negative correlation with global mental health, such as measured by the SCL-90. In a study by Yang & Zhang (2008) from Inner Mongolia, the SCL-90 was used to measure the relationship between the mental health of 231 elementary school teachers and their achievement motivation. It concluded that there were significant associations reported between SCL-90 scores and the level of achievement motivation of the teachers. Their overall motivation for success was negatively related to high SCL-90 scores, while their motivation for avoiding failure was positively correlated (Yang & Zang, 2008). In a similar study by Zhang, Zhu, and Xiusen (1991), the SCL-90 was also used to assess the relationship between motivation and mental health. Yet, instead of examining motivation for success vs. motivation for the avoidance of failure, this study looked at self-oriented vs. society-oriented motivation. Results showed that society-oriented motivation had a negative relationship with mental health. In contrast, undergraduates who had low levels of academic achievement showed higher correlations between mental health and low self-oriented motivation (Zhang et al., 1991).

Self-Esteem and Psychological Distress Symptoms

Past research has consistently confirmed a strong negative relationship between psychological distress symptoms and self-esteem and self-esteem and overall mental well-being (Landazabal, Pérez & Mozaz, 2008). In addition, there is also evidence from past research that personality disorders can also be predicted by measures of low self-esteem (Watson, 1998).

Furthermore, there are multiple bodies of research that address some of the specific psychotic symptomologies which are associated with low self-esteem. Regarding psychosomatic issues, a study by Varni, Rapoff, Waldron & Gragg (1996) reported that patients with lower self-esteem often claimed a higher

intensity of pain than those with higher self-esteem. Obsessive-compulsive behaviors have also been predicted by low self-esteem (Watson 1998) - an assertion confirmed by Biby (1998).

Many past studies have also linked depressive symptoms to low self-esteem (Hoffmann, Baldwin & Cerbone, 2003), while other literature has simply suggested self-esteem to be a buffer against depression (Takakura & Sakihara, 2001). Anxiety has also been linked to self-esteem in past literature (Bohne et al., 2002), as has hostility and bullying (O'Moore & Kirkham, 2001; Rigby & Slee, 1993). There have also been reports of paranoid ideation associated with self-esteem (Ellett, Lopes & Chadwick, 2003; Martín & Penn, 2001) and links with self-esteem and psychoticism (Fan & Fu, 2001).

Self-Esteem and Social Support

The strong link between self-esteem and social support is ever-present, such as reported by Dumont & Provost (1999), who suggested that depression and self-esteem have significant negative correlations, while social support and self-esteem are highly correlated. This assertion was also confirmed in an earlier study of individuals with multiple sclerosis, reporting a statistically significant relationship between social support and self-esteem among these patients (Foote et al., 1990). Muhlenkamp & Sayles (1986) and Williams & Galliher (2006) also agreed and went a step further to suggest the causality of low measures of social support leading to low self-esteem.

Brown et al. (1986) also demonstrated a link between social support and self-esteem in an article that examined the presence of core social supporters of working-class women (i.e., a lover, a spouse, or close companion) and found that a lack of this kind of social support combined with low self-esteem caused a high risk for depression, especially when a crisis occurred in the lives of these women (Brown et al., 1986).

In his book, Kaplan (1980) purports that a significant relationship exists between delinquency and low self-esteem, suggesting that doing poorly on tests and not meshing with peer groups leads to diminished self-esteem, which causes delinquency. Similar links between social support and self-esteem were also reported in studies by Moradi and Funderbunk (2006) and Teoh and Nur Afiqua (2010). Huurre (2000) also reported on the relationship between social support and self-esteem, offering that when people have frequent contact with others, this decreases isolation, which then allows them to feel like they are a part of a social network, and this gives them a sense of control over their surroundings and an assurance that help is always nearby if ever needed (Huurre, 2000).

