

International Journal of **Psychology** (IJP)

**Palliative Care Resilience: Adversity Quotient among Cancer
Patients in Nairobi and Nyeri Counties, Kenya**



Palliative Care Resilience: Adversity Quotient among Cancer Patients in Nairobi and Nyeri Counties, Kenya

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Abstract

Purpose: This study sought to find out the levels of Adversity Quotient among cancer patients attending palliative care in Nairobi and Nyeri Counties, Kenya.

Methodology: The study adopted a correlation research design. The target population were the cancer patients, attending treatment at the three palliative care units in Nairobi and Nyeri Counties. Systematic random sampling technique was used in the study to obtain a sample of 96 participants. Semi structured questionnaires were used to collect data. Data was analysed using both descriptive and inferential statistics, namely Pearson Moment Correlation Coefficient(r).

Findings: Results showed that the lowest adversity quotient level score attained by the respondents was 32, while the highest score was 93. The adversity quotients mean score was 68.98 ± 13.54 , signifying that the adversity quotient for the respondents was in the moderate level possibly because majority of them had been diagnosed with cancer between 1 to 2 years earlier hence may have still been overwhelmed by their illnesses and the subsequent cost in initiation of treatment and diet thus lowering their AQ to moderate levels.

Unique contribution to theory, practice and policy: Patients under palliative care could adopt group psychotherapy, including cognitive-behavioural, informational, non-behavioral, social support, and using unusual treatments such as music and art therapy to curb cancer. More cancer related programs enhancing patients AQ should be put in place by the counsellors in order to increase the patients AQ in the palliative care units from moderate level to high level of AQ in order to boost recovery outcomes.

Keywords: *Adversity Quotient, resilience, palliative care, Nyeri County Referral Hospital (CRH), Nairobi Hospice, Nyeri Hospice*

INTRODUCTION

The Adversity Quotient Theory was proposed by Paul Stoltz in 1997; it is a model of how a person responds to harsh conditions and his/her ability to overcome it. Adversity Quotient (AQ) is the science of human resilience (Stoltz, 2000). The AQ theory is broadly grounded in three areas of psychology, which include: the science of the mind and body interaction (psychoneuroimmunology), cognitive psychology (the science of the mind and performance interaction) and the science of the brain (neurophysiology). These three aspects are deemed to equally influence the development of AQ. A person's AQ is seen as inborn and is therefore assumed to have a hereditary predisposition. However according to Stoltz a person can enhance their AQ through systematic training procedures, which are likely to facilitate the long-term consolidation of the acquired skills.

According to Stoltz (2000), the AQ theory has four CORE dimensions that make up the tenets of the theory, namely; control, ownership, reach and endurance. Stoltz (2000) states that "control" is the degree to which a person believes that he/she can have influence what happens next in their life. It determines resilience, wellbeing, and persistence. It helps the individual to determine how much control they have over an adverse event. It is nearly impossible to measure actual control in a given situation. From the beginning, nothing happens without perception of control. Perceived control is therefore deemed to be much more important. People who respond to adversity as external, temporary and limited have positive helpful styles and are more likely to enjoy life's benefits. With perceived control, hope and action can be actualized while learned vulnerability can be overcome (Canivel, 2010). The differences between higher AQ and lower responses under this element are consequently diverse. Those with higher AQ's merely perceive greater control over life's events than those with lower AQ's do. Consequently, they take action which may include finding benefit in an adverse situation such as cancer, which may actually enhance recovery in itself.

