

## ***Self-Concept and Self-Regulated Learning of Obese Adolescents***

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**Abstract**— The objective of this study was to explore obese adolescents' self-concept and their self-regulated learning. The sample was 197 senior high school students in Medan City. The study utilized two questionnaires, a self-concept scale, and self-regulated learning scale. The questionnaires were developed by researchers; utilizing the theory of self-concept proposed by Fitts (1971) for self-concept scale; and employing Zimmerman (in Schunk & Zimmerman, 1998) self-regulated learning theory to construct self-regulated learning scale. The results showed that obese adolescent relatively has lower self-concept as well as learning self-regulation.

Keywords: *Self-Concept, Self-Regulated Learning, Obese Adolescents*

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### **INTRODUCTION**

Adolescence is a period of change, and one of the most noticeable change is physical changes, including increases in height and gain weight (Hurlock, 2010). This physical change is characterized by the maturity of sex organs affected by the maturation of sexual hormones. Santrock (2013) explained that a very significant physical change in adolescence raises several undesirable psychological effects, they become very concerned about their body shape and appearance compared to other aspects. Teenagers often feel uncomfortable with their physical appearance. Awareness of social responses to the appearance and physical attractiveness may cause concerned about imperfection body shape. Hurlock (2010) argued that over weight is one form of imperfection body shape. Having excessive body weight disturbed most teenagers and became a source of distressed during the early years of adolescence.

Currently, adolescent tend to be less active. They are more engaged in less physical activities such as playing computer or online games and watching television. This less active adolescent may lead to obesity (Obesitas Picu Kanker, 2010). Obesity in adolescents has grown rapidly in the western countries. In the Indonesian context, Riskesdas (2013) reported that the prevalence of obesity in the age group 13-15 years in Indonesia is approximately 2.5%. Obesity in adolescents is important to be concerned, since most of the obese teenagers, about 80% tend to experience obesity in

adulthood as well (Suryaputra & Nadhiroh, 2012).

Also, Obesity not only affects long-term health risks, but it also may lead to adolescences' social problems (Hurlock, 2010). Moreover, Dariyo (2004) stated that obese teenagers perceive lack of physical appearance and can be a sensitive discussion for teenagers. Schacter (in Sarafino, 2011) explained that people who are obese are more sensitive to social interaction than people who are not obese. This dissatisfaction fairly makes teenagers feel not confident and consider his appearance as something 'scary' (Conger & Petersen in Sarafino, 2011). This situation may also lead to lower self-concept (Rini, 2002).

In general, self-concept is a term used to refer to how a person thinks about, evaluates or perceives themselves. The environment is an important aspect of self-concept development. Positive feedback from environment tends to enhance self-concept and vice versa. A teenager who has positive self-concept will encourage individuals to behave positively. On the contrary, a person who has a negative self-concept, believes and views that he is weak, powerless, incompetent, disliked and failed (in Rahmat, 2007).

About education, teenagers are a student at a school. Consequently, school and its learning process become an important aspect of their life. Learning is a process in which behavior is generated or changed through practice or experience. Positive self-concept influence teenagers' learning process. Moreover, it is

argued to have a positive effect on school achievement. Moreover, students who can manage their learning process, it can be said that the students have self-regulated learning skills. Thus, based on these two important variables in learning, the relationship between the variables was explored.

#### A. Self-Concept

Fitts (1971) defined self-concept as *"The self as seen, perceived and experience by him. This is perceived self or the individual's self-concept."*

How a person was seen, perceived, and experienced their-self then became a self-concept.

Fitts (1971) classified self-concept into two dimensions; internal and external.

##### 1) Internal

- Self as identity

Identity is a basic aspect of self-concept.

This aspect aims to answer the question of "who am I?". The identity self can affect the way a person interacts with his environment as well as himself.

- Self as the actor

The self as the actor is a person's perception of his or her behavior or way of acting. It also determines whether a behavior is abstracted, symbolized and incorporated into identity.

- Self as observer

This self-serves as a standard observer and a benchmarker, and especially as a self-assessor. Assessment is given to existing labels in identities or actors separately, for example: "I am beautiful," or "I can do it." A self-assessment like "I am pretty," means that the person labels the whole self and not on a specific behavior. Likewise, when a person says, "I can do," means that the person agrees with his/her behavior.

##### 2) External

- Physical self

It is a person's perceptions and feelings about the physical appearance, health, skills, and motor movement.