In yet another study on social support leading to self-esteem, eight baseball coaches were trained on providing social support to their young players. In comparison, a control group of 10 coaches received no such training. Consistent with the self-esteem enhancement model, the self-esteem of players who had been measured to have low pre-season self-esteem and who had played under the coaches receiving training had significantly higher self-esteem at the end of the year than those players who had played for the coaches in the control group (Smoll, Smith, Barnett & Everett, 1993).

Conceptual Framework

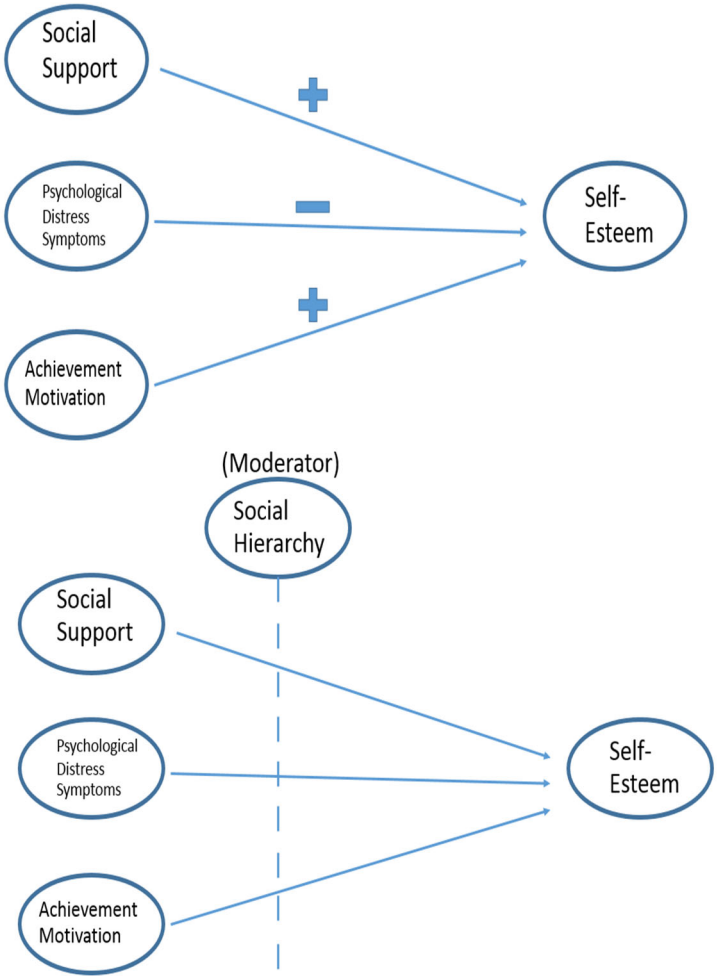

Figure 1: ***Proposed conceptual framework of the relationship between social support, motivation, psychological distress symptoms, patients' hierarchal position, and self-esteem***

Research Methods

Research Design

The current study presents the hypothesis that social support, psychological distress symptoms, and motivation directly correlate with self-esteem and that the level achieved in the TC hierarchy will moderate this relationship. The conceptual framework is illustrated in Figure 1. Data was collected through four self-report questionnaires given to recovering alcoholics and drug addicts in the FAST model TC rehab facility at Thanyarak Hospital. Completed questionnaires were analyzed through multiple regression and factorial 3X3 ANOVA's to determine the relationship between the independent variables upon the dependent variable and the possible moderating effect of the TC hierarchal level on the dependent variable.

