

SELF-AWARENESS OF CONTROL AS RELATED  
TO AGGRESSION AND SELF-EFFICACY

BY

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A Thesis  
Submitted to the Faculty of Graduate Studies  
in Partial Fulfillment of the Requirements  
for the Degree of

Master of Arts

Department of Psychology  
University of Manitoba  
Winnipeg, Manitoba

© June, 2004

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**A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University of  
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## ACKNOWLEDGEMENTS

I would like to express my gratitude to my advisor, Dr. J. B. Nickels for all of his time and guidance as well as his wonderful energy and sense of humor. I would also like to thank my committee members, Dr. Marian Morry and Dr. Russell Smandych. Thank you for being so supportive. Your time and advise were much appreciated.

I would like to thank Ron May for all of the opportunities and support over the past six years. Finally, many thanks to Gerry Liske and the rest of my old "DIS" team at Employment and Income Assistance for their support and patience while I was juggling my job and the completion of my degree.

To my Mom.

## TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	i
TABLE OF CONTENTS	ii
ABSTRACT	iii
LIST OF TABLES	iv
LIST OF APPENDICES	v
INTRODUCTION	2
AGGRESSION	2
Aggression and Biological Factors	6
Aggression as a Learned Behaviour	6
AGGRESSION AND SELF-AWARENESS	9
AGGRESSION AND PERCEPTIONS OF CONTROL: OUTCOME FOCUS	11
AGGRESSION AND SELF-EFFICACY: BEHAVIOUR FOCUS	16
SELF-AWARENESS AND INTRAINDIVIDUAL ANALYSES	18
Time Studies	19
Situation Studies	19
Instrument Studies	22
PRESENT STUDY AND HYPOTHESES	23
METHOD	24
Participants	24
Measures	24
Procedure	27
RESULTS	28
DISCUSSION	31
REFERENCES	39
	ii

## Abstract

The majority of people have been either targets or perpetrators of aggression at some point in their lives. The present research assesses self-awareness of one's own control levels as related to aggression and self-efficacy. The correlation between six measures of control and the corresponding six ratings of control for 146 Introductory Psychology students was used as the measure of self-awareness of one's own control levels. Self-awareness, aggression, and self-efficacy were then intercorrelated. Contrary to hypothesis one, self-awareness of control was directly rather than inversely correlated with aggression. Results supported hypotheses two that self-awareness would be directly correlated with self-efficacy. Hypothesis three that self-awareness would be more highly correlated with self-efficacy for those with high levels of measured control was not supported. Hypothesis four that self-efficacy would be inversely related to aggression was supported for impulsive/impatient aggression but not for general, physical, or verbal aggression.

## LIST OF TABLES

Table 1	Mean Scores and Standard Deviations of Variables	29
Table 2	Correlations Between Scales and Subscales	30

## LIST OF APPENDICES

Appendix A	Belief in Personal Control Scale	46
Appendix B	Internal Control Index	48
Appendix C	Desirability of Control Scale	51
Appendix D	Primary and Secondary Control Scale	53
Appendix E	Harmony Control Scale	55
Appendix F	Self-Rating Questionnaire	57
Appendix G	Aggression Inventory	59
Appendix H	Self-Efficacy Scale	61

Running head: SELF-AWARENESS OF CONTROL

Self-Awareness of Control as  
Related to Aggression and Self-Efficacy

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## Self-Awareness of Control

### as Related to Aggression and Self-Efficacy

Any time people pick up a newspaper or turn on the television to watch the evening news, they can almost be guaranteed that they will witness coverage of at least one story of violence. Stories of violent acts such as sexual and physical assaults (Castagna, 2002a; Guccione, Blackstein, & Landsberg, 2002), air rage (Armstrong, 2002), and assaults with deadly weapons (Castagna, 2002b) inundate modern media.

Many of us have witnessed or even been the target of aggression at some point in time. With the fast-paced life that many people lead, it is understandable that stressors and frustrations are frequently encountered. So why is it that some people are able to effectively control their feelings of hostility and frustration, whereas others are prone to angry outbursts? What is it that enables some people to “count to ten” or “just walk away”; yet others, presented with the same negative event, lose their tempers and react harshly?

### Aggression

*Aggression* has been defined as “any form of behaviour directed toward the goal of harming or injuring another living being who is motivated to avoid such treatment (Baron & Richardson, 1994; Dollard, Miller, Doob, Mowrer, & Sears, 1939). Although emotions (e.g., anger), motives (e.g., desire to harm), and attitudes (e.g., racism) can influence aggression, it can also occur in the absence of any of these factors – “in cold blood,” for example – and is, therefore, commonly viewed as a behaviour (Baron & Richardson, 1994).

There are various dimensions of aggression including physical-verbal, active-passive, direct-indirect, and hostile-instrumental (Baron & Richardson, 1994). Physical aggression includes such acts as striking or pushing someone while verbal aggression can

include rejecting someone or uttering threats (Buss, 1961). Active aggression requires exerting effort to intimidate, harm, or impose one's will up on others. Passive aggression involves preventing the target from achieving a goal (Baron & Richardson, 1994; Buss, 1961), such as chaining oneself to a tree to prevent it from being cut down. An example of indirect aggression is gossiping about someone (Baron & Richardson, 1994; Buss, 1961), whereas direct aggression requires that the act be committed directly against the target. Aggression can also be hostile or instrumental (Baron & Richardson, 1994). In instances of the former, the primary goal is to cause suffering; whereas in the latter, aggression is a means of obtaining another, noninjurious goal (Baron & Richardson, 1994).

Frustration - defined as the blocking or thwarting of some form of ongoing, goal-directed behaviour - has often been identified as one of the key determinants of aggression (Baron & Richardson, 1994; Bell & Baron, 1990; Dollard et al., 1939; Gottfredson & Hirschi, 1993). Frustration can stem from barriers to a goal, failure to achieve a goal, distractions, or conflicts (Buss, 1961). According to Dollard et al. (1939), aggression is always a consequence of frustration. When someone pursues a particular goal (e.g., a child hears the music from an ice cream truck and desires a cone), there is usually a predictable sequence of behaviours that take place (Dollard et al., 1939). If the expected sequence of action is interrupted (e.g., child's mother forbids ice cream) and the occurrence of the goal is prevented, frustration ensues (Dollard et al, 1939). Aggression is a characteristic reaction to frustration (Dollard et al., 1939).

Frustration, however, does not guarantee that aggressive behaviour will ensue (Baron & Richardson, 1994). Berkowitz's *Aggression-Cue Theory* states that frustration leads to a *readiness* for aggressive action (Baron & Richardson, 1994). However, cues (e.g., nearby

weapons) must be present for aggression actually to occur (Baron & Richardson, 1994). In fact, there are several mediating factors of frustration-aggression (Baron & Richardson, 1994). These include: 1) the *magnitude* of the frustration, 2) the presence of *cues*, 3) the *unexpectedness/arbitrariness* of the frustration, and 4) *emotional* and *cognitive* processes of the potential aggressor (Baron & Richardson, 1994). The *Social Control Model* of aggression states that, in the majority of situations, people weigh the immediate benefits against the long-term costs of reacting in an aggressive manner (Gottfredson et al., 1993). However, on less frequent occasions, when emotions are highly charged, the immediate benefits are instead compared to the immediate costs (Gottfredson et al. 1993). It is understandable how aggression could appear more attractive in the latter situation.

Shame and guilt have also been found to relate to aggression (Tangney, Wagner, Fletcher, & Gramzow, 1992). Guilt motivates a desire to repair, confess, and make amends; whereas shame motivates a desire to hide (Tangney et al., 1992). When shame is experienced, hostility is initially directed towards oneself; but, because the imagery of rejection and disapproval is involved, it is easily redirected towards the rejecting other (Tangney et al., 1992).

Tangney et al. (1992) identified two types of shame-anger interactions. When a person initially reacts in anger, he or she can become ashamed of feeling angry (Tangney et al., 1992). More often, however, an initial sense of shame can lead to anger towards the shaming other. Shame tends to initiate anger episodes rather than curb hostility (Tangney et al., 1992).

Individuals who display impulsive aggression or episodic rage outbursts present a serious danger to themselves and others (Stanford, Greve, & Gerstle, 1997). Such

individuals display intermittent aggressiveness that is grossly out of proportion to any precipitating psychosocial stressors (Stanford et al., 1997). The intensity of these outbursts can range from verbal aggressiveness to homicide (Stanford et al., 1997).

Previous research had treated violence as a homogeneous construct, combining premeditated and impulsive aggressive individuals into one group (Stanford et al., 1997). Much of past research on impulsive aggression has also focused on violent incarcerated offenders (Stanford, Greve, & Dickens Jr., 1995; Stanford et al., 1997). Such research ignores the large number of individuals in the general population who commit nontrivial acts of violence (e.g., assaulting their spouses, children, or an adversary during a fight but escaping charges pressed against them), yet have not come in contact with the criminal justice or mental health systems (Stanford et al., 1995). Self-report measures of irritability and impulsiveness have been found to be significantly intercorrelated in patients with personality disorders (Stanford et al., 1995).

Stanford et al. (1997) investigated the frequency of self-reported impulsive aggression in a college population. They also assessed the difference between self-reported impulsive aggression and nonaggression, and the nature of the relationship between irritability and aggression on a normative population (Stanford et al., 1997).

Impulsive individuals were defined as those who identified episodes during the preceding six months in which they had become excessively angry and had at least two impulsively aggressive episodes during the previous month, during at least one of which they had displayed behaviours such as physically or verbally assaulting people or throwing/destroying objects (Stanford et al., 1997). Irritability and impulsiveness were strongly correlated. The number of impulsively aggressive episodes was significantly

correlated with irritability, indirect hostility, resentment, total hostility, and impulsiveness (Stanford et al., 1997). Twenty-four per cent of people in the population examined were classified as impulsively aggressive.