- Moral ethics self

It refers to a person's perception of him/herself regarding ethical and moral considerations such as a person's relationship with God.

- Personal self

It is an individual's sense of personal values regardless of his physical appearance and his relationship with others. It also refers

to the extent to which he/she feels adequate as a person, for example: sense as a happy person.

- Family self

Shows how far a person feels about himself as a member of the family and to the role and function he/she runs as a member of the family.

- Social self

This aspect refers to a person's judgment concerning his/her interactions with others and the wider environment.

#### B. Self-Regulated Learning

Zimmerman (in Woolfolk, 2004) defined self-regulated learning as a process where a learner activates and substance his cognition, behavior, and feelings systematically to achieve a learning goal. Zimmerman (1989) divided self-regulated learning into fourteen strategies, namely:

- Self-evaluating
- Organizing and transforming
- Goal setting and planning
- Seeking information
- Keeping record & monitoring
- Environmental structuring
- Self-consequencing
- Rehearsing & memorizing
- Seek peer assistance
- Seek teacher assistance
- Seek adult assistance
- Review test/work
- Review notes
- Review texts book

#### C. Adolescents

According to Papalia et al. (2007) adolescents are: "developmental transition between childhood and adulthood entailing major physical, cognitive, and psychosocial changes." Moreover, Yusuf (2004) stated that adolescent is a critical developmental phase begins with physical maturation, especially sexual organs and ready to reproduce. According to Hurlock (2010) adolescence stages includes: (a) early adolescence: age 13-16 /17, (b) late teens: age 16/17 - 18. In this study, the participants were teenagers in late adolescence stage, ranging from age 16 / 17-18.

#### D. Obesity

According to Sjarif (2002), obesity and overweight are two terms to express body weight. These two terms essentially have different meanings. The word obesity derived from Latin means overeating, but today obesity

is defined as an abnormality or disease characterized by excessive fat accumulation.

**Measurement of Obesity**

WHO (2006) recommended Body Mass Index (BMI) as a standard measurement of obesity. BMI is the easiest way to estimate obesity. The formula of Body Mass Index is:

$$BMI = \frac{\text{Weight (kg)}}{\text{Height(m)} \times \text{Height(m)}}$$

Classification		BMI
THIN	Underweight	< 17.0
	Light underweight	17.0 - 18.5
	Healthy weight	18.6-25.0
NORMAL	Overweight	25.1 - 27.0
	Obesity	>27.0

**METHOD**

This study is a descriptive study aimed to explore obese adolescents' self-concept and self-regulated learning. According to Azwar (2011), descriptive research is a method that describes systematic and accurate facts; it is not intended to explain, test the hypothesis, make predictions and implications. Also, Hadi (2000) defined descriptive research as research that aims to describe a phenomenon without intending to generalize. The participants were 197 obese senior high school students in Medan City. The sample was randomly selected.

**RESULT**

*A. Self-Concept of Obese Adolescents*

Self-concept of obese adolescents was negative. To explore more in-depth for each dimension, including internal and external, please refer to the tables as follow for details.

Table 1. Physical Self

Variables	Classifications	N	Percentage
Physical self-identity	Negative	149	75,6%
	Positive	48	24,4%
Total		197	100%
Physical self-attitudes	Negative	157	79,7%
	Positive	40	20,3%

Total		197	100%
Physical self-satisfaction	Negative	133	67,5%
	Positive	64	32,5%
Total		197	100%

Sources: analyzed primary data (2017)

Table 1 shows that most of the participants, about 149 subjects (75.3%), had a relatively negative physical identity. Next, about 157 subjects (79.7%) also had relatively negative physical self-attitudes. Lastly, 133 subjects (67.2%) had negative physical self-satisfaction as well.

Table 2. Moral Ethics Self

Variables	Classifications	N	Percentage
Moral ethics self-identity	Negative	144	73,1%
	Positive	53	26,9%
Total		197	100%
Moral ethics self-attitudes	Negative	156	79,2%
	Positive	41	20,8%
Total		197	100%
Moral ethics self-satisfaction	Negative	121	61,4%
	Positive	76	38,6%
Total		197	100%

Sources: analyzed primary data (2017)

Table 2 describes that most of the obese adolescents (73.1%) had negative moral ethics self-identity. This trend also applies to moral ethics self-attitudes (79.2%), and moral ethics self-satisfaction (61.4%) can be classified as negative.

