

# Effect of Extrinsic Motivation on Adversity Quotient in Patients With HIV & AIDS

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**Abstract:** Patients with HIV & AIDS may have various types of psychological response, so it is a very difficult situation for them. Difficulty can be measured with Adversity Quotient. So nurses are expected to give extrinsic motivation to bring back the quality of life for patients with HIV & AIDS. The objective of this study was to identify the presence of the effect of extrinsic motivation on Adversity Quotient in patients with HIV & AIDS in the Infectious Disease Intermediary Treatment Unit, Dr Soetomo Hospital, Surabaya. This study used a quasi-experimental design. The population was taken from ambulatory patients. Samples were taken using purposive sampling, in which the patients involved were those who only met the inclusion criteria, with the total sample of 16 individuals. The independent variable in this study was extrinsic motivation, which was presenting as social support, and the dependent variable was Adversity Quotient. Data were collected using questionnaires and interviews, and were subsequently analyzed using the Wilcoxon Signed Rank Test and Mann-Whitney Test with a significance value of 0.05. Results revealed that the Adversity Quotient of the patient indicated the effect of extrinsic motivation on Adversity Quotient of patients with HIV & AIDS ( $p = 0.017$ ). The extrinsic motivation was found to have an effect on control response ( $p = 0.027$ ) and origin response ( $p = 0.028$ ), while there was no influence on ownership response ( $p = 0.334$ ), reach ( $p = 0.129$ ), and endurance ( $p = 0.161$ ). The extrinsic motivation with intervention of social support has a positive effect on the improvement of Adversity Quotient in patients with HIV & AIDS. The level of Adversity Quotient in these patients may have an effect on the attitude in dealing with the recovery of their disease. Further study should measure the effectiveness of Adversity Quotient training on acceptance response in patients with HIV & AIDS.

## 1 INTRODUCTION

Generally, AIDS patients are in a situation that makes them feel that death is coming in the near future and this situation they anticipate specifically. When an individual is declared as HIV-infected, they will show changes in psychosocial character (living in stress, depression, lack of social support and behavioural changes) (Nasronudin, 2005). Psychological responses to psychological adaptations depend on three important factors, including biological factors (symptoms of the course of the disease), psychological factors (personality and problem-solving skills and interpersonal support) and sociocultural factors (social stigma attached to HIV infection) (Muma, 1997).

Psychological systems emphasize the effects of psychodynamic factors, motivation and personality on the experience of illness and reactions to illness (Tandiono, 2007). Transpersonal psychotherapy (including motivation) is an option for those who feel near-death, isolation, or other psychological problems so that they will experience harmony internally and externally (Maramis, 2005). High motivation can influence behavior through increased knowledge and skills (Colquite, 2000 in Niniek, 2004). Individuals who have Adversity Quotient (AQ) are highly emotionally and physically flexible enough to face adversity (Stoltz, 1997). Adversity Quotient (AQ) has three forms of definition. First, AQ is a new conceptual framework for understanding and improving all facets of success. Second, AQ is a measure of knowing one's response

to adversity. During this time, these unconscious patterns are actually already owned by each individual. Finally, AQ is a set of tools that have a scientific basis for improving individual responses to deal with adversity (Stoltz, 1997). According to Stoltz (1997), AQ consists of five dimensions: COORE which includes control, origin, ownership, reach and endurance. However, the effect of extrinsic motivation on Adversity Quotient on HIV and AIDS patients is unclear.

The prevalence of depression in patients with HIV & AIDS has doubled compared with the normal population. In treated patients, this figure is higher (about 40%). A longitudinal study found that CD4 + lymphocyte count decreased 38% more in HIV patients with depression than in the group of HIV patients without depression. The prevalence of depression increased from 15-27% in 36 months before the diagnosis of AIDS to 34% at 6 months before the diagnosis of AIDS and 43% at 6 months after the diagnosis (Tandiono, 2007).