Ownership dimension of AQ is the possibility that somebody will in fact do something to improve their circumstances, in spite of their prescribed responsibilities (Stoltz, 2000). It determines action, responsibility, accountability and commitment. It determines the extent to which the individual owns the outcome of the adversity. A high ownership score reflects increased ownership by the individual for their recovery outcomes, regardless of their cause. A lower ownership score on the other hand reflects less ownership on their recovery outcomes, regardless of their cause. Canivel (2010) observes that people with high AQ have the ability to enhance their accountability to control, empower and motivate action; while those with low AQ disown the problem causing failure to act, point fingers, give-up, they tend to suffer reduced performance and produce many more negative actions. Owning the outcome is important because it reflects accountability for achieving a specific result in response to a problem (Stoltz, 2000). This to a cancer patient may cause him/her to act with greater responsibility such as compliance in taking medication, observing prescribed diet and lifestyle which may ultimately enhance the recovery outcome.

The reach dimension is the extent to which an individual perceives that an adversity will "reach into" and affect other aspects of the condition or beyond (Stoltz, 2000). It determines effort, energy and burden, stress and tends to have a cumulative effect. It shows how far the adversity will reach into other areas of the individual's life. Low reach dimension allows the adversity to negatively impact other aspects of one's life leading to bitterness, lack of sleep, isolation, self-stigmatization

and poor decision making. The lower the reach, the more likely you are to attract bad events, allowing them to spread. On the other hand, the higher the AQ, the more likely you are to limit the reach of the problem to the event (Stoltz, 2000).

The Adversity Quotient Theory was proposed by Paul Stoltz in 1997; it is a model of how a person responds to harsh conditions and his/her ability to overcome it. Adversity Quotient (AQ) is the science of human resilience (Stoltz, 2000). The AQ theory is broadly grounded in three areas of psychology, which include: the science of the mind and body interaction (psychoneuroimmunology), cognitive psychology (the science of the mind and performance interaction) and the science of the brain (neurophysiology). These three aspects are deemed to equally influence the development of AQ. A person's AQ is seen as inborn and is therefore assumed to have a hereditary predisposition. However according to Stoltz a person can enhance their AQ through systematic training procedures, which are likely to facilitate the long-term consolidation of the acquired skills.

This theory of AQ was found to be relevant in relation to this study because cancer recovery outcome is based on the assumption that the thought and emotional processes determine the potency of body chemistry up to the cellular level. Individuals with high levels of AQ are superlatively prepared to integrate habits of thought and behaviour and are not likely to give up or fall half way when confronted by challenges in life. Additionally, accommodating cancer which is a long-term illness not only involves physical discomfort but also creates many psychological problems for the patients. Such psychological problems may include low self-concept, depression, anxiety, and sleep disturbance which can affect the patients' recovery outcomes. This is mainly because there is a close relationship between psychological processes, biological disease processes and their outcomes.

Through AQ the study sought to find out how the cancer patients perceived how they could, manipulate whatever happens next, the possibility that somebody would actually do something to improve their situation, the duration the individual perceived the situation/adversity would last and how eventually adversity would affect other aspects of the person's life. Stoltz (2000) stated that people who productively apply AQ perform optimally when faced by adversity. They learn from these challenges and also take action in a healthier and faster way. Alfred (2018) states that AQ is a key factor in the promotion of health and a major construct that deals with the human being's ability to respond positively to the adverse situations an individual faces, even when these cause a possible risk to his/her health or development. Research has shown that the process of resilience has three main aspects to the individual which are that individuals at risk showed better results than one expected positive adaptation in spite of the experience of stress and lastly a good recovery from the trauma (Zautra, 2010). AQ impacts on the treatment of diverse chronic diseases, such as systemic lupus erythematosus, diabetes, rheumatoid arthritis, juvenile idiopathic arthritis, Chagas disease, cancer.

