THE EFFECT OF SELF-COMPASSION ON DEPRESSION, ANXIETY, AND STRESS MEDIATED BY PERCEIVED BODY IMAGE IN PEOPLE WITH MOBILITY IMPAIRMENT AND DISABILITY IN PHRAE PROVINCE

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Abstract: This study examined the direct and indirect effects of self-compassion on perceived body image, depression, anxiety, and stress. The indirect effect was examined with perceived body image as the mediating factor. The study also examined the differences between males and females in self-compassion, perceived body image, depression, anxiety, and stress. The study included 128 participants who are people with mobility impairment and disability from Phrae province. The study applied path analysis via multiple regression analysis. An independent t-test was conducted to study the gender difference. Four separate questionnaires were administered. A demographic questionnaire, Self-compassion Scale, was used to measure self-compassion, and Body Appreciation Scales-2 was used to measure perceived body image. Depression, anxiety, Stress Scale-21 was used to measure depression, anxiety, and stress. The study found that self-compassion had a significant direct and indirect effect on perceived body image, depression, anxiety, and stress. The finding showed there was no significant difference between males and females in regard to all areas of the study.

Keywords: Mobility disability and impairment; Self-compassion; Perceived body image; Depression; Anxiety; Stress

Introduction

There are 2,058,052 Thai citizens who are legally considered disabled. People with mobility impairment and physical disability accounted for 49.61% of people with disability. (Ministry of Development and Human Security, 2021). According to the Diagnostic and Evaluation of Disability Manual (2nd ed.), a

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person with mobility impairment and disability refers to a person who has limitation in performing activities of daily living or have restriction in social participation from personal impairment together with environmental barriers, which is caused by impairment or loss of ability and/or organs which affects mobility functions such as hand, feet, arms, legs. These impairments could result from paresis, different types of plegias, amputations, or chronic illnesses affecting the functioning of the hand, feet, arms, and legs (Ministry of Public Health et al., 2007).

Thai society sees people with disability as being incomplete of the 32 components, which are believed to be what makes up a person (Naemiratch & Manderson, 2009). The word *songsarn* is used to express empathy, sympathy, and compassion towards, and is often used towards people with disability. When the word is used towards an inferior object, the word's meaning changes to an expression of pity. (Naemiratch & Manderson, 2009). Even though some people with disability can embrace their physical differences and accept how they are being seen by society. There is still a societal separation between people with disability and abled body people in Thai society (Naemiratch & Manderson, 2009). The reason for this separation, as suggested in psychosocial adaptation to the disability process, is society does not consider the individual uniqueness of people with disability but rather sees the disability itself as an identity as a whole (Livneh & Anovak, 2005; Ministry of Public Health et al., 2007). This can cause problems for people with disability's self-concept and body image. (Livneh & Anovak, 2005). Having a negative body image affects one's mental well-being. Negative body image was found to be associated with stress, anxiety, and depression (Science Daily, 2006).

Self-compassion has shown to have a promising effect on body image, depression, anxiety, and stress, which are some problems people with disability faces (Livneh, 2001; Livneh & Antovak, 2005). However, none of the research on self-compassion so far have been studied with people with disability as samples.

Objectives

There is a lack of research on self-compassion in people with disability. For this reason, this study examines the direct and indirect effect of self-compassion on perceived body image, depression, anxiety, and stress among people with mobility impairment and disability in Phrae province. The indirect effect of self-compassion is mediated by perceived body image. Another objective is to examine the differences between males and females in self-

compassion, perceived body image, stress, anxiety, and depression of people with physical disabilities in Phrae province.