#### *Aggression and Biological Factors*

Specific areas of the brain including areas of the hypothalamus, amygdala, and hippocampus have been found to elicit attack in rats and cats if stimulated electrically or chemically (Bell & Baron, 1990). Some centers seem to be specific to predatory aggression, fear-related attack, and sexually related dominance (Bell & Baron, 1990). Performing such studies on human participants is not ethically possible. However, Stanford et al. (1997) reported that several neuropsychological and brain-imaging studies have implicated frontal/executive dysfunction in violent individuals. Bell and Baron also found evidence that some instances of bizarre expression of human violence can be attributed in part to tumors or other lesions in the limbic system.

#### *Aggression as a Learned Behaviour*

Aggression as a characteristic way of solving social problems usually emerges early in life (Huesmann, Lefkowitz, and Walder, 1984). There are a number of factors that contribute to aggressive behaviour with regular observation of aggression, reinforcement of aggression, and being the object of aggression as the most influential (Huesmann et al., 1984). Severe antisocial, aggressive behaviour, however, seems to occur only when there is a convergence of a number of these precipitating factors (Huesmann et al., 1984). Once an aggressive style of responding develops, it seems to persist (Huesmann et al., 1984). In fact, aggressiveness has been shown to be transmitted across generations within families (Huesmann et al., 1984).

Aggressive behaviour is typically precipitated, maintained, and exacerbated by the way individuals process information (Bickett, Milich, & Brown, 1996). One theory suggests that it is the child's perception of intention that determines the behavioural response with the actual intention of the provoker contributing nothing to the prediction of the "victim's" response (Bickett et al., 1996).

There is a five-step sequence for competent social performance (Baron & Richardson, 1994). The first step involves encoding social cues, that is, determining what event has occurred. The second step is to interpret the cues. Aggressive children tend to make increased attributions of hostility (Baron & Richardson, 1994). Next, a search for possible responses takes place. The potential aggressor then evaluates the most viable response. Finally, the aggressor enacts the chosen response (Baron & Richardson, 1994). Aggressive boys do not often misinterpret nor do they respond inappropriately to clear-cut cues. But, when confronted with ambiguous cues, aggressive boys are more likely than nonaggressive boys to infer hostile motives in others (Bickett et al., 1996).

In addition to theories regarding deficits in information-processing abilities, it has been suggested that aggressive children acquire hostile attributions through modeling parental attributions (Bickett et al., 1996) and family interactions (Baron & Richardson, 1994). Bickett et al. found that parents of aggressive and delinquent boys are often themselves criminal and aggressive. Based on this information, Bickett et al. hypothesized that when interpreting ambiguous situations, aggressive boys and their mothers interpret the situations as being hostile. Nonaggressive boys and their mothers, on the other hand, differentiate between hostile and ambiguous situations and show less propensity to make hostile attributions in ambiguous situations.

Bickett et al. (1996) studied 50 boys ranging from 7 to 12 years of age and their mothers. They found that when asked in an open-ended manner to provide explanations for another's behaviour in hypothetical stories, aggressive boys were more likely to make hostile attributions and to indicate that they would respond aggressively than were the nonaggressive boys. Mothers of aggressive boys were more likely to make hostile attributions about their children's behaviour and that of hypothetical peers, regardless of intent, than were mothers of nonaggressive boys.

Aggression has long been recognized as one of the most disruptive and pervasive childhood behavioural problems, which tends to remain stable from early childhood to adolescence and adulthood and predicts a wide spectrum of adult adjustment problems (Waldman, 1996). Megargee (1966) ascertained that the majority of previous empirical data on aggression in children had been collected either in laboratories or under controlled conditions (e.g., schoolyards). Therefore, most data have involved relatively mild forms of aggression from which scientists have had to extrapolate to account for more extreme forms of aggression (Megargee, 1966).

Inaccuracies in social perception are also believed to elicit aggression. Waldman (1996) examined two types of social perception inaccuracies: The first was labeled a *social perceptual deficit* and consists of a general tendency to misinterpret social cues across different domains. The second, a *social perceptual bias*, involves a circumscribed inaccuracy in perceiving or interpreting social cues within a given domain.

When judging another's actions, aggressive or hyperactive-aggressive boys have been found to respond more quickly and with less attention to relevant social cues as compared to nonaggressive boys (Waldman, 1996). However, Waldman found no

significant evidence of a general social perceptual deficit in aggressive boys or difference in the identification of hostile attention cues. He did, however, find evidence that social perception deficits may mediate the relationship between social isolation and inattention and impulsivity, in that inattention and impulsivity increase the likelihood of social perceptual deficits, which in turn raise the likelihood of social isolation. Findings also indicated that aggressive boys were more likely to respond aggressively to others' behaviours that are perceived as *nonhostile* in intent.

### Aggression and Self-Awareness

An important part of the present research is an examination of the relationship between self-awareness in regards to perceived control and aggressiveness. People who score high in private self-consciousness report that they regularly try to figure themselves out, reflect about themselves, and examine their motives. As a result, they are likely to know themselves better than those who are low in private self-consciousness (Buss, 2001). Those who display high self-awareness have considerably higher correlations between self-reports of traits or attitudes and behavioural tests of these self-reports (Buss, 2001).

Self-awareness has been shown to be inversely related to aggression, that is, increased self-awareness is correlated with decreased aggression (Baron & Richardson, 1994). Results supporting this view have been found in studies in which participants administer shocks to targets in the presence of mirrors (Baron & Richardson, 1994). Those who could see themselves in a mirror administered significantly less shocks. However, according to Nezlek (2002), *self-awareness* can be defined as a person's awareness of their own personality characteristics, as opposed to *self-consciousness*, which he defined as a



person's awareness of how his or her personality characteristics are viewed by other people. For the purposes of the present study, the focus will be on the self-awareness.

Berkowitz, Lepinski, and Angulo (1968) examined how awareness of one's own anger level affects aggressive responses. They suggest that people's reactions to an emotional event depend, in part, on their understanding of the situation and interpretation of what is happening within themselves. Differential emotional feelings and actions result from the individual's interpretation of his or her own internal reactions (Schachter, 1964). Evidence has also been found that suggests that cognitions may affect emotional behaviour after the initial reactions have taken place (Berkowitz et al., 1968). Aggressive desires may follow the aroused individual's interpretation of the connection between their internal reactions and an external event rather than solely being a product of their understanding of the nature of their feelings (Berkowitz et al., 1968).

Detecting the activation of socially disapproved responses within oneself may provoke anxiety and lead to a strong inhibition of those prohibited action tendencies (Berkowitz et al., 1968). For example, college men who were sexually aroused displayed fewer sexual themes in response to Thematic Apperception Test (TAT) cards than did a nonaroused control group, presumably because they had become aware of the socially disapproved sexual reactions within them and restrained all signs of sexual responses (Berkowitz et al., 1968).

Berkowitz et al. (1968) studied participants who had been moderately insulted and were then led to believe that their tormentor had aroused either low, moderate, or high levels of anger within them. Participants then had to administer shocks for every incorrect answer given by their "tormentor" while they were learning a code (Berkowitz et al., 1968). As

predicted, men in the medium-anger group were more punitive towards the “learner” than those in the low- or high-anger groups. People in the high-anger group did not give more intense shocks than people in the low-anger condition, presumably because they had become anxious and inhibited strong aggression. Men who were told that they were very angry subsequently felt more anxious than did the people in the other two conditions. They rated themselves as reliably more sluggish, drowsy, and tired than other subjects. Based on these findings, it would appear as if people who are more aware of their own personality characteristics would have a better understanding of which events elicit feelings of aggression within them and would consciously avoid such triggers.

#### Aggression and Perceptions of Control: Outcome Focus

Another characteristic that appears to be related to aggression is perceived control (Burger, 1992; Megargee, 1966). Control is defined either generally as “exerting an influence over which outcome will likely occur” (Nickels, Cramer, & Gural, 1992) or specifically as “the ability to cause an influence in the intended direction” (Astin & Shapiro, 1997). There are a large number of terms and definitions for the concept of control throughout psychological literature (Skinner, 1996). However, Skinner identifies the fundamental distinction in the literature of control as being between *actual* control and *perceived* control. The former is defined in terms of how much control is objectively present, and the latter in terms of an individual’s beliefs about how much control is available. It is unlikely that losing or gaining objective control can have an effect unless it is perceived (Parker, 1993; Skinner, 1996). The perception of control is essential to personal well-being (Parker, 1993). Having the ability and resources to engage in problem-focused coping (being “in control”) can reduce the physiological and psychological impact of

stressors and daily challenges (Haidt & Rodin, 1999) as well as influence positive cognitive, psychological, and physical outcomes in life (Eizenman, Nesselroade, Featherman, & Rowe, 1997).

Attributions and explanations of such phenomena are of interest to psychologists as they link the stimuli that people encounter to individual responses. According to Haven (1989), explanations for economic phenomena often reflect values and may determine future behaviour. Haven was concerned with the association between such explanations and the respondents' locus of control. The expectation was that one's perception of their control over personal economic matters would influence their explanations for poverty.

The structure of thinking is also related to the dynamics of feelings and actions (Weiner, 1995). Weiner emphasizes the *principle of mastery*, which is the theory that humans have an innate desire to understand their environment, themselves, and why events occur. Desire for control is an important motivating force in the attribution process. Related to that is the concept that people have the need to view the world as an orderly and just place in which people "get what they deserve" (Lerner, 1980); consequently, we tend to blame misfortune on external events and good fortune on internal attributes (Haven, 1989; Weiner, 1985). Perceived controllability is one of the key components in determining emotional experiences of gratitude, guilt, shame, hopelessness, pity, pride, and anger. Being able to exercise control over potentially threatening situations can diminish arousal (Bandura, 1986).