Participants

All participants of the current study were in their last week of recovery in Thanyarak Hospital's 4-month FAST model TC. All participants were residents of the live-in wards of the hospital, recovering from alcohol or amphetamine drug dependencies. Approximately 20 percent of these patients were in the program voluntarily, while the Thai legal system mandated the other 80 percent participation. The age ranges of patients ranged from 20 to 55, and the percentage of male to female patients was approximately 65 percent to 35 percent, respectively. Total numbers of patients for each ward of the hospital prior to testing are provided in table 1 and 2 below

Research Measures

Social Support

Social Support was measured by the Thai language version Multidimensional Scale of Perceived Social Support (MSPSS). This is a twelve-item questionnaire that asks the patient to self-report the level of social support perceived by significant others, friends, and family. The MSPSS has good internal reliability with Cronbach's alpha .88 and test-retest reliability of .85 (Zimet et al., 1988). A Thai version of this test was created for this study by translating the original scale into the Thai language. Then back-translating it into English using a separate translator and then having the original and back-translated English versions checked by an English expert for consistency of meaning for each question. The MSPSS is measured on a 7-point Likert Scale with the 7 options of: 1 = very strongly disagree, 2 = strongly disagree, 3 = mildly disagree, 4 = neutral, 5 = mildly agree, 6 = strongly agree, 7 = very strongly agree.

Psychological Distress Symptoms

The Thai version of the SCL 90 was administered to all participants. This is a 90-item questionnaire that yields both a global symptom index and subscale measures of somatization, obsessive compulsivity, interpersonal sensitivity, hostility, depression, anxiety, paranoid ideation, phobic anxiety, and psychoticism. The Thai version was created in 1978 by Chooprayoon (Wongpakaran, Wongpakaran, & Boripuntakul, 2011). Although some improvements have been recommended in recent years, it is still a widely used measure of psychological distress symptomology in Thailand. It shows good internal consistency with a Cronbach's alpha of .97. The SCL-90 is measured on a 5-point Likert Scale, which asks the patient "How much they are bothered by" a given scenario, and then offers responses in the form of 0 = not at all, 1 = a little bit, 2 = moderately, 3 = quite a bit, and 4 = extremely.

Motivation

The motivation was measured by the 14 items Ray-Lynn AO scale, short form. Upon its inception in 1979, this scale was tested in four countries and among English speakers, and it was found to have a reliability coefficient at Cronbach's alpha level of .70 (Ray, 1979). Since then, it has generally been reported to have good overall reliability and validity (Abouserie, 1995). The Ray-Lynn AO scale consists of 14 questions and scores answers in terms of: (yes=3), (?=2), (no=1). A Thai language version of this test was created for this study by translating the original scale into Thai language, then back-translating it into English by a separate translator, and then checking the original and back-translated English versions by an English expert for consistency of meaning for each question.

Self-Esteem

The Coopersmith Self-Esteem Inventory measured self-esteem. This is a 25-item questionnaire that allows participants to self-report their level of agreement (agreement scaled 1-6) with statements associated with self-esteem. It shows high reliability and validity measures with a Cronbach's alpha level.75 (Ahmed, Valliant, & Swindle, 1985). A Thai language version of this test was created and administered in past research projects at Thanyarak Hospital. It is currently still in use at the hospital regularly.

Data Collection Procedure

Data collection was conducted at six of the live-in wards of Thanyarak Hospital (Pathumthani, Thailand). Participants were informed of the criteria which allowed them eligibility for testing (being in the final week of their 4-month rehabilitation stay at the hospital) and were told of the confidential

nature of their participation as well as reassured that their information would not be shared with the hospital staff or fellow addicts in the program. Signed a consent form and then completed four questionnaires (12, 14, 25, and 90 questions, respectively.

Data Analysis

Multiple regression analysis was utilized to test the hypothesized relationship between the 3 IV's (social support, psychological distress symptoms, and motivation) upon the DV (self-esteem) and the proposed moderating relationship the social hierarchy may play in this relationship. In the first round of testing, the social hierarchy was also added as an independent variable to check for the main effect on the DV's self-esteem.

Research Findings

Demographic Profile of Participants

A total of 88 participants took part in the current study. The entire sample consisted of Thai nationals residing temporarily in a drug and alcohol rehabilitation program. Seventy-seven (77) of them were addicted to amphetamines ("*yaba*" or "ice"), while 11 were addicted to alcohol. The sample consisted of 51 males and 37 females, who ranged from 20 to 55 years, with a mean age of 34.06. Participants in their 20's made up 32% of the sample (n=28), while participants in their 30's made up 48% of the sample (n=42). Those in their 40's made up 16% of the sample (n=14), while patients in their 50's made up 5% (n=4).