Literature Review

Self-Compassion

Three concepts promote self-compassion. Self-kindness, Common Humanity, and Mindfulness (Neff, 2001). Self-kindness required the action of stopping constant judgment of self, negative commentary, and understanding of the nature of failure instead of disapproval. Self-kindness does not dismiss the pain and suffering but helps make them more bearable. The opposite of self-kindness is self-criticism or self -Judgment. Living in a competitive society, one needs to be superior or at least above average. To determine whether a person is better than average requires judgment and comparison (Neff, 2011). One cannot always blame others and cannot always be above average; this leads to a feeling of shame. When one falls short, and the comparison is clear-cut or not comparable, people resort to self-condemnation (Neff, 2011). The second component of self-compassion is the recognition of shared human experience. Self-compassion recognizes that everyone suffers. There is comfort in knowing that all human beings are imperfect. Everyone feels pain in a difficult time. Even though the experience is unique to an individual, the process is the same (Neff, 2011). The last component of self-compassion is mindfulness. Mindfulness refers to seeing the present situation clearly without judgment, accepting what is occurring. Mindfulness allows one to choose self-kindness or self-comforting to help soothe the pain and view the situation objectively. Mindfulness is noticing those pain without exaggeration, noticing what is going on in the present and what is happening in one's field of consciousness. The past is just a memory, and the future is just one's imagination (Neff, 2011).

Perceived Body Image

Body image refers to how an individual perceives one's body. Body image is usually considered satisfied or dissatisfied, triggered by two main components. The first is body perception, an integration of one's knowledge of one's physical attributes, the accuracy of how one sees themselves, and the ideal body attributes. The second component is the extent to which one is satisfied with their body. The degree of body satisfaction can lead to the degree of body confidence and body esteem (Tiwari& Kumar, 2015).

Society has placed great importance on beauty. Studies have shown that images of ideal body shapes in the media contribute to negative body perception and body satisfaction in both genders (Barlett et al., 2008). Gender is one of the important factors when considering perceived body image.

Females have been found to have lower body satisfaction than males (Barlett et al., 2008). Male and females also have different areas of concern regarding body image. Females focus more on weight loss, while men focus on gaining muscle mass (Tiwari & Kumar, 2015). Body image affects an individual's psychological well-being (Tiwari & Kumar, 2015). Tiwari & Kumar, 2015 suggested that negative body image results in lower self-esteem and depression. Depression has also been linked to negative body image in people with chronic illnesses and disabilities (Livneh & Antivak, 2005). Research has shown the association between negative body image and depression in male and female adolescents (Tiwari & Kumar, 2015). Research has found that ethnicity also plays a role in body perception. Caucasians and Asians are found to have lower body satisfaction than other ethnicities (Tiwari & Kumar, 2015). Considering that people with disability in Thailand are Asians, the majority unemployed, the societal stigma views them as lesser than others or incomplete and differs from mainstream media portray of ideal body image. It is likely that they have lower body satisfaction and negative body image.

Depression, Anxiety, and Stress

Stress, anxiety, and depression are common during the psychosocial adaptation to chronic illness and disability (Livneh & Antovak, 2005). The World Health Organization considers depression, anxiety, and stress indicators of mental health issues (Ramon-Arbues et al., 2020). Stress is a physical response to threatening situations. When individuals experience threats and negative emotions, the body will physically, biochemical, cognitively, and/or behaviorally attempt to change the stressor or adjust to the effect of stressors. This causes strains on the body to cope. The psychological and physical change required to meet the demands could cause illnesses (Khan & Khan, 2017). The American psychological association defines anxiety as "persistent, excessive worries that don't go away even in the absence of stressors." (Alvard & Halfond, 2019). The difference between anxiety and stress is that stress is usually caused by external factors and is short-lived. Anxiety, however, persists even when the stressors are not present at the present moment (Ramon-Arbues et al., 2020). Anxiety should not be confused with anxiety disorder which differs from anxiety in severity and duration (Khan & Khan, 2017). Depression is more severe had last for much longer than stress. Depression has a debilitating nature. Depression, like anxiety and stress, has physical symptoms. (Raven, 2020). The world health organization has stated that depression is the leading cause of disability worldwide. Depression can often lead to a life-threatening state of mind that leads one to plan and/or commit suicide (Raven, 2020). Existing research has found the same results across different populations regardless of age and culture; women scored higher in depression, anxiety, and stress throughout their lives (Lu et

al.,2018; Hou et al., 2020). A similar result has been found during the Covid-19 pandemic (Hou et al., 2020).