One common finding is that overtly aggressive people have fewer controls and are more easily aroused than nonaggressive people (Burger, 1992; Megargee, 1966). According to Megargee, one of the practical implications of these findings is that the way to discourage

aggressive tendencies is to build up internal controls. For example, penal institutions typically base their programs on this principal in that once an individual has demonstrated sufficient control by behaving in a nonaggressive manner for an adequate period of time, they are thought to be rehabilitated and are considered for release (Megargee, 1966).

Megargee (1966) had previously found that when assaultive and nonassaultive criminals were compared, the assaultive participants had more control and less hostility than either nonassaultive criminals or a control group without criminal convictions. This led him to propose that there are two types of assaultive criminals: Some have an *undercontrolled aggressive* personality, and some have a *chronically overcontrolled* personality. The former refers to people who have very low inhibitions against aggressive behaviour and are easily provoked, whereas the latter refers to those who have extremely rigid inhibitions against the expression of anger and rarely display aggression. Over time, the instigation of aggression experienced by the overcontrolled person can build to up to the point at which it exceeds even the most excessive of barriers, and the resulting act is far more extreme any of the numerous acts displayed by undercontrolled persons.

Based on this theory, Megargee (1966) hypothesized that a sample of people who had committed extremely aggressive acts would include some who were undercontrolled and some who were overcontrolled. On the other hand, a sample of people who had committed mildly aggressive acts, such as fistfights, would consist of almost exclusively the Undercontrolled Aggressive type. Therefore, an extremely assaultive group should appear to be less aggressive and more in control of their emotions and actions than either a moderately assaultive or nonassaultive group.

Megargee (1966) evaluated four groups of juvenile offenders: 1) serious assaultive (e.g., murder), 2) moderately assaultive (e.g., gang fights), 3) incorrigible (e.g., unmanageability at home), and 4) property offenses (e.g., robbery). He found that only 22% of those in the serious assaultive group had prior detentions as opposed to 70% of those in the moderately assaultive group.

Serious assaultive participants had better school attendance and conduct records than those in the other three groups did (Megargee, 1966). In addition, the serious assaultive group was found to be more cooperative, submissive, friendly and to have displayed less verbal aggression prior to the criminal act that they were institutionalized for. Members of the serious assaultive group were found to display more control, be more conscientious, responsible, and alert to ethical or moral issues than members of the other groups. They were particularly oriented toward academic success and tended to be more mature, alert, and ambitious than those in the other groups as well.

People are happier and more satisfied when they believe that they can successfully master the goals and tasks of their everyday life (Lang & Heckhausen, 2001). Perceived control appears to enhance confidence and to make challenging tasks less stressful (Bandura, 1986; Parker 1993). Lang and Heckhausen further define control as having two main components: *Agent-end beliefs* of control refer to the extent to which individuals believe that they influence their developmental success and success at accomplishing their personal goals. *Agent-means beliefs* of control refer to the extent to which individuals believe that they have access to the means that they perceive as causal for their success in life.

The construct of control can also be applied to the skills of letting go and accepting a situation as is (Astin & Shapiro, 1997). Control and efficacy depend on the fit between

individuals and the social systems in which they are embedded (Haidt & Rodin, 1999). Haidt and Rodin (1999) broke the concept of control down into; *effectance* or a striving for competence, *sense of industry* or a feeling of being able to make things and make them well, and *reactance* or a state involving increased arousal and anxiety during which a person attempts to recover from a perceived loss of control. Having the ability to exercise behavioural control over potentially aversive situations decreases or at least eliminates autonomic reactions to those events (Bandura, 1986). Choosing not to exercise control at any given time, but having the knowledge that control could be exerted should be distinguished from being deprived of control (Bandura, 1986; Nickels et al., 1992).

There are different reasons why it may appear as if persons are reacting passively and have little to no control over a particular situation. They might actually perceive the outcome as being completely noncontingent on their actions and are not attempting to control the outcome in any way. They might also be *relinquishing* control because they feel that someone or something else has a better chance of achieving the desired outcome (Skinner, 1996) and therefore would not perceive the outcome as being completely noncontingent on their actions. Finally, they might be relying on *secondary control* through adjusting their own expectations or desires to conform to the outcome that they feel will most likely occur, thus maintaining a perception that the desired outcome will occur (Schultz & Hechhausen, 1996; Skinner, 1996). When people perceive that they have the opportunity to exert control but do not exercise that ability, the self-knowledge that the control could be exercised, rather than its actual application, can reduce anxious arousal (Bandura, 1986). This reduction in emotional arousal due to having a sense of efficacy is

beneficial because research has shown that arousal leads to aggressiveness in persons who are prone to aggression (Bandura, 1986; Donnerstein & Wilson, 1976).

#### Aggression and Self-Efficacy: Behaviour Focus

Perceptions of control are assessments of one's influence on the environment as opposed to perceptions of self-efficacy, which are assessments of one's abilities to achieve the outcomes one desires (Parker, 1993). In the context of perceptions of control, self-efficacy involves the experience of intentionally exerting efforts towards influencing a desired outcome to occur and feeling the energy or effectiveness of those efforts (Skinner, 1996). Among the different aspects of self-knowledge, perhaps none is more influential in people's everyday lives than conceptions of their personal self-efficacy (Bandura, 1986). Perceived self-efficacy differs from perceived control in that the former is defined as people's *beliefs* about their abilities to execute the behaviours or actions required to influence outcomes that affect their lives (Ajzen, 2002; Bandura, 1986), whereas the latter is focused on their expectations of influence over outcomes (Nickels et al., 1992). "In these definitions, the concern [in regards to self-efficacy] is clearly over the behaviour itself, not with control over the outcomes or events" (Ajzen, 2002). The focus in self-efficacy is on what you believe you can do rather than what you expect to get. Even when people know full well what to do, they often do not behave effectively because self-referent thoughts mediate the relationship between knowledge and action (Bandura, 1986).

Bandura (1986) further describes the concept of self-efficacy as being "concerned with how people judge their capabilities and how their self-percepts of efficacy affect their motivation and behaviour" (p. 391). Self-efficacy involves a generative capability in which cognitive, social, and behavioural subskills must be organized into integrated courses of

action in order to serve innumerable purposes (Bandura, 1986). Self-efficacy is a significant determinant of behaviour or course of action that operates partially independent of underlying skills (Bandura, 1986).

Ajzen (2002) reported on five previous studies, which examined the factorial structure of perceived behavioural control in the context of planned behaviour. Findings in the five studies consistently supported the proposal that self-efficacy and controllability are two clearly separable factors. For example, two studies reported by Ajzen (2002) looked at eating low-fat diets in different populations. The same researchers had conducted both studies. In the first study the measures of self-efficacy and controllability were entered into a regression equation together and did not have a significant effect on the prediction of behaviour. In the second study the measures of self-efficacy and controllability were looked at separately and self-efficacy was found to have a significant effect on the prediction of intentions and behaviours in regards to eating a low-fat diet. Parker (1993) examined the relationship between control, self-efficacy, and dissent as well as exit (dealing with conflict by resigning one's position) in response to workplace conflicts. Parker's findings also support the theory that the effects of control and self-efficacy are additive rather than multiplicative.

When facing difficulties in life, people who doubt their own capabilities may reduce their efforts or even give up completely, whereas those who have a strong sense of self-efficacy exert greater efforts in order to master challenges (Bandura, 1986). Reasonably accurate appraisals of one's own abilities are of considerable value in successful functioning. Inaccurate self-assessments in either direction can have aversive consequences (Bandura, 1986). Overestimations can result in such negative outcomes as needless failures



and undermined credibility. Underestimations, on the other hand, can result in the failure to cultivate personal potentials.

Beliefs about one's own abilities contribute to the quality of psychosocial functioning in a variety of ways (Bandura, 1986). Perceived self-efficacy shapes causal thinking (Bandura, 1986). Those who perceive themselves as highly efficacious tend to be inclined to attribute failures to lack of effort, whereas other people who have comparable skills but less perceived self-efficacy ascribe failures to lack of ability. People who have high self-efficacy approach challenges with less anxiety and experience little stress in taxing situations (Bandura, 1986).

Yuzawa and Yuzawa (2001) investigated the relationship between self-efficacy and aggressive behaviours in school-aged boys. They examined previous findings that aggressive children expect positive outcomes to result from aggression and feel more confident about exhibiting aggression than their nonaggressive peers do. Although their findings did support this theory, they also found evidence that some children resort to aggression because they are not as confident in their abilities to perform socially appropriate behaviours such as verbal persuasion.

#### Self-Awareness and Intraindividual Analyses

A promising approach to the study of self-awareness of control, self-efficacy, and aggression involves the use of intraindividual analyses. *Intraindividual* (or *within-person*) analyses refer to the exploration of characteristics that vary within people as a function of time, situation, or instrument. In such studies, fluctuations (variability) in behaviour are considered to be important variables in their own right rather than relegated to the realm of "error variance" (Penner, Shiffman, Paty, & Fritzsche, 1994). Researchers have argued that

intraindividual variability in emotion for both positive and negative moods is a multidimensional construct that is sufficiently stable to be considered a psychological trait (Eid & Diener, 1999; Penner et al., 1994). In other words, some people consistently show greater fluctuation in affect than other people do.