More than one-third of the sample had never attended high school (35%, n=31); another 41% had attended high school but hadn't finished (n=36). Only 22% had graduated high school (n=19), while only one participant had received an associate degree and one more had their bachelor's.

The effects of social support, psychological distress symptoms, motivation, and level of hierarchy on self-esteem

The first round of multiple regression was run to determine if social hierarchy should undergo further analysis as a moderator. The variables of social support, psychological distress symptoms, and motivation were placed at the same level as a social hierarchy to check for significant relationships with the dependent variable, self-esteem. Because the social hierarchy status of the respondents was approximately normally distributed, this variable was entered as a continuous variable in the regression analysis. Note. R^2 adjusted = .423, CI = Confidence Interval for B

Results from the multiple regression analysis indicate that the social hierarchy variable does not account for variance in the dependent variable, self-esteem, thus nullifying the social hierarchy as a moderating variable, β=.01, t (83) =.11, p>.05. The analysis further suggests that low psychological distress symptoms were associated with higher self-esteem scores, β=-.46, t (83) =-5.12, p<.05. Social support was also a significant predictor of self-esteem, β=.61, t (83) =4.96, p<.05. On the other hand, motivation was not significantly contributing to the variance in self-esteem. The analysis further shows psychological distress symptoms to have a negative effect on self-esteem (t=-5.116). In other words, as psychological distress symptomology increases, self-esteem decreases. The model had a multiple R of .653, adjusted R^2=.423.

Results from the second round of multiple regression confirmed results from the first round, showing a highly significant relationship between the two independent variables, psychological distress symptoms and social support, and the dependent variable self-esteem F (3, 84) = 22.88, p<.01. Psychological distress was again found to be highly significant, β = -.46, t (83) = -5.12, p<.01, as was social support, β=.41, t (83) = 4.99, p<.01, and consistent with the first round of regression, achievement motivation was rendered insignificant, β = .05, t (83) = .56, p>.05. The results are shown in Table 1.

Table 1. *Unstandardized coefficients, standardized coefficients, and confidence intervals for three independent variables upon the dependent variable self-esteem.*

Variable	B	95% CI	B	T	P
(Constant)	41.73	(19.69, 63.77)		3.77	.00
Psychological Distress Symptoms	-.15	(-2.01, -.09)	-.46	-5.15	.00
Social Support	.61	(.37, .86)	.41	4.99	.00
Achievement Motivation	.2	(-.52, .92)	.05	.56	.58

Note. R^2 adjusted = .43, CI = Confidence Interval for B

Additional Findings

Psychological distress symptoms as predictors of self-esteem

The absence of effects of the proposed moderator variable, social hierarchy, on the dependent variable self-esteem implied that other variables in the study were more worthy of further examination. The SCL-90 was used in the current research to provide a global measure of psychotic symptomology. For a closer examination of its effects on self-esteem, it has been broken down into its nine

sub-categories, somatic, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. Forward multiple regression was performed to determine which nine most significant factors in predicting self-esteem. Only two sub-categories, depression and hostility, were significant negative predictors of self-esteem. Results are shown in Table 2 below.

Table 2. *Unstandardized coefficients, standardized coefficients, and confidence intervals for the significant independent predictors depression and hostility on dependent variable self-esteem*

Variable	B	95% CI	B	T	P
(Constant)	87.62	(83.24, 92.00)		39.76	.00
Depression	-.58	(-1.01, -.12)	-.33	-2.5	.01
Hostility	-1.06	(-2.07, -.05)	-.29	-2.9	.04

Note. R^2 adjusted = .31 CI = Confidence Interval for B

Two of the nine sub-factors of the SCL-90 were allowed into the regression equation. Depression (R Square = .290) accounted for 29 percent of the variation of the dependent variable self-esteem, while Hostility (R Square = .325) accounted for an additional 3.5 percent. The remaining seven sub-categories of the SCL-90 (somatic, obsessive-compulsive, interpersonal sensitivity, anxiety, phobic anxiety, paranoid ideation, and psychoticism) did not significantly contribute to the variance.