Motivation has a major influence in the life of a person, whether extrinsic motivation, for example, parents, friends support etc, as well as intrinsic motivation, i.e. motivation that comes from within the individual themselves. In a state of deterioration only self-motivation in themselves can help to recover because humans have control over their health and well-being. The role of supporters and those around is merely a guide that helps restore natural and emotional balance (Santrock, 2002). Social support affects health and protects a person against the negative effects of severe stress (Nursalam, 2007). HIV & AIDS patients are directed to develop themselves with the transformation of awareness in order to manage their emotions independently so they can perform activities like healthy people to improve their quality of life. Based on the phenomenon that psychological and motivational conditions in people with HIV & AIDS cause different psychological responses, and also because the effect of extrinsic motivation on Adversity Quotient on HIV & AIDS patients has not yet been studied, this study was conducted to identify the effect of extrinsic motivation on Adversity Quotient in people with HIV & AIDS. Extrinsic motivation in the form of social support is needed by HIV & AIDS patients to accelerate the acceptance of the disease.

## 2 MATERIALS AND METHODS

This study used a quasi-experimental design by involving a control group in addition to the experimental group, which was carried out in the Infectious Disease Intermediate Treatment Unit, Dr. Soetomo Hospital, Surabaya, from June to July 2008. Samples were HIV/AIDS-infected patients treated in the Unit. The samples were chosen by purposive sampling method with inclusion criteria including HIV & AIDS patients receiving ARV treatment, confirmed as positively infected for 1-2 years, more than 20 years old, willing to participate in research and able to communicate and able to read and write.

Data collection in this study used questionnaires and interviews for primary data, while for secondary data collection was done by using the patients' medical records. Data obtained were processed and analyzed using Wilcoxon Signed Rank-Test test to determine the difference of pre-test and post-test on the dependent variable of Adversity Quotient of HIV & AIDS patients before and after intervention. The use of the MannWhitney statistical test analyzed the difference between Adversity Quotient between groups with extrinsic motivation (social support) and no extrinsic motivation. Statistical tests were performed using the SPSS program.

## 3 RESULTS AND DISCUSSION

### 3.1 Level of Adversity Quotient of HIV & AIDS Patients

The variables measured in this study were Adversity Quotient of patients according to Stoltz. Results questionnaires are presented in the table as follows:

Table 1 : Level of Adversity Quotient of HIV & AIDS patients in IDITU Clinic, Dr. Soetomo Hospital.

No	Adversity Quotient Intervention		Adversity Quotient Control		Adversity Quotient	
	Pre	Post	Pre	Post	Intervention	Control
					Post	Post
1	71	74	70	72	74	72
2	67	78	67	66	78	66
3	72	75	64	70	75	70
4	70	80	71	70	80	70
5	83	82	68	69	82	69
6	66	77	80	78	77	78
7	68	75	74	70	75	70
8	71	74	71	72	74	72
Mean	70,75	77	70,625	70,875	77	70,875
SD	5.33854	2.82843	4.83846	3.44083	2.82843	3.44083
	Uji Wilcoxon p = 0,017		Uji Wilcoxon p = 0,943		Uji MannWhitney p = 0,003	

The test results show the value (p) = 0.017. This significance value is less than 0.05, indicating the effect of extrinsic motivation on Adversity Quotient in HIV & AIDS patients.

### 3.2 Response of Control Dimension

The first dimension of Adversity Quotient is control, response of control dimension as table below.

Table 2 : Response of control dimension.

No	(Control) Intervention		(Control) Control		(Control)	
	Pre	Post	Pre	Post	Intervention	Control
					Post	Post
1	14	14	14	14	14	14
2	15	17	16	15	17	15
3	16	17	12	14	17	14
4	13	15	15	16	15	16
5	18	18	13	13	18	13
6	13	16	17	16	16	16
7	12	18	12	15	18	15
8	15	16	16	17	16	17
Mean	14,5	16,375	14,375	15,0	16,375	15,0
SD	1.92725	1.40789	1.92261	1.30931	1.40789	1.30931
	Uji Wilcoxon p = 0,027		Uji Wilcoxon p = 0,236		Uji MannWhitney p = 0,008	

Test results show the value (p) = 0.027. This significance value is less than 0.05, indicating the presence of the effect of extrinsic motivation on control responses in HIV & AIDS patients.