#### *Time Studies*

Research that has studied intraindividual variables as a function of time (i.e., purely longitudinal studies) include the growth of self-image throughout the adolescent years (McMullen, 2001) as well as changes in cognitive functioning and perceived control in relation to the aging process (Eizenmon, Nesselroode, Feathermon, & Rowe, 1997; Sliwinski & Buschke, 1999). Intraindividual research has also been used to study human attachments and their within-person variability over time and with different relational partners (La Guardia, Ryan, Couchmon, & Deci, 2000).

#### *Situation Studies*

It is commonly assumed that a person's personality characteristics are consistent across situations. According to this viewpoint, a person who displays confidence in career-related situations should show confidence in all situations. Admittedly, there are personality characteristics, such as motivation, that are fairly consistent across situations; however, personality characteristics are always affected by the situation or context in which they are invoked (Mischel, 1968). For example, if school-aged boys had parents who disciplined them harshly for exhibiting aggression at home but modeled and encouraged aggressiveness in social relationships, the boys behaved nonaggressively at home but were quite aggressive at school (Mischel, 1968).

In regards to control, people may appear to be the same because they score similarly on a measure of control in a given situation. However, some may always have high or low perceptions of control, whereas others may be feeling especially in control or ineffectual in that particular situation (Eizenman et al., 1997). Roberts and Nesselroade (1986) found that perceived locus of control can exhibit significant intraindividual day-to-day variability.

Intraindividual research on consistency of adolescent social and cognitive competence has been utilized to learn more about maladaptive behaviours by providing information about their cross-situational consistency (Steele, Forehand, & Devine, 1996). Ninety-eight triads of adolescents, their mothers, and their teachers were studied over a three-year period. The study was focused on the intraindividual consistency of perceived competence (social, physical, cognitive, and general self-worth) of the adolescents. The researchers found that competency ratings within each informant were consistent over the three years. There were no significant differences between mother and teacher ratings of the adolescents' competence over the years, but the adolescents consistently rated themselves as being less competent than the mothers or teachers thought they were (Steele et al., 1996). If intraindividual behavioural consistency is dependent on context, as Mischel (1968) proposes, the consistency found in the above study could have resulted from using adolescent participants who are likely using their home life and academic experiences as a frame of reference for their self-concepts throughout the three years.

Other examples of research that examines intraindividual variables as a function of situation include research on emotional fluctuations in relation to stress (Schultz, 1995), alcohol use (Armeli, Tennen, Affleck, & Kranzler, 2000; Paradise, 2002), and perceived versus actual physical health characteristics (Brondolo, Rosen, Kostis, & Schwartz, 1999).

Stress experienced in the workplace has been shown to effect marital interactions at home for married couples with children (Schultz, 1995). Schultz found that men were more likely to be withdrawn or angry at home if they experienced stress at work. Women, however, did not exhibit as much spillover of negative emotions into their personal life.

Intraindividual analyses have been conducted with persons who were enrolled in alcohol treatment programs (Armeli et al., 2000). Participants reported a stronger desire to drink and greater alcohol consumption on days in which a higher than average number of positive as well as negative nonwork life events occurred. Lower desire to drink alcohol and lower alcohol consumption were reported on days when more positive work-related events occurred.

Intraindividual analyses have also been used to study the relationship between alcohol use, problem behaviours, and negative affect (Paradise, 2002). Paradise found that significant within-person changes in externalizing behaviours, aggression, and disordered thinking related to similar changes in frequency of alcohol use.

In yet another example of intraindividual analyses Brondolo et al. (1999) studied measured versus rated blood pressure as well as physical and psychological symptoms in 54 mildly hypertensive men. Results indicated significant within-person relationships between actual and perceived blood pressure. Negative affect was significantly related to perceived, but not actual, blood pressure (Brondolo et al., 1999).

In a final example of intraindividual analyses Campbell (1988) examined intrapersonal and interpersonal discrepancies of self-image in relation to their ideal self as well as important others among delinquent girls. It was hypothesized that delinquent girls would display more stereotypically masculine traits and would also rate themselves as being

farther from their ideal self than nondelinquent girls. The former group did rate themselves as being significantly less feminine than they aspired to be, whereas the latter group rated themselves as being less brave and active than the delinquent participants. However, there was no significant difference between the groups in self-ideal comparison. Delinquent girls also failed to hold a more masculine ideal than nondelinquent girls.

### *Instrument Studies*

Researchers have also conducted intraindividual studies that compare measured or objectively scored values and expressed or subjectively scored values (Nickels & Renzaglia, 1958). Other examples include measured versus expressed indicators of athletic performance (Iso-Ahola, 1995), substance abuse (O'Leary, Donovan, O'Leary, 1976), the effectiveness of behavioural medicine (Muten, 1991), and extraversion (Fleeson, Malanos, & Achille, 2002).

The intraindividual *consistency method* that will be utilized in the present study parallels that of Fleeson et al. (2002) and Nickels & Renzaglia (1958) and involves calculating a correlation coefficient between measures (scores) and expressions (ratings) of several personal characteristics for *each participant*. This approach differs from the typical use of the correlation coefficient in that the degree of consistency for each participant (the coefficient) serves as raw data to be related to other variables. In the present study, the consistency of each participant's measured control (as given by objective control scores) and expressed control (as given by subjective control ratings) was used as an indication of that person's level of self-awareness of control. The self-awareness coefficients were then related to aggression and self-efficacy.

### Present Study and Hypotheses

The main purpose of the present study was to examine the relationship among each participant's self-awareness of control on the one hand and his or her self-efficacy and aggressiveness on the other. Previous research has shown self-awareness to be correlated with decreased aggression (Baron & Richardson, 1994; Berkowitz et al., 1968). Therefore, regardless of whether people have aggressive or passive tendencies, those who are self-aware of their control level should have the self-knowledge required to regulate their reactions to aversive situations, so that even the very aggressive self-aware people will be able to inhibit their aggressive tendencies and find alternative resolutions (Berkowitz et al., 1968). Hypothesis one predicted that self-awareness of one's own control levels would be inversely correlated with all forms of aggression.

Having the ability to effectively cope with stressors that occur in life and being aware of that ability can lessen adverse psychological effects of negative events and promote positive emotional and psychological outcomes in life (Eizenman et al., 1997; Haidt & Rodin, 1999; Parker, 1993). Self-awareness about control levels should be directly related to the degree to which participants perceive themselves to be effective at handling challenging events in their lives (Parker, 1993). Therefore, hypothesis two predicted that self-awareness of one's own control levels would be directly correlated with self-efficacy. Furthermore, hypothesis three predicted that self-awareness of one's own control levels would be more highly correlated with self-efficacy for those with high levels of measured control than for those with low levels of measured control.

Previous research has demonstrated that a lack of perceived abilities to control situations, especially threatening ones, can lead to increased arousal as well as feelings of

shame and anger (Bandura, 1986; Weiner, 1995). Yuzawa and Yuzawa (2001) found that aggressive school-aged boys are less confident of their abilities to perform socially appropriate behaviours, such as verbal persuasion, in order to resolve conflicts. Based on these findings, hypothesis four predicted that feelings of self-efficacy would be inversely correlated with all forms of aggressiveness.

## Method

### *Participants*

One hundred and seventy six (male and female) undergraduate students were recruited from Introductory Psychology classes at the University of Manitoba during the 2002-03 academic year. They were offered two experimental credits towards their course grade for their participation. The responses from thirty participants were excluded from the results due to incomplete data. Therefore, the final number of participants was 146 (males and females).

### *Measures*

*Measured Control.* Six instruments were used to assess six different aspects of measured control. Participants completed the Belief in Personal Control Scale (BPCS), a 45-item instrument (see Appendix A) designed to measure various dimensions of perceived personal control (Berrenberg, 1987). The *general external control* component consists of 19 items ( $\alpha = .85$ ) and assesses the extent to which the individual believes that outcomes are produced by fate/others rather than by their own actions (Berrenberg, 1987). The BPCS has high construct validity (Berrenberg, 1987).

Participants completed an Internal Control Index (ICI). The ICI is a 28-item instrument (see Appendix B) designed to measure to what degree a person looks for or

expects to obtain reinforcement from taking control of situations, making decisions, and attributing outcomes to sources within themselves (Duttweiler, 1984). The ICI is based on the premise that people who attribute control to internal factors are likely to believe that reinforcement is contingent on their own behaviour, whereas those who attribute control to external factors are more likely to believe that reinforcement is due to luck or chance (Duttweiler, 1984). The ICI has satisfactory validity and rather high internal consistency with alphas of .84 to .85 (Duttweiler, 1984).

The Desirability of Control Scale (DCS) was also administered. The DCS is a 20-item likert style instrument (see Appendix C) which assesses individual differences in the general level of motivation for control over life events (Burger & Cooper, 1979). The DCS has satisfactory internal consistency ( $\alpha = .80/.81$ ) and test-retest reliability ( $\alpha = .75$ ) (Burger & Cooper, 1979).

Participants completed a measurement instrument for Primary and Secondary Control. This is a 14-item instrument (see Appendix D) that measures persistence in goal striving (primary control) and positive reappraisals (secondary control) on 4-point Likert-style scales (Wrosch, Heckhausen, & Lachman, 2000). There are five items that measure primary control (PC) and nine items that measure secondary control (SC). These subscales have high validity. They also have satisfactory reliability with alphas of .77 and .78, respectively (Wrosch et al., 2000).

The Harmony Control Scale (HC) was administered in order to assess the purposeful transfer of primary control from oneself to external social, spiritual, or cosmic forces (Tangsrud, 2002). This 21-item scale (see Appendix E) includes items that indicate



participants' willingness to relinquish primary control to cosmic forces, higher beings, and luck.