Discussion

Self-Esteem Benefits from Social Support

Multiple regression analysis in the current study found a direct and significant relationship between social support and self-esteem. Past research has also highlighted a strong link between social support and self-esteem (Dumont & Provost, 1999). Some studies, such as Smoll et al. (1993), have offered concrete examples of how social support can affect self-esteem even when it comes in the form of a brief intervention. As mentioned above, a study by Kaplan (2000) confirmed the salient nature of social support leading to feelings of self-esteem in adolescents. Kaplan purports that poor academic achievement combined with failures to maintain healthy social relationships leads to poor self-esteem and, in many cases, delinquency.

However, the current study did not have a long enough time frame to conduct a pre-test/intervention/post-test model. Most studies examining the effects of social support on self-esteem are not *i*nterventions as was by Smoll et al. (1993). Instead, they are a mere snapshot measure of self-reported social

support at the time of the study, as is the current study. Such was the case in Tam, Lee, Har, and Pook (2011), who also observed, like in the present study, those with low self-esteem will likely also self-report low social support.

Although the interaction did not achieve statistical significance, examining the interactional effects of social support, depression, and hostility in the current study lends tentative support to the notion. Even when people are suffering from depressive and hostile symptoms, the presence of a social network can enhance that person's self-esteem.

Hurre (2000) confirms that social support can act as a buffer against psychological trauma. He referred to it as a "protector." He added that just the simple act of increasing social-supporting figures in one's life reduces feelings of isolation and builds networks that allow someone to feel a better sense of control over their lives. He also asserted that receiving messages of love and understanding from others can give someone the sense that help is always around the corner, and these feelings lead to an increased sense of self-esteem and self-worth (Hurre, 2000).

Before the Hurre study, Brown et al. (1986) had previously taken a closer look at 'loving' relationships through a significant other. He stressed the importance of the 'significant other' in relation to self-esteem and mentioned that one of the risk factors for the maintenance of self-esteem was a feeling of being 'let down' by someone who had been expected–but failed to–fulfill the expectations of support attributed by a participant (Brown et al., 1986). A study by Voss, Markiewicz, and Doyle (1999) also reported on one-on-one relationships in relation to self-esteem. This study examined adult relationships between best friends, partners, and spousal partners by assessing them for quality. It was determined that when the 'quality' of these relationships was higher, participants recorded higher levels of self-esteem (both with 'best friends' and 'spouses'). This assertion that marriage closeness can have significant impacts on self–esteem was also confirmed by Shackelford (2001). He pointed out that nuances within the marriage, such as infidelity, physical abuse, verbal degradation of the wife's physical attractiveness, and jealousy, were factors in the overall quality of the relationship. The overall quality of marriage directly affects the self-esteem of both parties in the marriage (Voss et al., 1999).

Depression's Negative Influence on Self-Esteem

In the first round of multiple regression analysis in the current study, all three independent variables (achievement motivation, social support, and

psychological distress symptoms) and the experimental variable social hierarchy, were tested in relation to the dependent variable self-esteem. This first round of testing indicated that only two independent variables, psychological distress symptomology and social support, were related to significant variance in the dependent variable self-esteem. Further analysis indicated that just two of the sub-categories of psychological distress symptoms from the SCL-90, depression and hostility, were significantly related to self-esteem. Previous studies have consistently reported a significant relationship between depression and self-esteem. Three principal models theorize about the link between depression and self-esteem. The first model is the *vulnerability* model, which suggests that low self-esteem contributes to depression (Sowislo & Orth, 2013). The second model is the *scar* model, which asserts that depression leads to self-esteem through gradual erosion. The third model is referred to as the *common factor* model (Rieger, Göllner, Trautwein & Roberts, 2016) and suggests that the two are interchangeable (in other words, low self-esteem is the same thing as depression).