Self-compassion, Body image stress, anxiety, and depression

Having a negative perceived body image could lead to many dire results, such as developing eating disorders, depression, or even suicide. According to the Anxiety & Depression Association of America, Body Dysmorphic Disorder (BDD) "is a body-image disorder characterized by persistent and intrusive preoccupations with an imagined or slight defect in one's appearance." BDD is often accompanied by other mental illnesses such as anxiety disorder, depression, eating disorder, and obsessive-compulsive disorder.

Self-compassion has been found to have a negative relationship with body dysmorphic symptoms. The finding shows that people with high self-compassion usually show lower body dysmorphic symptoms. Body dysmorphic disorder and obsessive-compulsive disorder are often misdiagnosed because of their similarity in intrusive thoughts and repetitive behavior. Mindfulness is the opposite of intrusive thoughts. When the brain receives threats, cortisol is created, which could trigger depression and anxiety if the stress is exposed for a long period of time. Applying this to being obsessive about flaws, the threat of not being good enough acts as a stressor; after a prolonged period of time, stress could turn into depression and anxiety. A positive correlation between stress, anxiety, depression, and negative body image had been made. (Science Daily, 2006). Research has found self-compassion has great potential in helping individuals deal with stress, anxiety, and depression (Snaith et al., 2018) and body dissatisfaction (Braun et al., 2016).

Conceptual Framework

The current study is aimed to investigate the direct effect of self-compassion on depression and anxiety and stress among people with mobility disabilities in Phrae Province, the indirect effect of self-compassion on depression, stress, and anxiety mediated by perceived body image, and identify if there is any gender difference in self-compassion, perceived body image, depression and anxiety of people with a physical disability.

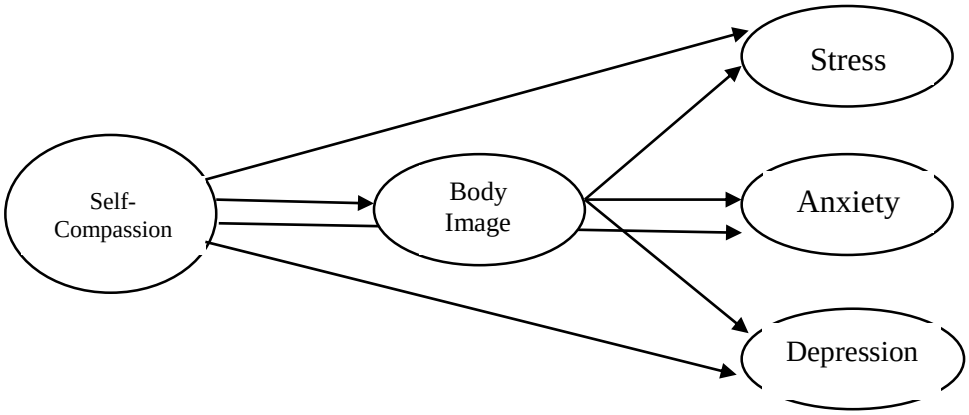

Figure 2.1: The Conceptual Framework of the Research

Method/Procedure

Participants

The sample consisted of 128 participants (65 male and 63 female). The ages range from 26 to 94 years old, with the mean age at 66. All participants are legally identified as people with type 3 disabilities, specifically mobility impaired and disabled. All participants are residents of Phrae province.

Measurement Tools

Self-compassion scales and body appreciation have been back-translated into English by GDM Translation Center. Depression, Anxiety, Stress Scales-21 Thai version had already been standardized with permission from the developer to be used.

Demographic Questionnaire is a five questions questionnaire used to collect basic information about participants, age, sex, cause of disability, duration of disability, and condition related to disability.