*Expressed Control.* Participants were given an original Self-Rating Questionnaire (SRQ) containing brief paragraphs, each of which describes the typical person scoring high on each of the six measures of control discussed above. Each participant indicated on a five-point Likert-style scale (see Appendix F) to what extent each paragraph describes his or her own personality. Item A corresponds to external control (BPCS), item B corresponds to internal control (ICI), item C corresponds to desire for control (DCS), item D corresponds to purposeful transfer of primary control to external forces (HC), item E corresponds to primary control (PC), and item F corresponds to secondary control (SC).

*Self-Awareness.* The measure of self-awareness was a derived score. Participants obtained six scores from the BCPS, ICI, DCS, HC, PC, and SC, each indicating how high they scored on a different measure of control. Participants also gave six ratings on the SRQ, each indicating how high they rated themselves on the same six aspects of control. By pairing participants' six measures of control with their respective ratings of control, a single Pearson product moment correlation was calculated for each participant. This correlation indicates the degree to which a participant's measured levels of control are similar to that participant's rated levels of control. These intraindividual correlations are thus treated as a separate variable labeled self-awareness of control (SAC).

*Aggression.* Participants completed the Aggression Inventory (AI), a 30-item Likert-style scale (see Appendix G) that measures their general tendencies for aggressiveness over dimensions of aggressive behaviour such as physical (four items), verbal (seven items), and impulsive/impatient aggression (seven items; Gladue, 1991). Because previous research has

shown significant evidence of gender differences in many aspects of aggression (Gladue, 1991), AI scores were considered separately for men and women. Reliability ranges from .80 to .82 for males and .70 to .76 for females.

*Self-Efficacy.* Participants also completed the Self-Efficacy Scale (SES) in order to measure general levels of belief in their competence (Sherer, Maddux, Mercandante, Prentice-Dunn, Jacobs, & Rogers, 1982). This 30-item instrument (see Appendix H) assesses general expectations of self-efficacy that are not tied to specific situations or behaviour (Sherer et al., 1982). The SES has high criterion and construct validity, and its internal consistency shows alphas ranging from .71 to .86 (Sherer et al., 1982).

#### *Procedure*

Prior to completing the questionnaires, participants were told that the study was being conducted in order to assess the personality characteristics of university students. Participants were also asked to indicate their gender on the front page of their booklets.

The SRQ was administered first so participants would complete it before they saw the other scales. This was an attempt to prevent participants' self-ratings from being affected by their having thought about their own control levels for the significant amount of time it took to complete the other control scales. Then the participants were administered the remaining scales in varying orders. They were given one hour to complete all questionnaires.

Upon completion of the questionnaire package, the participants were informed when they could expect feedback on findings. Once the findings were obtained, they were posted.

## Results

The range of the 146 intraindividual correlations (SAC) was 1.88 (-.94 to .95). The means and sd's of all relevant measures (including the 3 subscales of the AI) are presented in Table 1. The mean self-awareness of control correlation was .14 ( $SD = .36$ ).

The SAC, AI, and SES (plus other measures where relevant) were intercorrelated through Pearson product moment correlations (see Table 2). An alpha level of .05 (two-tailed) was used for all statistical tests, although exact probabilities are provided.

Self-awareness of control was found to be significantly and positively correlated with total aggression ( $r(146) = .17, p < .043$ ). When looked at separately, two types of aggression (physical and verbal) were also found to be positively correlated to self-awareness ( $r(146) = .17, p < .037$  and  $.17, p < .040$ , respectively) whereas impulsive/impatient aggression was not significantly related to self-awareness ( $r(146) = .06, p < .443$ ). Thus, hypothesis one that there would be an inverse relationship between self-awareness and aggression was disconfirmed.

In confirmation of hypothesis two, self-awareness of control was significantly and positively correlated with self-efficacy ( $r(146) = .57, p < .001$ ). Self-efficacy was also found to be significantly and positively related to overall levels of measured control ( $r(146) = .66, p < 0.001$ ). However, self-efficacy was found to be significantly but inversely related to levels of expressed control ( $r(146) = -.26, p = .002$ ).

Participants were divided at the median (438.10) of overall levels of measured control scores into high (438.10 – 563.36) and low (361.80 – 438.09) scorers. The correlation between SAC and SES was calculated separately for each group of scorers. The

Table 1

*Mean Scores and Standard Deviations of Variables*

Variables	<i>M</i>	<i>SD</i>
<b>Total Measured Control</b>	439.98	40.56
Measured External Control (BCPS)	66.17	9.88
Measured Internal Control (ICI)	99.72	12.40
Measured Desire for Control (DCS)	102.89	14.22
Measured Primary Control (PC)	14.81	3.65
Measured Secondary Control (SC)	12.08	3.13
Measured Harmony Control (HC)	68.90	12.40
<b>Total Expressed Control (SRQ)</b>	17.57	2.77
Expressed External Control	2.28	0.98
Expressed Internal Control	3.65	1.01
Expressed Desire for Control	3.41	1.00
Expressed Primary Control	2.73	1.11
Expressed Secondary Control	3.01	1.20
Expressed Harmony Control	2.49	1.28
<b>Self-Awareness of Control (SAC)</b>	0.13	0.37
<b>Self-Efficacy (SES)</b>	81.11	11.67
<b>Total Aggression (AI)</b>	9.77	2.92
Physical Aggression	2.43	1.03
Verbal Aggression	2.91	0.85
Impulsive/Impatient Aggression	2.60	0.76

*Note.* The various Measured Control scales as well as the Aggression scales had different numbers of items so, in order to calculate Total Measured Control and Total Aggression, the respective scales were given a common denominator (20 for control and 7 for aggression) and then summed.

Table 2

*Correlations between Scales and Subscales*

	Control	Aggression				Self-Efficacy		
	SAC	AI	Physical	Verbal	Impulsive/ Impatient	SES	SES (high MC)	SES (low MC)
SAC	1.00 <.001 (146)	.17* .043 (146)	.17* .037 (146)	.17* .040 (146)	.06 .443 (146)	.57* <.001 (146)	.29* .033 (55)	.31* .002 (91)
AI	--	1.00 <.001 (146)	.89* <.001 (146)	.88* <.001 (146)	.74* <.001 (146)	-.12 .155 (146)	.22 .109 (55)	.15 .155 (91)
Physical	--	--	1.00 <.001 (146)	.67* <.001 (146)	.45* <.001 (146)	-.08 .334 (146)	.15 .286 (55)	.16 .132 (91)
Verbal	--	--	--	1.00 <.001 (146)	.48* <.001 (146)	-.02 .800 (146)	.34* .011 (55)	.21* .047 (91)
Impulsive/ Impatient	--	--	--	--	1.00 <.001 (146)	-.26* .002 (146)	.05 .729 (55)	-.01 .153 (91)

\*Correlations are significant at the .05 level (two-tailed)  
*Note.* MC refers to Measured Control.

correlation between SAC and SES for the high measured control group was  $r(55) = .29, p < .033$  and for the low measured control group the correlation was  $r(91) = .31, p < .002$ . The Fisher z-test of independent correlations showed that there was no significant difference between SAC and SES for participants with low levels of measured control versus those with high levels of measured control ( $z = 0.161, p < .010$ ). Thus, hypothesis three was not confirmed. Additional analyses indicated that there was no significant difference between SAC means for the two groups ( $F(1,144) = 1.50, p = .223$ ). However, there was a significant difference between SES means for the two groups ( $F(1,144) = 26.53, p < .001$ ).

Self-efficacy was not significantly related to total aggression ( $r(146) = -.12, p = .155$ ), physical aggression ( $r(146) = -.08, p = .334$ ), or verbal aggression ( $r(146) = .02, p < .800$ ). However, self-efficacy was significantly and inversely related to impulsive/impatient aggression ( $r(146) = -.26, p = .002$ ). Thus, only one of the four tests of hypothesis four was supported.

### Discussion

*Hypothesis One.* Previous research has found that people who possess high self-awareness are less likely to be aggressive (Baron & Richardson, 1994). However, evidence has been found that indicates that people who are more self-aware possess the knowledge about their emotional strengths and weaknesses that is necessary to recognize and diffuse or avoid situations or triggers that could lead to negative feelings and the possibility of aggressiveness (Berkowitz, et al., 1968). In the present study, total aggression was found to be significantly related to self-awareness of control levels but directly rather than inversely.

When considered separately, both physical and verbal aggression (but not impulsive/impatient aggression) were directly related to self-awareness.

It is possible that physical and verbal aggression are not always dysfunctional. Atkins, Stoff, Osborne, and Brown (1993) defined three categories of aggression; instrumental aggression, hostile aggression that has instrumental value, and hostile aggression that has no instrumental value. A corporate executive who is very assertive may display instrumental aggression. A National Football League player who is physically aggressive is likely to display hostile aggression that has instrumental value (winning games). These two people may be aware of the control they have (in their professions, at least) because they both do very well in their chosen professions. These two professionals may also have strong senses of self-efficacy, which has been previously found to be positively correlated with aggression (Anderson & Bushman, 2002).

Perhaps only dysfunctional or hostile aggression is indicative of lower self-awareness of control levels. Check, and Dyck (1986) studied people with Type A personalities and found that they tended to be quicker to resort to hostile aggression, particularly when they perceived a loss of control. Burger (1992) and Megargee (1966) have also presented evidence that suggests that overtly aggressive people have less perceived control.

If a questionnaire that only measures dysfunctional aggression had been administered, the results may have supported that aggression and self-awareness are inversely related. The AI includes items that measured both instrumental and hostile aggression throughout (Gladue, 1991). However, the impulsive/impatient subscale contains

almost exclusively items that fall into the realm of hostile aggression. This may explain why only this subscale correlated with self-awareness in the expected direction.