### 3.3 Response of Cause/ Origin Dimension

The second dimension of Adversity Quotient is cause dimension, response of cause/origin dimension as table below.

Table 3 : Response of cause/origin dimension

No	(Origin) Intervention		(Origin) Control		(Origin)	
	Pre	Post	Pre	Post	Intervention	Control
					Post	Post
1	16	17	16	15	17	15
2	14	18	15	16	18	16
3	18	20	19	15	20	15
4	16	21	16	17	21	17
5	21	20	14	15	20	15
6	12	15	20	19	15	19
7	17	18	19	18	18	18
8	18	19	12	11	19	11
Mean	16,5	18,5	16,375	15,75	18,5	15,75
SD	2.72554	1.92725	2.77424	2.43487	1.92725	2.43487
	Uji Wilcoxon p = 0,028		Uji Wilcoxon p = 0,366		Uji MannWhitney p = 0,028	

The test results show the value (p) = 0.028. This significance value is less than 0.05, indicating the presence of the effect of extrinsic motivation on the origin response in HIV & AIDS patients.

### 3.4 Response of Ownership Dimension

The third dimension of Adversity Quotient is ownership dimension, response of ownership dimension as table below.

Table 4 : Response of ownership dimension

No	(Ownership) Intervention		(Ownership) Control		(Ownership)	
	Pre	Post	Pre	Post	Intervention	Control
					Post	Post
1	17	19	18	19	19	19
2	18	18	17	17	18	17
3	19	18	15	15	18	15
4	17	19	16	15	19	15
5	15	15	18	17	15	17
6	16	17	19	18	17	18
7	17	16	16	14	16	14
8	16	16	18	20	16	20
Mean	16,875	17,25	17,125	16,875	17,25	16,875
SD	1.24642	1.48805	1.3562	2.10017	1.48805	2.10017
	Uji Wilcoxon		Uji Wilcoxon		Uji MannWhitney	

	p = 0,334	p = 0,589	p = 0,721
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Test results show the value (p) = 0.334. This significance value is greater than 0.05, indicating no effect of extrinsic motivation on ownership responses in HIV & AIDS patients.

### 3.5 Response of Reach Dimension

The fourth dimension of Adversity Quotient is reach dimension, response of reach dimension as table below.

Table 5 : Response of reach dimension

No	(Reach) Intervention		(Reach) Control		(Reach)	
	Pre	Post	Pre	Post	Intervention	Control
					Post	Post
1	9	9	6	7	9	7
2	11	12	5	5	12	5
3	7	9	6	6	9	6
4	8	10	9	8	10	8
5	11	10	7	8	10	8
6	10	11	7	7	11	7
7	7	7	6	4	7	4
8	9	9	9	9	9	9
Mean	9,0	9,625	6,875	6,75	9,625	6,75
SD	1,60357	1,50594	1,45774	1,66905	1,50594	1,66905
	Uji Wilcoxon p = 0,129		Uji Wilcoxon p = 0,705		Uji MannWhitney p = 0,003	

The test results show the value (p) = 0.129. This significance value is greater than 0.05, meaning there is no effect of extrinsic motivation on reach response in HIV & AIDS patients.

Table 1 shows the effect of extrinsic motivation on Adversity Quotient response in HIV & AIDS patients with significance (p) = 0.017. Quantitative results have been significant, but there were still respondents who have not made maximum efforts in overcoming difficult times since the diagnosis of HIV. This was indicated by patients who did not increase the value of Adversity Quotient. Stoltz (2004) suggests that Adversity Quotient is a snapshot of one's response habits to adversity, a consistent measure of the subconscious pattern that has been developed by individuals for many years. Adversity Quotient is a conceptual framework capable of predicting an individual's ability to overcome life's difficulties. The struggle to reach the

goal and struggle to face the existing obstacles is analogous to the journey up the mountain. Adversity Quotient is a conceptual framework that can predict which individuals are capable and unable of coping with life's difficulties.