Self-compassion Scales measured self-compassion. (SCS) (Neff, 2003) Self-compassion scales contain 26 items, using a Likert scale from 1-5 (1=Almost never, 5=Almost always). SCS can be used to measure the overall level of self-compassion. The scale also measures the three sub-components of self-compassion (self-kindness, common humanity, mindfulness) and the reversal score for the opposition of the three main concepts (self-judgment, isolation, over-identification). As a rough guide, average scores for the Self-Compassion Scale are around 3.0 on the 1-5 Likert scale; a score of 1-2.5 indicates low self-compassion, 2.5-3.5 indicates moderate, and 3.5-5.0 is an indication of high self-compassion (Neff, 2003). After Reliability analysis, four items were removed, including item numbers 5, 15, 18, and 21, and Cronbach's alpha

improved from 0.791 to 0.829. All reliability scores were above the standard, which was set at 0.7

Body Image was measured by Body Appreciation Scale – 2 (BAS-2) (Tylka & Barcalow, 2005). Tylka & Barcalow have stated the permission of use to all. The instrument is made up of 10 items which are rated from 1-5 Likert Scale. (1= never, 5 = always) The score of 10 items is averaged, and scoring possibilities range from 1 – 5. A higher score suggests greater body appreciation. Wordings in BAS-2 had been modified to be inclusive for people with disability (Tylka & Barcalow, 2005). The reliability analysis of Body Appreciation Scale-2 indicates all items were considered acceptable, with Cronbach's Alpha being 0.928.

Stress, anxiety, and depression were measured by Depression, Anxiety and Stress scale (DASS 21) (Lovibond & Lovibond, 1995). Sawang developed the Thai version. (Oei, Sawang, Koh, &Mukhtar, 2013). Depression. Each question is rated from 0-3 (0 = Did not apply to me at all, three = Applied to me very much or most of the time). Depression questions include question number 3, 5, 10, 13, 16, 17, 21. Questions measuring anxiety are questions 2, 4, 7, 9, 15, 19, and 20. Stress is measured by questions 1, 6, 8, 11, 12, 14, and 18. The reliability analysis of the Depression, Anxiety, and Stress Scale- 21 indicates all items were considered to be acceptable, with Cronbach's Alpha being 0.962. The subscales were also considered acceptable, depression with Cronbach's Alpha being 0.916, anxiety with Cronbach's Alpha being 0.888, and stress with Cronbach's Alpha being 0.901.

Data Collecting Procedure

The sample selection was made through convenient sampling. An online meeting was held to assign Phrae province village health volunteers and clarify any questions. The volunteers who distributed the questionnaires were instructed that in the case that people with disability are unable to fill in the questionnaire on their own, the village health volunteer, family members, and caretakers are allowed to help read and record the answer on behalf of the participants. The village volunteers have been told about monetary rewards of 50 Baht per fully answered questionnaire.

Finding/Results

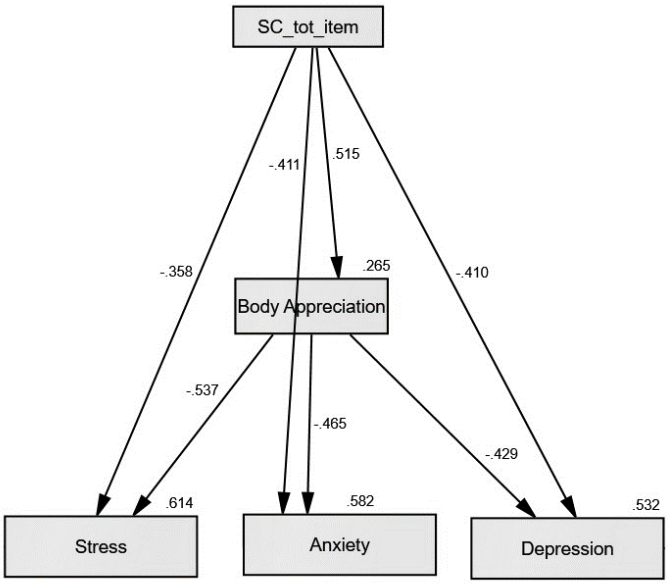

Figure 1: ***Path Model of Direct and Indirect Effect of Self-Compassion on Depression, Anxiety, and stress***

Path analysis via multiple regression was performed in order to examine the hypothesized direct and indirect relationship of the variables under investigation. Hypothesis 1 stated that self-compassion has a direct effect on body image, depression, anxiety, and stress. Hypothesis 1 is retained. The direct effect of self-compassion and depression was statistically significant and was negative, β = -0.410, (p< 0.01). The direct effect of self-compassion and anxiety was statistically significant and was negative, β = -0.411, (p< 0.01). The direct effect of self-compassion and stress was statistically significant and was negative, β = -0.358 (p< 0.01). The direct effect of self-compassion and body appreciation was statistically significant and was positive, β = 0.515 (p< 0.01).