*Hypothesis Two.* It was predicted that participants who were more self-aware of their own control levels would also display higher levels of self-efficacy. A significant relationship was found. There was a strong positive relationship between self-awareness of control and self-efficacy. Skinner (1996) defined self-efficacy as intentionally exerting efforts to achieve desired outcomes and feeling the effectiveness of those efforts. People who have experienced a greater number of successful outcomes and are clearly aware of this fact may have more positive views of their abilities than those who have not experienced as much success, even if these successes were due to factors that had nothing to do with control (e.g., coincidence).

*Hypothesis Three.* It had also been hypothesized that participants who score high in measured control would, as a group, display a higher correlation between self-awareness of control levels and self-efficacy than those low in measured control. There was a significant relationship between self-awareness of control levels and self-efficacy in the “high” and “low” groups, but the two correlations did not differ significantly. These findings expand on and are consistent with findings from previous studies that have found perceived control levels to be strongly positively correlated with self-efficacy (Ajzen, 2002). Evidently self-awareness of control rather than merely measured control predicts self-efficacy.

*Hypothesis Four.* Finally, it had been predicted that self-efficacy would be inversely related to aggression. Only impulsive/impatient aggression followed this predication. Total aggression was not significantly related to self-efficacy. Neither were physical or verbal aggression. These results would again follow the reasoning that dysfunctional



aggressiveness is more indicative of decreased self-efficacy. Perhaps impulsive and impatient displays of aggression are less likely to be constructive than verbal or physical aggression. These findings may indicate that people who believe strongly in their capabilities to handle themselves effectively in challenging situations will be less likely to react in a counterproductive manner. In other words, people who score high in self-efficacy may still exhibit aggressiveness when they feel that it is required, but it may be constructive aggression rather than inappropriate aggressiveness (Check & Dyck, 1986). They may be more likely to be verbally assertive and stand their ground rather than to start a physical or verbal dispute.

#### *Additional Findings*

The mean intraindividual correlation between measured and expressed control levels was low, indicating that participants failed to show high self-awareness of their control levels. However, the correlations ranged from being rather high and negative to extremely high and positive. These findings follow predictions in that it was expected that there would be a wide variability in levels of self-awareness among participants. The hypotheses of this study rested on the assumption that some participants would be very self-aware while others would not be self-aware. This range in scores was greater than the range in scores for measured and expressed values previously reported by Nickels and Renzaglia (1958). Nickels and Renzaglia found that most participants demonstrated a high positive relationship between measured and expressed values. The range for intraindividual correlations between the Study of Values scale (SV) and a definitional ratings sheet (DR) of values was -.44 to .83 and the range for intraindividual correlations between the SV and an occupational

ratings sheet (OR) was  $-.54$  to  $.86$ . However, the relationship was not strong enough to suggest that the two were interchangeable (Nickels & Renzaglia, 1958).

Nickels and Renzaglia (1958) also found that when participants were divided into "high religious" and "low religious" groups the former group scored significantly lower on self-awareness of values than the latter group did. Findings in the current study also indicated a lower relationship between measured and expressed levels of control for the "high control" group than for the "low control" group. However, the relationship was not significant. Nickels & Renzaglia (1958) had suggested that their findings might have been due to the fact that the highly religious participants did not represent a homogeneous population and that the members of this group were in the minority. The number of participants that were considered to be high in measured control in the present study was significantly lower than the number of participants who were low in measured control (55 vs. 91). This may have influenced the results.

Aggression was correlated with self-efficacy for the high as well as low measured control groups. Interestingly, verbal aggression was the only type of aggression that was significantly correlated with self-efficacy when scores were grouped in this manner. These findings could again have been affected by the small number of participants in each of the two groups. Perhaps larger group sizes would have yielded different and more reliable results.

### *Limitations*

There are some potential shortcomings in the present study. The most significant of these is that the sample population will be made up entirely of university students.

Therefore, most of the participants likely perceive themselves as having at least some influence over outcomes in their lives as a result of being accepted into university.

University students, as a group, are also unlikely to be very dysfunctionally aggressive. Those who do have aggressive tendencies will have had to develop effective methods of controlling those tendencies in order to succeed academically and cope effectively with the stress that accompanies such success.

The significant correlations were low to moderate in most cases. This indicated that a large amount of variance was unaccounted for by the variables included in this study.

#### *Future Research*

Perhaps stronger results would be found if this study were to be conducted with a more diverse population. If a population with more variable life experiences were to participate levels of control, aggression, and self-awareness may vary to a greater degree.

It may also be the case that self-awareness of something other than control levels would be a better predictor of aggressiveness. Previous research has found relationships between aggression and various emotions such as shame, guilt, and frustration (Baron & Richardson, 1994; Bell & Barron, 1990; Dollard et al., 1939; Gottfredson & Hirschi, 1993; Tangney et al., 1992). Perhaps people's awareness of what triggers these moods and how they manifest themselves would be related to aggressiveness. People who are more aware of the onset of these emotions and are aware of how they will react to them may be better able to repress their aggressive tendencies and/or remove themselves from the situation that is causing them to feel these negative emotions.

Future studies may also find more significant results if a different measure of aggression was utilized, one which was comprised of items that solely measured

dysfunctional aggression. Instruments such as the AI (Gladue, 1991) include items that may be perceived as relating to assertiveness that is functional for succeeding in aspects of life, such as one's academic or professional career. People who are highly self-aware of their own levels of control may know that they are exhibiting assertiveness but feel that it is very appropriate and acceptable.

The insight that this study offers into the relationship between self-awareness of control and different types of aggression is important. The findings suggest that self-awareness of control is inversely correlated with the more dysfunctional types of aggression. People who are highly self-aware of their levels of control may still use certain types of aggressive tactics when these tactics will aid in the achievement of goals. For instance, people who are highly aware of their control levels may still be very assertive in their careers. The findings of this study also help to reconfirm the important role that various types of perceived control play in our lives. Additionally, the correlation between measured control and self-efficacy was moderate, thus reconfirming the findings of previous research indicating that the effects of these two variables are additive rather than multiplicative (Ajzen, 2002; Parker, 1993). Future research could re-examine the relationship between self-awareness of control levels and aggression in participants who exhibit functional aggressiveness compared to participants who exhibit dysfunctional aggressiveness.

The strong relationship between self-efficacy and self-awareness of control suggests that people who are more aware of their own levels of control may feel more competent in dealing with life events. Basically, knowing oneself better is related to feeling more confident in one's ability to handle the challenges that life presents. This relationship was

show to exist for people who had low levels of measured control as well as high levels of measured control.

Hopefully the findings of this study will provide valuable information about the variability in people's levels of self-awareness and how self-awareness is related to their abilities to control their aggressive tendencies. Further research into the relationship between self-awareness of control as related to both aggression and self-efficacy is needed.

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## APPENDIX A

This questionnaire consists of items describing how you interact with other people or how you typically respond in a variety of situations. For each statement please select the response which applied BEST to YOU. Using the following rating scale select the response which applies BEST to YOU by circling the MOST appropriate number for each statement according to the following code,

- 1 = Does NOT apply AT ALL to me  
 2 = Applies SOMEWHAT to me  
 3 = Applies FAIRLY WELL to me  
 4 = Applies WELL to me  
 5 = Applies EXACTLY to me

1. I enjoy working with my hands doing repetitive tasks.  
1 2 3 4 5
2. I admire people who can walk away from a fight or argument.  
1 2 3 4 5
3. When a person is unfair to me I get angry and protest.  
1 2 3 4 5
4. When a person tries to "cut ahead" of me in a line, I firmly tell them not to do so.  
1 2 3 4 5
5. Whenever I have trouble understanding a problem, I ask others for advice.  
1 2 3 4 5
6. When a person criticizes me, I tend to answer back and protest.  
1 2 3 4 5
7. When a person tries to boss me around, I resist strongly.  
1 2 3 4 5
8. I think it is okay to make trouble for an annoying person.  
1 2 3 4 5
9. I get into fights with other people.  
1 2 3 4 5
10. When a person criticizes or negatively comments on my clothing or hair, I tell them it is none of their business.  
1 2 3 4 5
11. I really admire persons who know how to fight with their fists or body (not using any weapons).  
1 2 3 4 5
12. When another person hassles or shoves me, I try to give them a good shove or punch.  
1 2 3 4 5
13. When another person picks a fight with me, I fight back.  
1 2 3 4 5
14. I prefer to listen to rock-and-roll instead classical music.  
1 2 3 4 5
15. I become easily impatient and irritable if I have to wait.  
1 2 3 4 5

16. When another person is mean or nasty to me, I try to get even with them.  
1 2 3 4 5
17. Whenever someone is being unpleasant, I think it is better to be quiet than to make a fuss.  
1 2 3 4 5
18. Others say that I lose patience easily.  
1 2 3 4 5
19. I consider myself to be an authority figure for some people.  
1 2 3 4 5
20. More often than others, I seem to do things that I regret later.  
1 2 3 4 5
21. If a person insults me, I insult them back.  
1 2 3 4 5
22. I prefer to get out of the way and stay out of trouble whenever somebody is hassling me.  
1 2 3 4 5
23. When I am on bad terms with a person, it usually ends up in a fight.  
1 2 3 4 5
24. I become easily impatient if I have to keep doing the same thing for a long time.  
1 2 3 4 5
25. It often happens that I act too hastily.  
1 2 3 4 5
26. Whenever I build something new, I read the instruction booklet before doing anything.  
1 2 3 4 5
27. I really admire persons who know how to fight with weapons.  
1 2 3 4 5
28. I often act before I have the time to think.  
1 2 3 4 5
29. When I am very angry with someone, I yell at them.  
1 2 3 4 5
30. When I have to make up my mind, I usually do it quickly.  
1 2 3 4 5

## APPENDIX B

This questionnaire consists of items describing possible perceptions you may have of yourself, others, and life in general. Please respond to each of the statements below by indicating the extent to which that statement describes your beliefs. For each statement circle the number that best describes your feelings.