Adversity Quotient is used to help individuals who have to bounce back from each setback and strengthen resistance to their illness. The existence of motivation, social support, and the opportunity to express feelings are able to push the patient toward a good level of health and provide much information related to their illness. This is especially desirable, especially for new patients, as reflected in the enthusiasm of new patients on given activities as well as demonstrated by a substantial increase in AQ in patients who have just been diagnosed.

Nasronudin (2005) states that people with HIV & AIDS have severe psychological adaptations due to positive results on blood samples. This greatly affects the patient's psychological psyche and affects the patient's immunity level. According to the theory of psychoneuroimmunology, as the foundation for the formation of Adversity Quotient, there is a significant effect of the patients' resistance on the course of the disease (increasing HIV virus results in CD4 decline).

Factors that are quite influential on the course of the disease in boosting immunity depends on the individual himself. The attitude of HIV & AIDS sufferers in facing the health condition in the future certainly will not be much different with the assessment of his fighting power. As an assessment of the ability or resilience in facing difficulties in the face of illness, Adversity Quotient includes an assessment of whether a person feels a useful person, has many abilities and beliefs to live a normal life even though they are infected with HIV, has resilience in the face of problems, and has control over an event that creates difficulties. This will have a great influence on the patient's immunity and immunity.

A person with a high level of Adversity Quotient will tend to have a positive attitude towards everything. In people with HIV & AIDS, this level of Adversity Quotient will have an effect on their attitude in dealing with the cure of their illness. A positive attitude towards the cure of their illness helps the patient to a more constructive coping and increasing expectations, with extrinsic motivation in the form of social support, assisting the patient in expressing feelings when first diagnosed, helping the patient to respect themselves and accept the condition sincerely, the importance of the patient to others and direct the patient to remain active in following

beneficial activities, and can be useful for others. This optimistic attitude will synergize all activities to improve the health of the patients themselves, regular visits, obedience in taking ARVs, and other activities that support healing. It turned out to be proved by the results of data analysis conducted in this study. The results show the existence of extrinsic motivation influence on Adversity Quotient in HIV AIDS patients.

Table 2 shows the effect of extrinsic motivation on the control response in HIV & AIDS patients, with significance ( $p$ ) = 0.027. These results indicate that the ability of the patient to reverse the difficulty and then turn into opportunity and change the sense of helplessness to empowerment still varies. However, the trend shows a relatively moderate value. The control response shows how a person controls an event that causes difficulties in their life. Control response in HIV & AIDS patients shows an improvement as seen in the patients' better feelings when doctors state the diagnosis, and the patient remains convinced that every disease has its own remedy and believes there is a way out of the problem.

The spirit to keep on fighting, even with positive HIV, is present after the provision of extrinsic motivation. Control begins with the understanding that anything can be done. Patients with high AQ feel higher control over their illness than patients with low AQ. As a result, the patient takes action that results in more control. Significance value of control response had ( $p$ ) = 0.027, indicating that people with HIV & AIDS have control over events when they were diagnosed. Welles (2000) says that people who have good control tend to have a high AQ. They do not blame others for their illness and have responsibility for what they did in the past. Finally, individuals who have a high AQ assume that the problem they face is in a small sphere and they are confident to deal with it.

Stolz (2004) argues that control is one of the most important origins in feelings, which is reinforced by Seligman's optimistic theory of optimism which takes account of the impact a person has on responding and handling adversity. Good self-control enables the patient to control themselves against adverse situations, both from illness or from the environment, including the stigma of society towards people with HIV. Good control can shape optimism in the face of adversity.

Table 3 shows the effect of extrinsic motivation on the origin dimension in HIV & AIDS patients, with significance ( $p$ ) = 0.028. Patients with low AQ tend to place undue guilt over the bad events that

occur. Low origin responses can stop feedback because of the constant burden of self-blame. Like critics, guilt and regret will be of little use. If guilt is too great it can be debilitating and deconstructive, destroying energy, hope, self esteem and the immune system.