The current study proposes that the scar model is perhaps the best method to interpret this relationship. The scar model implies that a persistent low mood level (depression) erodes personality aspects such as attitudes and behaviors (Mulder, 2004). Rohde, Lewinsohn, and Seeley (1990), although not explicitly naming the scar model, suggested that people who had gone through and subsequently recovered from an episode of depression reported having diminished social skills, poorer health, and a higher degree of dependence on others even though their depressive episode was over.

Although there is some evidence to support the scar model, substantial literature supports the vulnerability model (i.e., poor self-esteem leading to depression). In a 2016 study of self-esteem, depression, and anxiety in Italians, Manna et al. reported that although there was evidence that both models (scar and vulnerability) were shown to work, self-esteem was more of a predictor of depression than the other way around. In a study of adolescents by Rieger et al. (2016), this same conclusion was reached favor of the vulnerability model over the scar model.

Another 2016 study by Orth et al. attempted to strengthen the vulnerability model by controlling for narcissism. This research proposed that there may be a point at which self-esteem becomes too high and enters the realm of narcissism, which may begin to decrease. But results of the study indicated otherwise. Ultimately it was reported that narcissism played no role in the self-esteem dynamic. In other words, as self-esteem increased even into presumable unhealthy ranges, which may indicate narcissism, the risk for

depression remained low, thus strengthening overall support for the vulnerability model (Orth et al., 2016).

Hostility's Negative Influence on Self-Esteem

Hostility was the second sub-category of psychological distress symptomology to be extracted from the SCL-90 symptom checklist, shown to be a significant predictor of self-esteem by forwarding stepwise multiple regression ($P < .05$). This indicates that levels of self-esteem increased with decreased levels of hostility, and vice versa, i.e., when hostility was at its highest, self-esteem was at its lowest. The lowest levels of hostility were associated with the highest levels of self-esteem.

The present findings linking hostility to self-esteem are consistent with much past research on this relationship. B. E. Maxwell (1992) studied troubled, neglected, abused, and homeless adolescents and reported low self-esteem in tandem with high levels of depression and hostility. But hostility is not only associated with depression, abuse, and homelessness. It has also been suggested to cause people to skirt social support and engage in risky behaviors. A study by Houston and Vavak (1991) rated undergraduates on hostility (low and high). After researchers conferred with their parents, it was found that subjects scoring high in hostility were not only found to have lower covert self-esteem but were also more likely to reject social support, suppress anger, drives while intoxicated, and experience excessive anger than were students scoring low in hostility (Houston & Vavak, 1991).

Other research on at-risk individuals has also reported the salient nature of hostility and its effect on self-esteem. A study by Williams et al. (1993) reported that people with eating disorders such as anorexia nervosa and bulimia suffer from low self-esteem, low assertiveness, and self-directed hostility.

Further studies from common groups of the general population, such as students and women, have also contributed to the literature linking hostility to low self-esteem. In a study by Cowan, Neighbors, DeLaMoreaux, and Behnke (1998), it was reported that women who have lower personal self-esteem and collective self-esteem (the esteem which comes from belonging to the collective group, "women") have higher levels of hostility towards other women than do those who have higher personal and collective self-esteem.

Studies involving students have also added insight into this relationship. In 2015, Rentzsch, Schroder-Abe, and Schultz created a model that confirmed

the relationship between hostility and self-esteem but suggested that in some cases, envy could be a mediator in the relationship, i.e., students who were suffering from low academic self-esteem became envious of their peers who they felt were more successful than them, and then ultimately displayed hostile behavior towards them (Rentzsch et al., 2015).