- 1 = Always true
- 2 = Often true
- 3 = Sometimes true
- 4 = Rarely true
- 5 = Never true

1. I can make things happen easily.  
1 2 3 4 5
2. Getting what you want is a matter of knowing the right people.  
1 2 3 4 5
3. My behaviour is dictated by the demands of society.  
1 2 3 4 5
4. If I just keep trying, I can overcome any obstacle.  
1 2 3 4 5
5. I can succeed with God's help.  
1 2 3 4 5
6. I find that luck plays a bigger role in my life than my ability.  
1 2 3 4 5
7. If nothing happens, I go out and make it happen.  
1 2 3 4 5
8. I am solely responsible for the outcomes in my life.  
1 2 3 4 5
9. I rely on God to help me control my life.  
1 2 3 4 5
10. Regardless of the obstacles, I refuse to quit trying.  
1 2 3 4 5
11. My success is a matter of luck.  
1 2 3 4 5
12. Getting what you want is a matter of being in the right place at the right time.  
1 2 3 4 5
13. I am able to control effectively the behaviour of others.  
1 2 3 4 5
14. If I need help, I know that God is there for me.  
1 2 3 4 5
15. I feel that other people have more control over my life than I do.  
1 2 3 4 5

16. There is little that I can do to change my destiny.  
1 2 3 4 5
17. I feel that I control my life as much as is humanly possible.  
1 2 3 4 5
18. God rewards me if I obey his laws.  
1 2 3 4 5
19. I am not the master of my own fate.  
1 2 3 4 5
20. I continue to strive for a goal long after others would have given up.  
1 2 3 4 5
21. Most of the things in my life I just can't control.  
1 2 3 4 5
22. God helps me control my life.  
1 2 3 4 5
23. I have more control over my life than other people have over theirs.  
1 2 3 4 5
24. I actively strive to make things happen for myself.  
1 2 3 4 5
25. Other people hinder my ability to direct my life.  
1 2 3 4 5
26. What happens to me is a matter of good or bad fortune.  
1 2 3 4 5
27. When something stands in my way, I go around it.  
1 2 3 4 5
28. I can be whatever I want to be.  
1 2 3 4 5
29. I know how to get what I want from others.  
1 2 3 4 5
30. Fate can be blamed for my failures.  
1 2 3 4 5
31. With God's help, I can be whatever I want to be.  
1 2 3 4 5
32. I am the victim of circumstances beyond my control.  
1 2 3 4 5
33. I can control my own thoughts.  
1 2 3 4 5
34. There is nothing that happens to me that I don't control.  
1 2 3 4 5
35. Whenever I run up against some obstacle, I strive even harder to overcome it and reach my goal.  
1 2 3 4 5
36. By placing my life in God's hands, I can accomplish anything.  
1 2 3 4 5
37. I am at the mercy of my physical impulses.  
1 2 3 4 5



38. In this life, what happens to me is determined by my fate.

1 2 3 4 5

39. My actions are a result of God working through me.

1 2 3 4 5

40. I am a victim of social forces.

1 2 3 4 5

41. Controlling my life involves mind over matter.

1 2 3 4 5

42. When I want something, I assert myself in order to get it.

1 2 3 4 5

43. The unconscious mind, over which I have no control, directs my life.

1 2 3 4 5

44. If I really want something, I pray to God to bring it to me.

1 2 3 4 5

45. I am not really in control of the outcome in my life.

1 2 3 4 5

## APPENDIX C

Please read each statement. Where there is a blank, decide what your normal or usual attitude, feeling of behaviour would be.

- 1 = Rarely (less than 10% of the time)  
 2 = Occasionally (about 30% of the time)  
 3 = Sometimes (about half of the time)  
 4 = Frequently (about 70% of the time)  
 5 = Usually (more than 90% of the time)

1. When faced with a problem I \_\_\_\_ try to forget it.  
1 2 3 4 5
2. I \_\_\_\_ need frequent encouragement from others for me to keep working at a difficult task.  
1 2 3 4 5
3. I \_\_\_\_ like jobs where I can make decisions and be responsible for my own work.  
1 2 3 4 5
4. I \_\_\_\_ change my opinion when someone I admire disagrees with me.  
1 2 3 4 5
5. If I want something I \_\_\_\_ work hard to get it.  
1 2 3 4 5
6. I \_\_\_\_ prefer to learn the facts about something from someone else rather than have to dig them out myself.  
1 2 3 4 5
7. I \_\_\_\_ will accept jobs that require me to supervise others.  
1 2 3 4 5
8. I \_\_\_\_ have a hard time saying "no" when someone tries to sell me something I don't want.  
1 2 3 4 5
9. I \_\_\_\_ like to have a say in any decisions made by any group I'm in.  
1 2 3 4 5
10. I \_\_\_\_ consider the different sides of an issue before making any decisions.  
1 2 3 4 5
11. What other people think \_\_\_\_ has a great influence on my behaviour.  
1 2 3 4 5
12. Whenever something good happens to me I \_\_\_\_ feel it is because I've earned it.  
1 2 3 4 5
13. I \_\_\_\_ enjoy being in a position of leadership.  
1 2 3 4 5
14. I \_\_\_\_ need someone to praise my work before I am satisfied with what I've done.  
1 2 3 4 5
15. I \_\_\_\_ am sure enough of my opinions and try to influence others.  
1 2 3 4 5

16. When something is going to affect me I \_\_\_\_ learn as much about it as I can.  
1 2 3 4 5
17. I \_\_\_\_ decide to do things on the spur of the moment.  
1 2 3 4 5
18. For me, knowing I've done something well is \_\_\_\_ more important than being praised  
by someone else.  
1 2 3 4 5
19. I \_\_\_\_ let other people's demands keep me from doing things I want to do.  
1 2 3 4 5
20. I \_\_\_\_ stick to my opinions when someone disagrees with me.  
1 2 3 4 5
21. I \_\_\_\_ do what I feel like doing, not what other people think I ought to do.  
1 2 3 4 5
22. I \_\_\_\_ get discouraged when doing something that takes a long time to achieve results.  
1 2 3 4 5
23. When part of a group I \_\_\_\_ prefer to let other people make all the decisions.  
1 2 3 4 5
24. When I have a problem I \_\_\_\_ follow the advice of friends or relatives.  
1 2 3 4 5
25. I \_\_\_\_ enjoy trying to do difficult tasks more than I enjoy trying to do easy tasks.  
1 2 3 4 5
26. I \_\_\_\_ prefer situations where I can depend on someone else's ability rather than just my  
own.  
1 2 3 4 5
27. Having someone important tell me I did a good job is \_\_\_\_ more important to me than  
feeling I've done a good job.  
1 2 3 4 5
28. When I'm involved in something I \_\_\_\_ try to find out all I can about what is going on  
even when someone else is in charge.  
1 2 3 4 5

## APPENDIX D

Please read each statement carefully. Then decide how much each statement applies to you and circle the appropriate number based on the code provided.

1. I prefer a job where I have a lot of control over what I do and when I do it.  
DOES NOT apply to me at all 1 2 3 4 5 6 7 ALWAYS applies to me
2. I enjoy political participation because I want to have as much of a say in running government as possible.  
DOES NOT apply to me at all 1 2 3 4 5 6 7 ALWAYS applies to me
3. I try to avoid situations where someone else tells me what to do.  
DOES NOT apply to me at all 1 2 3 4 5 6 7 ALWAYS applies to me
4. I would prefer to be a leader rather than a follower.  
DOES NOT apply to me at all 1 2 3 4 5 6 7 ALWAYS applies to me
5. I enjoy being able to influence the actions of others.  
DOES NOT apply to me at all 1 2 3 4 5 6 7 ALWAYS applies to me
6. I am careful to check everything on an automobile before I leave for a long trip.  
DOES NOT apply to me at all 1 2 3 4 5 6 7 ALWAYS applies to me
7. Others usually know what is best for me.  
DOES NOT apply to me at all 1 2 3 4 5 6 7 ALWAYS applies to me
8. I enjoy making my own decisions.  
DOES NOT apply to me at all 1 2 3 4 5 6 7 ALWAYS applies to me
9. I enjoy having control over my own destiny.  
DOES NOT apply to me at all 1 2 3 4 5 6 7 ALWAYS applies to me
10. I would rather someone else took over the leadership role when I'm involved in a group project.  
DOES NOT apply to me at all 1 2 3 4 5 6 7 ALWAYS applies to me
11. I consider myself to be generally more capable of handling situations than others are.  
DOES NOT apply to me at all 1 2 3 4 5 6 7 ALWAYS applies to me
12. I'd rather run my own business and make my own mistakes than listen to someone else's orders.  
DOES NOT apply to me at all 1 2 3 4 5 6 7 ALWAYS applies to me

13. I like to get a good idea of what a job is all about before I begin.  
DOES NOT apply to me at all 1 2 3 4 5 6 7 ALWAYS applies to me
14. When I see a problem I prefer to do something about it rather than sit by and let it continue.  
DOES NOT apply to me at all 1 2 3 4 5 6 7 ALWAYS applies to me
15. When it comes to orders, I would rather give them than receive them.  
DOES NOT apply to me at all 1 2 3 4 5 6 7 ALWAYS applies to me
16. I wish I could push many of life's daily decisions off on someone else.  
DOES NOT apply to me at all 1 2 3 4 5 6 7 ALWAYS applies to me
17. When driving, I try to avoid putting myself in a situation where I could be hurt by someone else's mistake.  
DOES NOT apply to me at all 1 2 3 4 5 6 7 ALWAYS applies to me
18. I prefer to avoid situations where someone else has to tell me what it is I should be doing.  
DOES NOT apply to me at all 1 2 3 4 5 6 7 ALWAYS applies to me
19. There are many situations in which I would prefer only one choice rather than having to make a decision.  
DOES NOT apply to me at all 1 2 3 4 5 6 7 ALWAYS applies to me
20. I like to wait and see if someone else is going to solve a problem so that I don't have to be bothered by it.  
DOES NOT apply to me at all 1 2 3 4 5 6 7 ALWAYS applies to me

## APPENDIX E

Please read each of the following statements carefully and indicate how much the statement resembles your own personality. Please respond to each statement by circling the appropriate number based on the following code.