This result gives an illustration of the degree of recognition of the patients that the self as the origin of a difficulty (current illness) experienced (expressed with guilt and regret). The sense of responsibility for the consequences of a difficulty was at a moderate level. Original response reveals who or what causes a difficulty. This variable has a link to guilt. Guilt has two important functions. First, if the guilt is of the right level, that feeling will cause a person to act towards improvement and help in a state of healing. Second, if the guilt leads to regret, it will cause a sense of destruction. Destructive guilt destroys hope, motivation and energy. The response of origin in HIV & AIDS patients increased, indicated by the guilt of the patients to the family and close friends due to HIV positive diagnosis. The origin response is a perception of the origin of the difficulty (starting from the beginning of HIV) until the patient is able to place guilt as constructive or destructive.

Table 4 shows there is no effect of extrinsic motivation on the dimension of ownership in people with HIV & AIDS. Although the average value showed an increase, the ( $p$ ) was 0.334. Stolz (2004) argues that the lower the level of recognition, the more likely it is not to recognize the consequences. The tendency to dismiss bad events or avoid responsibility is an unwelcome attitude.

Ownership responses reveal aspects of recognition of adversity. Patients with high AQ tend to acknowledge the consequences of difficulty, often able to remember the cause. Such a sense of responsibility forces them to act, making the patient improve their health level more. The significance value of ownership variable was ( $p$ ) = 0.334. From the results of this study it can be assumed that people with HIV & AIDS less recognize the cause of the arising difficulties, but there is still a sense of responsibility to overcome these conditions. The absence of influence on this dimension is due to the inability of the patient to affirm the importance of themselves to others. Response of ownership of HIV & AIDS is indicated in responsibility and acceptance of the disease suffered.

Table 5 shows the effect of extrinsic motivation on the reach dimension in HIV & AIDS patients. Although the mean score indicates an increase, the ( $p$ ) was 0.129, and the significance of the Mann-

Whitney test showed the significance difference of post-treatment group values and post-control group values with  $(p) = 0.003$ .

Stolz (2004) states that responses with low AQ will cause the difficulties to extend to other facets of life. Conversely, the range limitations will be even greater. These results illustrate the ability of HIV & AIDS patients to limit the adverse effects of the progression of their illness to other parts of their life at a moderate level. Reach describes the level of arising difficulties that reaches other parts of one's life. The significance value was 0.129, so it was assumed that people with HIV & AIDS responded to adversity in an unlimited and widespread way.

Response reach in patients is indicated by the family caring for the patient. On the other hand, the patient themselves feel that they themselves have troubled the others. Reach here covers the closeness of the patient with family and close friends. The patient will fall and drop if the family blames the patient for their illness being the result of their own fault.

Stoltz (2004) argues that a person with a high endurance response rate assumes that the cause of adversity is temporary, rapidly passes and less likely to occur, which means not significant. Extrinsic motivation has no effect on the endurance dimension because the difficult times experienced by HIV & AIDS patients are permanent. This is because the patient must consume drugs continuously and always keep the body condition so as not to decline.

## 4 CONCLUSIONS

Extrinsic motivation with social support interventions has a positive effect on Adversity Quotient improvement in HIV & AIDS patients. The level of Adversity Quotient of HIV & AIDS patients will have an effect on their attitude in dealing with the cure of their illness. HIV & AIDS patients who are extrinsically motivated will affect the control response to the disease. The responsiveness of the control dimension is influenced by the perception of control over the bad situations, both from oneself and the environment, and optimism in the face of adversity.

Extrinsic motivation positively affects the response of the origin dimension in HIV & AIDS patients. This dimensional response is influenced by feelings of guilt as constructive, supported by nurses who can provide feedback on their behavior. Patients with HIV & AIDS who had extrinsic motivation did not show any change in response of

ownership dimension. This ownership dimension response is influenced by the efforts of nurses in affirming the importance of the patient to others (family or friends).

Patients with HIV & AIDS who received extrinsic motivation showed no significant change in response to reach dimension and endurance dimensions. The response to reach is influenced by the impact of specific or extended difficulties, while the endurance response is affected by time in the face of adversity and the expectations in the face of adversity itself.

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