In a similar study by Reijnties et al. (2011), subjects were either accepted (control) or rejected by members of their peer group in a controlled experiment. The participants who suffered acute peer rejection had a higher degree of hostile intent towards their rejecters, suffered lower levels of self-esteem, were angrier and were more aggressive towards their peers' post rejection (Reijnties et al., 2011). A previous study by Boden, Fergusson and Horwood (2007) had also affirmed the direct effects of hostility upon self-esteem but had done so using a longitudinal method. Their research ultimately reported a significantly higher level of violence and hostility in adulthood from subjects who scored low self-esteem at age 15. The results of this study also were in line with Kernis and Grannemann (1989), suggesting that when high self-esteem is unstable, it still may lead to violence and hostility.

Although the direct link between hostility and self-esteem is well documented, other researchers highlight the complexity of this relationship, distinguishing between stable vs. unstable self-esteem and, in some cases, pointing out that high self-esteem can also be tied in with narcissism. One such study from Raskin, Novacek, and Hogan (1991) suggested a construct formed when hostility is grouped with narcissism and grandiosity. These personality elements keep an individual from experiencing self-doubt and depression. To the extent that the person is successful at warding off depression through these constructs, his self-esteem may rise. The overall conclusion from this study is that hostility can sometimes be associated with high levels of self-esteem when it is found within a construct of grandiosity and narcissism.

Salmivalli (2001) also purported that unhealthy self-esteem, when low, can be disparaging, but when high can become narcissistic. He suggested that when assessing which 'traits' are consistent with varying levels of self-esteem, it is not so much the *quantity* of self-esteem that should be examined but rather the *quality*. In earlier research, Kernis, Grannemann, and Barclay (1989) had suggested that the stability of self-esteem was just as important as the level when it comes to anger tendencies. Their study concluded that people with unstable high self-esteem had high levels of anger, whereas people with stable high self-esteem did not.

Implications and Suggestions

The current research focused on the possible ways in which the self-esteem of drug and alcohol abusers may be affected by varying degrees of social support, psychological distress, and achievement motivation. It also attempted an exploratory element that had not been formally researched: investigating the social hierarchy of the therapeutic community drug rehabilitation model to check for its possible effects on the outcome variable self-esteem as well as what effects (if any) on the independent variables mentioned above may be having on the hierarchal position.

However, "social hierarchy" in the TC did not significantly relate to any of the other variables in the study. Nevertheless, because of the vast extent of use of social hierarchies in TC's across the world and the lack of research on their effects on the global mental health of patients in rehab, it is suggested to do more research on this topic. The hierarchal social systems in TC's do not offer promotions based on any standardized criteria. For example, there are no time limits on how long member addicts can remain in one tier of the hierarchy before moving up. There are no mandatory tasks for all members to perform, which may propel them to the next level of the hierarchy. There are no "time-served" parameters that call for a member to be promoted at a given number of weeks after admission into the program. Because of this lack of standardization, promotion into the system appears to be entirely subjective. It forces some members to remain in the lowest levels of the hierarchy for the duration of their stay while others soar to the top levels without issue.

The nature of this discrepancy in promotion within the system should still be a concern to researchers, even though the current study has not yielded any concrete evidence that the hierarchy is responsible for mental health discrepancies in patients. Because often member addicts subjectively decide whether or not other members get promoted, the circumstance of being left at the bottom can easily equate to rejection for low-tier members, and with rejection from peers often come hostility and low self-esteem (Reijnties et al., 2011). An additional confounding issue is that in any hierarchal system in any context, low-tiered members do not get promoted into the system experience communication from the top-down rather than from the bottom up (Herz et al., 1966). It could lead to a general feeling of worthlessness and low self-esteem upon dismissal from the program.

This study implies that Thai drug abusers have similar reactions to depression, hostility, and social support as do the general population. Generally speaking, when social support is present in someone's life, their self-esteem will likely

be high. When depression is present, self-esteem will likely be low. In addition, when someone is consumed by hostility, their self-esteem is expected to be low, except in the case of some forms of narcissism (Raskin et al., 1991).