Chida and Steptoe (2008) adds that protective factors involved in AQ, such as self-esteem, self-care, optimism and positive mood, reduced anxiety independence and social support are related to the influence on health, including biological processes such as neuroendocrine and immune function. Furthermore, some meta-analyses point out the relationship of these factors with symptoms, disease progression and mortality. According to Sutanto (2013) the relationship between low AQ and health indicate deterioration, in regard to the psychological and quality of

life aspects, and also in regard to the effect on physical health and disease progression. In Kenya cancer is ranked as the third leading cause of death (KEMRI, 2014). In the 47 counties, Nairobi and Nyeri Counties have recorded one of the highest incidences of cancer in the country. According to Muriu (2013) data on clinical characteristics of cancer cases at Nyeri Hospice between the years 2011 to 2012 indicated that of the 598 cancer patients that sort treatment in the facility, only 21% were alive by December 2012. Statistics indicating the survival rate of cancer patients in Kenya is less than 30% (Kenya Network of Cancer Organizations, 2013)

METHODS AND PROCEDURES

This study adopted a correlational research design to examine the relationship between Adversity Quotient and recovery outcomes among cancer patients. Research was carried out at the three palliative care units in Nyeri and Nairobi Counties which are: Nyeri County Referral Hospital (CRH), Nairobi Hospice and Nyeri Hospice. The areas were chosen as a research site because the government of Kenya plans to decentralize essential cancer management activities from Kenyatta National Hospital in Nairobi to Nyeri, Mombasa and Kisumu County referral hospitals so as to ease the cost of the disease for low income families. These regions were been identified by the Ministry of Health as the regions with the highest prevalence of cancer (Mulemi, 2010). The target population were the cancer patients, attending treatment at the three palliative care units in Nairobi and Nyeri Counties. The study adopted a systematic random sampling technique. Systematic random sampling is a method that involves selecting subjects from a sampling frame in a systematic way to obtain a sample of 96 participants. Semi structured questionnaires were used to collect data. Based on this every third person was selected from a list until the required number was attained. The study utilized a self-scoring questionnaire administered to the participants to collect data on AQ, recovery outcomes and strategies that can be used to enhance Adversity Quotient among the participants. Data was analysed using both descriptive and inferential statistics, namely Pearson Moment Correlation Coefficient(r).

RESULTS

The levels of adversity quotient are presented in Table 1.

Table 1: Levels of Adversity Quotient among cancer patients

Level of AQ	Frequency	Percent
Low adversity quotient level	10	11.9
Moderate adversity quotient level	26	31.0
High adversity quotient level	48	57.1
Total	84	100.0

Findings from Table 1 indicate that majority of the respondents (57.1%) had a high adversity quotient level, while 11.9% of the respondents had a low adversity quotient level.

Data on adversity quotient level was further analysed descriptively in terms of means and standard deviation. The findings are presented on table 2.

Table 2: Descriptive Statistics for Levels of Adversity Quotient

	N	Minimum	Maximum	Mean	Std. Deviation
Sum AQ	84	32	93	68.98	13.540
Valid N	84				

As shown in Table 2, the lowest adversity quotient level score attained by the respondents was 32, while the highest score was 93. The adversity quotients mean score was 68.98 ± 13.54 , signifying that the adversity quotient for the respondents was in the moderate level.

Data was then further analysed separately for the two counties. The findings are as shown in Table 3 and 4.

Table 3: Frequencies for Levels of Adversity Quotient by County

Levels of Adversity quotient		Frequency	Percent
Nairobi	Low adversity quotient level	3	15.0
	Moderate adversity quotient level	11	55.0
	High adversity quotient level	6	30.0
	Total	20	100.0
Nyeri	Low adversity quotient level	7	10.9
	Moderate adversity quotient level	15	23.4
	High adversity quotient level	42	65.6
	Total	64	100.0

As shown in Table 3, majority of the respondents from Nairobi (55%) had a moderate adversity quotient level, while majority of the respondents from Nyeri (65.6%) had a high adversity quotient level.