Table 3. Personal Self-Concept

Variables	Classifications	N	Percentage
Personal self-identity	Negative	146	74,1%
	Positive	51	25,9%
Total		197	100%
Personal self-attitudes	Negative	162	82,2%
	Positive	35	17,8%
Total		197	100%
Personal self-satisfaction	Negative	147	74,6%
	Positive	50	25,4%
Total		197	100%

Sources: analyzed primary data (2017)

Table 3 shows that subjects who were obese had a negative self-identity (74.1%), personal

self-attitudes (82.2%), as well as personal self-satisfaction (74.6%).

**Table 4. Family Self-Concept**

Variables	Classifications	N	Percentage
Family self-identity	Negative	127	64,5%
	Positive	70	35,5%
Total		197	100%
Family self-attitudes	Negative	108	54,8%
	Positive	89	45,2%
Total		197	100%
Family self-satisfaction	Negative	148	75,1%
	Positive	49	24,9%
Total		197	100%

Sources: analyzed primary data (2017)

Table 4 describes that family self-concept of obese students was also relatively negative. Of 127 subjects (64%) perceived that they had negative family self-identity. Then, 108 subjects (54,5%) also perceived negative family self-attitudes. Likewise, most of them (75,1%) had a negative family self-satisfaction.

**Table 5. Social Self-Identity**

Variables	Classifications	N	Percentage
Social self-identity	Negative	197	100%
	Positive	0	0%
Total		197	100%
Social self-attitudes	Negative	197	100%
	Positive	0	
Total		197	100%
Social self-satisfaction	Negative	134	68 %
	Positive	63	32%
Total		197	100%

Sources: analyzed primary data (2017)

Table 5 also shows that obese adolescents perceived that they had negative social self-identity. They perceived negative self-concept in all area of social self-identity including social self-identity and social self-attitudes, with all of them (100%) had a negative self-concept. However, only 68% of them perceived that they had negative social self-satisfaction.

**B. Self-Regulated Learning of Obese Adolescents**

In general, obese adolescent had low self-regulated learning strategies, including self-evaluating, organizing and transforming, goal setting and planning, seeking information, keeping record & monitoring, environmental structuring, self-consequencing, rehearsing & memorizing, seek peer assistance, seek teacher assistance, seek adult assistance, review

test/work, review notes, review texts book. Please see Table 6 as follow for details.

**Table 6. Self-Regulated Learning Strategies**

Variables	Classification	N	Percentage
Self-evaluating	Low	197	100%
	High	-	0%
Total		197	100%
Organizing and transforming	Low	157	80,5%
	High	40	19,5%
Total		197	100%
Goal setting and planning	Low	168	86,2%
	High	29	13,8%
Total		197	100%
Seeking information	Low	160	82,1%
	High	37	17,9%
Total		197	100%
Keeping record & monitoring	Low	132	67,7%
	High	65	32,3%
Total		197	100%
Environmental structuring	Low	197	100%
	High	-	0%
Total		197	100%
Self-consequencing	Low	167	85,6%
	High	30	14,4%
Total		197	100%
Rehearsing & memorizing	Low	144	73,8%
	High	53	26,2%
Total		197	100%
Seek peer assistance	Low	197	100%
	High	-	0%
Total		197	100%
Seek teacher assistance	Low	145	74,4%
	High	52	25,6%
Total		197	100%

Seek adult assistance	Low	13 4	68,7%
	High	63	31,3%
Total		19 7	100%
Review test/work	Low	13 4	68,7%
	High	63	31,3%
Total		19 7	100%
Review notes	Low	14 4	74,2%
	High	53	25,8%
Total		19 7	100%
Review texts book	Low	13 5	69,6%
	High	62	30,4%
Total		19 7	100%

Sources: analyzed primary data (2017)

Table 6 shows that obese adolescents had low self-regulated learning in all aspects of self-regulated learning. All of the subjects (100%) in the research had a low in three aspects of self-regulated learning, namely: self-evaluating, environmental structuring, and seek peer assistance. Moreover, more than 80 % of subjects perceived low self-regulated learning in four aspects, including organizing and transforming, goal setting and planning, seeking information, and self-consequencing. Furthermore, more than a half (above 50%) had a low self-regulated learning in all other aspects, including keeping record & monitoring, seek teacher assistance, seek adult assistance, review test/work, review notes, review texts book.