To examine hypothesis 2, the indirect effect was calculated by multiplying the direct effects associated with the desired indirect effect. Hypothesis 2 stated that self-compassion has an indirect effect on depression, anxiety, and stress, with body appreciation as a mediating factor. Hypothesis 2 is retained. The indirect effect of self-compassion on depression as mediated by body appreciation was statistically significant and was negative, β = -.221, p=0.21 (p< 0.05). The indirect effect of Self-compassion on anxiety as mediated by body appreciation was statistically significant and was negative, β = -.239,

p=0.21 (p< 0.05). The indirect effect of Self-compassion on stress as mediated by body appreciation was statistically significant, and was negative, β = -.277, p=0.14 (p< 0.05).

Manova was used to examine hypothesis 3. Hypothesis 3 stated a gender difference in self-compassion, body appreciation, depression, anxiety, and stress. The findings show that hypothesis 3 is rejected for all variables.

Table 1: *Manova analysis examining the difference between genders in all variables.*

Gender	N	Mean	Std. Deviation	F	Sig.
Male (65)	Self-Compassion	3.5517	0.56521	.005	.943
Female (63)		3.5447	0.54817		
Male (65)	Body Appreciation	3.9338	0.88305	.002	.967
Female (63)		3.9270	0.97422		
Male (65)	Depression	0.6901	0.66938	.002	.964
Female (63)		0.6848	0.65070		
Male (65)	Anxiety	0.5824	0.62132	.148	.701
Female (63)		0.5420	0.56457		
Male (65)	Stress	0.7121	0.62193	.560	.456
Female (63)		0.7959	0.64539		

Self-compassion mean score for males was 3.55 with a standard deviation of .57, and for females, the mean score was 3.55 with a standard deviation of .55. The result from MANOVA rejects the hypothesis. There was no significant difference between genders in self-compassion F = .005, df, =1, (p > .05).

Body appreciation mean score for males was 3.93 with a standard deviation of .88, and for females mean score was 3.93 with a standard deviation of .97. The result from MANOVA rejects the hypothesis. There was no significant difference between genders in self-compassion F = .002, df, =1, (p > .05).

Depression mean score for males was 0.69 with a standard deviation of .67, and for females mean score was 0.69 with a standard deviation of .65. The result from MANOVA rejects the hypothesis. There was no significant difference between genders in self-compassion F = .002, df, =1, (p > .05).

Anxiety mean score for males was 0.58 with a standard deviation of .62, and for the females mean score was 0.54 with a standard deviation of .57. The result from MANOVA rejects the hypothesis. There was no significant difference between genders in self-compassion F = .148, df, =1, (p > .05).

The mean stress score for males was 0.71 with a standard deviation of .62, and for females, the mean score was 0.80 with a standard deviation of .65. The result from MANOVA rejects the hypothesis. There was no significant difference between genders in self-compassion F = .560, df, =1, (p > .05)

Discussion

Self-Compassion's effect on perceived body image

As hypothesized, self-compassion directly affects perceived body image, depression, anxiety, and stress. The correlation between self-compassion and perceived body image is positive, meaning people who score higher in self-compassion also have a better appreciation of their body. Another study in Canada conducted on female undergraduate students found self-compass to have a negative correlation between body concern and body preoccupation. The study has also found a positive correlation between self-compassion and body appreciation (Bruan, Park, & Gorin, 2016).

Self-Compassion's effect on Depression, Anxiety, Stress

This research finding confirmed the hypothesis that self-compassion has a negative effect on depression, anxiety, and stress, which is consistent with prior research. Self-compassion interventions have shown to be effective in reducing stress and improving emotional well-being in youth (Bluth, Robertson & Gaylord, 2015). Self-compassion also has been shown to help avoidance of coping in stressful situations. Self-compassion helps promote adaptive coping by reducing threats to the controllability of stressful situations (Chishima et al., 2018).