Table 4: Descriptive Statistics for Adversity Quotient by County

County		N	Minimum	Maximum	Mean	Std. Deviation
Nairobi	Sum adversity	20	37	93	63.55	12.972
	Valid N	20				
Nyeri	Sum adversity	64	32	92	70.67	13.361
	Valid N	64				

From Table 4, the lowest adversity quotient score attained by the respondents in Nairobi was 37 while that attained by respondents in Nyeri was 32. The highest score attained was 93 and 92 for Nairobi and Nyeri respectively. The adversity quotient mean score for respondents in Nairobi was 63.55 ± 12.97 , indicating a moderate level of adversity quotient, whereas the adversity quotient means score for the respondents in Nyeri was 70.67 ± 13.36 , indicating a high level of adversity quotient. Data on Adversity quotient (AQ) was further analysed for each of the four dimensions of AQ namely; control, ownership, reach and endurance. The results are presented in Table 5 and 6.

Table 5: Levels of Adversity Quotient among cancer patients

Dimension	Levels of Adversity quotient	Frequency means	Percent
Control	Low adversity quotient level	9	10.7
	Moderate adversity quotient level	29	34.5
	High adversity quotient level	46	54.8
	Total	84	100.0
Ownership	Low adversity quotient level	11	13.1
	Moderate adversity quotient level	30	35.7
	High adversity quotient level	43	51.2
	Total	84	100.0
Reach	Low adversity quotient level	12	14.3
	Moderate adversity quotient level	23	27.4
	High adversity quotient level	49	58.3
	Total	84	100.0
Endurance	Low adversity quotient level	11	13.1
	Moderate adversity quotient level	28	33.3
	High adversity quotient level	45	53.6
	Total	84	100.0

As shown in Table 5, majority of the respondents had a high adversity quotient level in all the 4 dimensions of AQ. The findings are as follows: control (54.8%), ownership (51.2%), reach (58.3%) and endurance (53.6%) respectively.

Data was further analysed descriptively for the four dimensions. The findings are summarized in Table 6.

Table 6: Descriptive statistics for Levels of Adversity Quotient by Dimensions

Dimension	N	Minimum	Maximum	Mean	Std. Deviation
Control	84	9	23	17.50	3.217
Ownership	84	8	23	17.01	3.558
Reach	84	6	24	17.19	3.835
Endurance	84	6	25	17.27	4.022
Valid N	84				

As shown in Table 6, for the control dimension, the minimum score was 9, while the maximum score was 23, and the mean score was 17.50 ± 3.217 , indicating a moderate level of adversity quotient. For the endurance dimension, the minimum score was 6, while the maximum score was 25, and the mean score for endurance was 17.27 ± 4.022 , which also indicates that it was in the moderate level. For ownership dimension, the minimum score was 8, while the maximum score was 23, and the mean score was 17.01 ± 3.558 , indicating a moderate level as well. For the reach dimension the minimum score was 6, while the maximum score was 24, the mean score was 17.19 ± 3.835 , again indicating a moderate level. Data was then further analysed separately for the two counties. The findings are as shown in Table 7.

Table 7: Descriptive Statistics for Dimensions of Adversity Quotient by County

County	Dimension	N	Minimum	Maximum	Mean	Std. Deviation
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Nairobi	Control	20	9	23	16.25	3.552
	Ownership	20	9	23	15.65	3.345
	Reach	20	9	22	15.95	3.734
	Endurance	20	10	25	15.70	3.541
	Valid N	20				
Nyeri	Control	64	11.0	23	17.89	3.030
	Ownership	64	8	23	17.44	3.541
	Reach	64	6	24	17.58	3.812
	Endurance	64	6	24	17.77	4.062
	Valid N	64				

As shown in Table 7, for Nairobi the minimum scores were 9, 9, 9 and 10 for control, ownership, reach and endurance dimensions respectively, while the maximum scores were 23, 23, 22 and 25 respectively. For Nyeri, the minimum scores were 11, 8, 6 and 6 for control, ownership, reach and endurance dimensions respectively, while the maximum scores were 23, 23, 24 and 24 respectively. In terms of the mean score for the different dimensions, for Nairobi, were 16.25+3.552, 15.65+3.345, 15.95+3.734 and 15.70+3.541 for control, ownership, reach and endurance respectively. These scores for each of the dimensions fall within the moderate level. For Nyeri, mean scores were 17.89+3.03, 17.44+3.3541, 17.58+3.812 and 17.77+4.062 for control, ownership, reach and endurance respectively. These scores for each of the dimensions fall within the moderate level but are slightly higher than for the respondents in Nairobi.