### DISCUSSION

This study aimed to explore a brief description of obese adolescents' self-concept and self-regulated learning. The results found that, in general, obese adolescents had negative self-concept and low self-regulation in learning. To be specified, overall dimensions of self-concept including internal and external dimensions were mostly negative including, physical self-identity, physical self-attitudes, and physical self-satisfaction. Also, moral ethics self-identity, moral ethics self-attitudes, and moral ethics self-satisfaction also perceived negatively by most of the subjects. Similarly, personal self-identity, personal self-attitudes, and personal self-satisfaction were perceived negatively as well. In the same way, family self-identity, family

self-attitudes, and family self-satisfaction, as well as social self-identity, social self-attitudes and social self-satisfaction were also perceived negatively by obese adolescents of the sample. This result was somewhat similar as Hurlock (2010) claimed, that overweight teenagers tend to experience psychological problems, thus affecting the development of self-concept than teenagers who have normal weight. Similarly, Stelle, 1974; Brant, 1980; Gormally, 1981 (in Fuhmann, 1990) found that obese adolescents tend to have a negative self-concept. This negative self-concept was formed due to the social environment rejection. It influences how adolescents see their-self, most of them withdraw from social life, have lack of confidence and low self-esteem (Nurvita and Handayani, 2015).

Next, the result also found that obese adolescents had low learning self-regulation. According to Zimmerman (1990), self-regulated learning is a dynamic and self-determining effort of learners by monitoring, organizing and controlling cognition, motivation, and behavior to achieve their learning objectives. This research found that obese adolescents had low self-regulation on all learning strategies, including including self-evaluating, organizing and transforming, goal setting and planning, seeking information, keeping record & monitoring, environmental structuring, self-consequences, rehearsing & memorizing, seek peer assistance, seek teacher assistance, seek adult assistance, review test/work, review notes, as well as review texts book.

For most of the adolescents, schools present one of the most important settings in the development of self-perception along with family (Purkey, in Elabum and Vaughn, 2001). School experiences affect adolescents' perception of academic ability, social acceptance, popularity, behavior, self-efficacy and physical attraction (Elabum and Vaughn, 2001). In this important life stages, adolescents formed self-image based on others' judgment, including their peers (Papalia, 2007). To obese teenagers, feeling of dissatisfaction with physical appearance may cause problems of self-concept development. Lack of academic self-efficacy may also influence their academic achievement. A person belief in ability or competence in performing a task, including academic tasks, achieving a goal or overcoming an obstacle is called self-efficacy (Bandura in Cobb, 2003). Self-efficacy is argued

as one of a critical factor to form of self-regulated learning skills. A person who feels capable of mastering a skill or performing a task will be better prepared to participate, work harder and more resilient to face of adversity, and reach a higher level of achievement. However, negative self-beliefs influence lower academic performance, motivation, career orientation, and future success.

### CONCLUSION

As explained before, the study was not intended to generalize. However, it gave an insight how were obese adolescents' self-concept and self-regulated learning look like. Therefore, the study concluded:

- a. Obese adolescents who participated in the study relatively have a negative self-concept.
- b. Obese adolescents who participated in the study relatively have low self-regulated learning skills.

### RECOMMENDATIONS AND SUGGESTIONS

#### A. Methodological suggestions

- Further research should control social environment as this variable has a critical impact on adolescents' self-concept development.
- To explore the variables more in-depth, further research is suggested to apply mixed methods by combining quantitative and qualitative techniques. It is important to discover subjects' feelings and opinions by doing an interview, so other factors that cannot be gained through quantitative scale may be revealed.

#### B. Practical suggestions

- *Parents*

Parents play important and significant roles to develop adolescents' self-concept as well as self-regulated learning. They are children's first social environment, therefore, to encounter social rejection of obese adolescents, parents who have obese children should give positive unconditional support to their children. By doing this, children will feel accepted. Accordingly the children may develop a positive self-concept.

- *Community*

Community, particularly school and neighborhood also have an impact on obese adolescents' self-development. Mocking and making fun of them often lead obese teenagers to withdraw from social interaction and daily life activities, thus lessening their physical activities. Therefore, inviting, pleasing, and supporting community is a must to prevent obese adolescents' social withdrawal.

- *Obese Adolescents*

For obese adolescents, positive self-feeling and focus on their strengths are two crucial factors to stay healthy, though the environment is not welcoming. Do not feel discouraged because the strong characters and positive self-regard may give a better influence on self-concept improvement. Take any opportunity to participate in social activities to express the presence. By doing these positive activities, the environment will easily spot your strengths.

Similarly, to enhance the self-regulated learning skills, adolescents should apply as much as they can the learning strategies as well as realize roles and responsibilities that can determine future success.

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