Perceived body image as a mediator

The indirect effect of self-compassion on depression, anxiety, and stress with perceived body image as a mediator has been shown in the finding of this research. Research has been done using body image as a moderator (body image flexibility). These research have yielded a similar conclusion; self-compassion has been positively associated with having higher body image flexibility (Daye et al., 2014; Ferreira, Pinto-Gouveia & Duarte, 2011). Low body image inflexibility is associated with greater depression, anxiety, and stress (Ferreira, Pinto-Gouveia & Duarte, 2011).

Gender different effects on self-compassion, perceived body image, Depression, anxiety, and stress.
Contradicting the finding of this research, Prior Research has found a significant difference in the level of self-compassion between males and females, even though small.

Men score slightly more in self-compassion than women. This contradicts the current study's finding, where no difference in self-compassion was found between men and women (Yarnell, Neff, Davidson, Mullarkey, 2019). People with disability often have to deal with social stigma (Livneh, 2001). This may affect the strength of the gender role of people with a disability, causing the perceived difference between genders to be minimized.

Research has shown that males and females differ in perceived body image. Males have better body satisfaction than females (Tiwari & Kumar, 2015). However, the current study found no difference between males and females in perceived body image. One of the reasons could be body satisfaction being found to increase with age and eventually stabilize (Tiwari & Kumar, 2015). However, earlier research has had opposite findings, which stated that 80% of women are unsatisfied with their bodies compared to their younger years (Tiwari & Kumar, 2015). Most of the research mentioned was conducted on preadolescents to early adults, in contrast to this research paper in which most participants were elderly.

This research found no difference in the depression, anxiety, and stress levels in male and female participants. Existing research has found different results across different populations regardless of age and culture. Women more likely than men are more likely to have higher levels of depression, anxiety, and stress at any age (Lu et al.2018), even during the COVID-19 pandemic (Hou et al., 2020). In this research, depression, anxiety, and stress scores were skewed towards answers 0 (did not apply to me at all) and 1 (Applied to me to some degree, or some of the time). A possible explanation for this finding could be due to socially desirable bias. Negative stereotypes of mental health patients create a feeling of shame. Even though the questionnaires were designed to be self-reported, some participants may not be able to fill in the questionnaires without the help of others. Considering participants' age, the need for help from others filling in the questionnaires may arise. This could also influence socially desirable bias, which swayed the data to lower scores regarding mental health issues, such as depression, anxiety, and stress.

Limitation of this study

Although the number of a participant in this study is sufficient. Due to the Covid-19 Pandemic and time restrictions, it was not possible to have collected data from a larger sample size. A larger number of participants would strengthen the result of the findings. The data collecting procedure was done with the help of a village health volunteer in aiding the completion of the questionnaire due to limited movement and poor eyesight of participants due to aging, which influenced the participant's answers.

Self-compassion scales and body appreciation scale-2 have been translated into Thai but have not yet been standardized. With the use of instruments that had been standardized, the result would be more accurate.

The age of the participants having majority been elderly, with a maximum being 94 years old. In this research, participants were not scanned for cognitive impairment, which could affect the accuracy of the answers. According to Thai statistics, 5% of people aged 65 years and above suffers from cognitive impairment, which increases to 20% for people aged 85 and above (Ministry of Development and Human Security, 2021).

Conclusion

Even though there is no gender difference in self-compassion, perceived body image, depression, anxiety, and stress, self-compassion directly affects perceived body image, depression, anxiety, and stress. Self-compassion also indirectly affects depression, anxiety, and stress, with perceived body image as a mediating factor. The finding suggests that increasing self-compassion tends to improve perceived body image and lower levels of depression, stress, and anxiety. Including a self-compassion training program in the rehabilitation process could improve the quality of life for people with mobility impairment and disability. Local policymakers could include self-compassion in training for village volunteers to educate and encourage the practice of self-compassion for people with a disability who may not be in a rehabilitation program.

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