4 = A LOT like me  
3 = SOMEWHAT like me  
2 = SLIGHTLY like me  
1 = NOT AT ALL like me

1. When things don't go according to my plans, my motto is, "Where there's a will, there's a way."  
1 2 3 4
2. When faced with a bad situation, I do what I can do to change it for the better.  
1 2 3 4
3. Even when I feel I have too much to do, I find a way to get it all done.  
1 2 3 4
4. When I encounter problems, I don't give up until I solve them.  
1 2 3 4
5. I rarely give up on something I am doing, even when things get tough.  
1 2 3 4
6. I find I usually learn something meaningful from a difficult situation.  
1 2 3 4
7. When I am faced with a bad situation, it helps to find a different way of looking at things.  
1 2 3 4
8. Even when everything seems to be going wrong, I can usually find a bright side to the situation.  
1 2 3 4
9. I can find something positive, even in the worst situations.  
1 2 3 4
10. When my expectations are not being met, I lower my expectations.  
1 2 3 4

11. To avoid disappointments, I don't set my goals too high.

1 2 3 4

12. I feel relieved when I let go of some of my responsibilities.

1 2 3 4

13. I often remind myself that I can't do everything.

1 2 3 4

14. When I can't get what I want, I assume my goals must be unrealistic.

1 2 3 4

## APPENDIX F

Below you will find a series of statements. Please think of one important decision that you have recently had to make. Then read each statement carefully and respond to it by expressing the extent to which you agree or disagree that the statement applies to you with regards to that decision. For all items, a response from 1 to 7 is required. Circle the number that best reflects your belief.

1. The will of a higher power affects the outcome of this decision.  
strongly disagree   1   2   3   4   5   6   7   strongly agree
2. I know that a higher power will arrange for my ultimate well-being in this decision.  
strongly disagree   1   2   3   4   5   6   7   strongly agree
3. There is no point trying to learn from some higher power what decision I should make.  
strongly disagree   1   2   3   4   5   6   7   strongly agree
4. In some sense, my decision doesn't matter, since there is no use fighting fate.  
strongly disagree   1   2   3   4   5   6   7   strongly agree
5. Some higher power will decide the "goodness" or "badness" of the decision outcome.  
strongly disagree   1   2   3   4   5   6   7   strongly agree
6. I would not look to a higher power for guidance.  
strongly disagree   1   2   3   4   5   6   7   strongly agree
7. In this decision I would ask friends or relatives for help.  
strongly disagree   1   2   3   4   5   6   7   strongly agree
8. I would not trust other people to make this decision for me.  
strongly disagree   1   2   3   4   5   6   7   strongly agree
9. It wouldn't be that important for me to know that others will support me in this decision.



strongly disagree 1 2 3 4 5 6 7 strongly agree

10. I can rely on other people to help me.

strongly disagree 1 2 3 4 5 6 7 strongly agree

11. By asking others for advice, I know the final choice won't be a bad one.

strongly disagree 1 2 3 4 5 6 7 strongly agree

12. I would try to fit in by doing what others would do.

strongly disagree 1 2 3 4 5 6 7 strongly agree

13. Meeting other people's expectations would make the decision a good one for me.

strongly disagree 1 2 3 4 5 6 7 strongly agree

14. I would try to get along with others by trying to anticipate what they want or need.

strongly disagree 1 2 3 4 5 6 7 strongly agree

15. I would not worry about anticipating anyone else's expectations.

strongly disagree 1 2 3 4 5 6 7 strongly agree

16. Good and bad decisions even out in the end.

strongly disagree 1 2 3 4 5 6 7 strongly agree

17. I trust luck to make the right decision for me.

strongly disagree 1 2 3 4 5 6 7 strongly agree

18. Luck would probably determine the best choice for me.

strongly disagree 1 2 3 4 5 6 7 strongly agree

## APPENDIX G

INSTRUCTIONS: Please indicate how closely each of the following personality descriptions resembles your own personality.

Circle the most appropriate number below each personality description based on the following code:

- 5 = VERY MUCH like me
- 4 = SOMEWHAT like me
- 3 = SLIGHTLY like me
- 2 = SOMEWHAT unlike me
- 1 = VERY MUCH unlike me

PERSONALITY A: These people believe that the vast majority of outcomes in their lives depend on what they themselves do. Such people are convinced that (a) it is through the ability, effort, and actions that events turn out as they do in their lives and (b) the only "luck" that exists is the luck they create or produce for themselves. \_\_

1 2 3 4 5

PERSONALITY B: These people believe that the vast majority of outcomes in their lives depend on what others do. Such people are convinced that (a) it is through the ability, effort, and actions of others that events happen as they do in their lives and (b) the only part they themselves play is to follow the advice of others or at least allow others to take responsibility for important decisions.

1 2 3 4 5

PERSONALITY C: These people try to influence the vast majority of outcomes in their lives. Such people are convinced that (a) it is through their own assertiveness and control of events that desired outcomes occur in their lives and (b) they will do best to avoid unwanted outcomes by manipulating them.

1 2 3 4 5

PERSONALITY D: These people rely on fate or a higher power to influence important outcomes in their lives. Such people are convinced that (a) it is through reliance on cosmic and/or spiritual forces that life events work out for the best and (b) they will do best to obtain support and guidance in their lives by relinquishing worldly control.

1 2 3 4 5

PERSONALITY E: These people believe that the best approach to life is to change the external world to better fit their own preferences, needs, and desires. Such people are convinced that (a) it is through reshaping the world that life improves for them and (b) they will do their best to alter the situations they are in to suit their personal goals.

1 2 3 4 5

PERSONALITY F: These people believe that the best approach to life is to change themselves to better fit the external world. Such people are convinced that (a) it is through adapting to the world that life improves for them and (b) they will do best to alter their personal goals to suit the situations they are in.

1 2 3 4 5

## APPENDIX H

## Inventory H

This questionnaire is a series of statements about your personal attitudes and traits. Each statement represents a commonly held belief. Read each statement and decide to what extent it describes you. There are no right or wrong answers. You will probably agree with some statements and disagree with others. Please follow the code below and indicate your own personal feelings about each statement by circling the appropriate number. Please be truthful and describe yourself as you really are, not as you would like to be.

- 1 = Strongly disagree  
 2 = Moderately disagree  
 3 = Neither disagree nor agree  
 4 = Moderately agree  
 5 = Strongly agree

1. I like to grow house plants.  
1 2 3 4 5
2. When I make plans, I am certain that I can make them work.  
1 2 3 4 5
3. One of my problems is that I cannot get down to work when I should.  
1 2 3 4 5
4. If I can't do a job the first time, I keep trying until I can.  
1 2 3 4 5
5. Heredity plays a major role in determining one's personality.  
1 2 3 4 5
6. It is difficult for me to make new friends.  
1 2 3 4 5
7. When I set important goals for myself, I rarely achieve them.  
1 2 3 4 5
8. I give up on things before completing them.  
1 2 3 4 5
9. I like to cook.  
1 2 3 4 5
10. If I see someone I would like to meet, I go to that person instead of waiting for them to come to me.  
1 2 3 4 5
11. I avoid facing difficulties.  
1 2 3 4 5
12. If something looks too complicated, I will not even bother to try it.  
1 2 3 4 5
13. There is some good in everybody.  
1 2 3 4 5

14. If I meet someone interesting who is very hard to make friends with, I'll stop trying to make friends with that person.  
1 2 3 4 5
15. When I have something unpleasant to do, I'll stick to it until I finish it.  
1 2 3 4 5
16. When I decide to do something, I'll go right to work on it.  
1 2 3 4 5
17. I like science.  
1 2 3 4 5
18. When I try to learn something new, I soon give up if I am not initially successful.  
1 2 3 4 5
19. When I'm trying to become friends with someone who seems uninterested at first, I don't give up very easily.  
1 2 3 4 5
20. When unexpected problems occur, I don't handle them well.  
1 2 3 4 5
21. If I were an artist, I would like to draw children.  
1 2 3 4 5
22. I avoid trying to learn new things when they look too difficult for me.  
1 2 3 4 5
23. Failure just makes me try harder.  
1 2 3 4 5
24. I do not handle myself well in social gatherings.  
1 2 3 4 5
25. I like very much to ride horses.  
1 2 3 4 5
26. I feel insecure about my ability to do things.  
1 2 3 4 5
27. I am a self-reliant person.  
1 2 3 4 5
28. I have acquired my friends through my personal abilities at making friends.  
1 2 3 4 5
29. I give up easily.  
1 2 3 4 5
30. I do not seem capable of dealing with most problems that come up in my life.  
1 2 3 4 5