The overriding theme from the findings is the intertwined relationship between social support, depression, hostility, and self-esteem among Thai drug and alcohol abusers. There is a team of multiple counselors and trainees stationed inside the therapeutic community in the current study. Presumably, in TC's worldwide, it is highly recommended to monitor regular social support, depression, and hostility in patients and be focused on in a group and individual counseling sessions. Efforts made are to train counselors to offer interventions that may enhance social support, diminish depression and hostility, and ultimately bolster self-esteem.

Limitations of the Study

There are fundamental cultural and language differences between Thais and westerners. All of the questionnaires in the current study were initially standardized and validated in western countries using western languages and translated into Thai, either by past researchers or in the present study. The cultural nuances in language that standardized test creators take for granted in the West do not always apply to Eastern cultures. More importantly, the way something is worded in a translation may have a different connotation in an Asian language, even after close cultural consideration has been taken.

A second limitation in the current study was the *one-time* test-taking procedure. Participants of this study were asked to take four questionnaires all in one sitting. This kind of procedure potentially can cause two different problems, the first one being test fatigue. As participants neared the ends of the questionnaires, they were likely not nearly as engaged as they might have been towards the beginning of the testing. The other issue with this type of testing format is the lack of longitudinal, test-retest results that could be garnered if participants are allowed first to show a baseline level of a specific attribute measured from the questionnaire. After the intervention (or, in this case, the promotion process into the TC social hierarchy), test again to check for any changes.

A third limitation of the study was the sample size. The recommended sample size (via G-power analysis) was 85, but the study results could have been more robust if a larger sample had been used. Moreover, there were fewer patients in the hospital because of the Covid-19 situation in Thailand, which became a severe concern in mid-March 2020. The researcher was forced to collect data from some subjects who had been in the program for longer than four months,

even though they still fit the inclusion criteria of being in their last week of the rehab process.

One final yet potentially confounding aspect of the study was when the patients completed the questionnaires. To magnify the potential effect the position in the social hierarchy was having on self-esteem, the researcher thought it best to test all subjects at the very end of their stay in rehab, the logic being that they have already experienced the fullest extent of either being promoted or not being promoted, and whatever feelings they had about that situation would be at their strongest at that point in time (just before going home). In general, people who are just days away from completing what equates to a jail sentence for those who were assigned to the program by court order are more likely going to be in a happy mood and have a more positive outlook than they might have towards the middle of their stay in rehab. In other words, the true feelings they might generally be expressing on questionnaires may be trumped by the good feeling of going home from recovery. Therefore, there may be some misrepresentations recorded during testing.

Recommendations for Future Research

The TC social hierarchy element could still impact the population of drug/alcohol addicts throughout their stay in the TC. Still, these effects may need to be extracted in other ways besides a self-esteem questionnaire days before leaving the facility. A potentially better method of gaining insight into the effects of the hierarchy upon self-esteem may be to allow self-esteem to be the *only* questionnaire the patients take while also allowing for a more in-depth, nuanced, and lengthier self-esteem test. New research into the hierarchy may also benefit from a test-retest model. All patients in the study are tested upon arrival into the TC (during the first week) and then four months later upon exiting the facility. Then based on the difference in self-esteem scores compared to the level in the hierarchy they have reached, a clearer picture may emerge as to the salience of the hierarchy on patient self-esteem.

One final aspect which has not yet been addressed is the difference in self-esteem between amphetamine and alcohol users. This was not a statistic mentioned in the results section of this paper because of the low sample size (77 amphetamine users vs. only 11 alcohol users). However, it is worth mentioning that amphetamine users had a mean self-esteem score 12 points higher than that of alcohol abusers (79 and 67, respectively). Because of this discrepancy, it would be beneficial to separate these two groups and obtain a larger sample size for alcohol abusers in the future. This could gain more

insight into the nature of this phenomenon of amphetamine users having higher average self-esteem scores than alcohol users.

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