DISCUSSIONS

The first objective was to find out the levels of Adversity Quotient among cancer patients in palliative care units, the descriptive findings indicated that on average, the respondents had a moderate level of adversity quotient. Findings indicated that majority of the respondents (57.1%) had a high adversity quotient level, while 11.9% of the respondents had a low adversity quotient level. Data on adversity quotient level was further analysed descriptively in terms of means and standard deviation. The finding also indicates that the AQ level amongst the respondents was not at a high level as expected, considering the influence by the period since the majority of participants had been diagnosed with cancer between 1 to 2 years earlier. The lowest adversity quotient level score attained by the respondents was 32, while the highest score was 93. The adversity quotient means score was 68.98±13.54, this signified that the adversity quotient for the respondents was in the moderate level. The findings can be compared to findings by Becker and Newton (2016) which established that AQ displayed in the event of severe illnesses, found patients overwhelmed at first but would then demonstrate resolve, perseverance and resilience.

The initial period after a cancer diagnosis, may cause a negative psychological impact among the affected patient. It is likely that the emotive state of the patient may be highly compromised due to the shock which a Cancer diagnosis may cause. The patient may have to use all their internal resources to overcome this first phase of shock in order to boost their AQ, so as to start their recovery. The findings are also in tandem with those of Arber and Spencer (2013), which established that all the cancer patient's participants in that study reported high levels of uncertainty

and lack of control that lead to psychosocial distress especially in the first three months of diagnosis. This distress could contribute to lower AQ levels among the affected patients.

Similarly, the AQ levels not being high may have been associated with the financial impact associated with cost of treatment, diet and other decisions that have to be made in relation to the illness. In this study, the researcher found that many of the respondents were from a low-income bracket which was indicated by the findings of finances as a challenge amongst the respondents. This finding is consistent with study findings by Hoffman and Lent (2013) that a cancer diagnosis entails countless decisions, treatments, and challenges across the cancer care continuum. The above-mentioned variables were identified during the findings as a contributory factor among the respondents and they may have played a part in the findings of moderate level of AQ by the researcher.

From the findings the researcher established that majority of the respondents from Nairobi had moderate AQ level compared to respondents from Nyeri who had high AQ level. This difference may be explained by the fact that respondents in Nyeri County were more likely to experience social and emotional support from their environmental setup which is more rural compared to the respondents in Nairobi where the set-up is perceived to be more urban hence less availability of social and emotional support.

CONCLUSION

On the levels of Adversity Quotient, the participants had moderate levels of AQ possibly because majority of them had been diagnosed with cancer between 1 to 2 years earlier hence may have still been overwhelmed by their illnesses and the subsequent cost in initiation of treatment and diet thus lowering their AQ to moderate levels

RECOMMENDATION

More cancer related programs enhancing patients AQ should be put in place by the counsellors in order to increase the patients AQ in the palliative care units from moderate level to high level of AQ in order to boost recovery outcomes. The researcher recommends that counsellors in palliative care units should use counselling strategies such as spiritual and financial support to address the cancer patients' fears since initially, a cancer diagnosis is daunting and it may cause a decrease in AQ and thus low recovery outcomes. This will improve the low level of recovery outcomes.

The researcher recommends that the palliative care units staff should encourage participation of family members, friends and significant others in the cancer continuum, so as to provide psychological and social support to patients. This inclusion will help the patient's family members and friends understand the challenges faced by the client and such collaboration may enhance AQ and boost recovery outcomes among the patients as well as reduce isolation which emerged as one of the challenges.

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