# INVESTIGATING MULTI-DIMENSIONAL PERFECTIONISM AND THE QUALITY OF LIFE IN STUDENTS COMPLETING A BACHELOR OF EDUCATION DEGREE AT MEMORIAL UNIVERSITY OF NEWFOUNDLAND

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# NOTE TO USERS

# INVESTIGATING MULTI-DIMENSIONAL PERFECTIONISM AND THE QUALITY OF LIFE IN STUDENTS COMPLETING A BACHELOR OF EDUCATION DEGREE AT MEMORIAL UNIVERSITY OF NEWFOUNDLAND

By

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A thesis submitted to the

School of Graduate Studies

in partial fulfilment of the

requirements for the degree of

Counselling Psychology, Masters of Education

Faculty of Education

Memorial University of Newfoundland

August 2006

St. John's                                        Newfoundland

# Canada

# Abstract

Perfectionism has been identified as a pervasive trait that can be found in a wide range of people. Growing research support suggests that this trait, which used to be considered one-dimensional, has multi-dimensional (i.e., negative and positive) aspects. According to Slaney, Rice, Mobley, Trippi, and Ashby (2001), setting high standards and having high orderliness qualities are the defining positive aspects of perfectionism. Discrepancy, the difference perceived between the high standards that a person sets and the actual performance that the person perceives him or herself displaying, is the defining negative aspect of perfectionism.

This thesis studied the prevalence of multi-dimensional perfectionism in undergraduate education students and sought to determine how perfectionism related to their perceived quality of life and their GPA performance. Subjects (75 undergraduate education students) completed the Almost Perfect Scale – Revised (APS-R) questionnaire (developed in 1997 by Slaney, Mobley, Trippi, Ashby, & Johnson) and as predicted by the instrument developers, three groups were identified, namely, adaptive perfectionists, maladaptive perfectionists and non-perfectionists.

Subjects also completed a brief World Health Organization Quality of Life questionnaire (WHOQOL-BREF), developed by the World Health Organization, to assess their

perceived quality of life based on the two weeks prior to the administration of the questionnaire. It was found that the maladaptive perfectionists, as compared to adaptive perfectionists, on average, had a significantly lower perceived quality of life in three of the quality of life domains assessed, namely the Physical Health Domain, the Psychological Health Domain, and the Social Relationships Domain. It was also discovered that the Discrepancy Subscale of the APS-R had a weak negative correlation to the Physical Health Domain, the Psychological Health Domain, and the Social Relationships Domain. No other significant differences were found in perceived quality of life for any of the other multi-dimensional group comparisons and no relationships were found between the type of perfectionism displayed and the GPA scores achieved.

The implications of these findings for both counsellors and classroom teachers are discussed and suggestions for future research are offered.

# Acknowledgements

Mr. Gerry White, Research Computing Specialist with the Faculty of Education, who provided statistical support during my research. His expertise and his general interest in my subject area helped me to better understand the statistical meaning of the information found within the data and to better write the statistical data into text form. Thank you, Gerry.

To Mr. Harry Hunt, my internship supervisor at Prince of Wales Collegiate High School, who provided encouragement, understanding and assistance. His encouragement during low times and understanding of the research process gave me the energy to move on when there seemed to be little hope of finishing. His guidance and assistance in helping me finish the thesis will not be forgotten and will be held in high regard for years to come. Thank you, Harry.

To Mrs. Irene Barrett, my officemate, who listened to me when I was frustrated and encouraged me when I was upset. We were both people who were finishing theses in order to graduate from the Masters of Education (Counselling Psychology) program. She was a person who could understand the challenges and joys of a thesis. She and her husband have recently been blessed with the birth of their beautiful baby girl, Emma. They are doing well and are very happy. I wish her well in finishing her thesis and I wish her well in her new life with her new family. Thanks so much for your assistance, Irene.

To my friends, Chris, Tracy, Phil, Amy, Mark, Karen, Colleen, and Sherrie, who were great supporters of my work and my ambition to be a counsellor. Without their help and encouragement, I would not be as far as I am today. Through thick and thin, these people stuck with me. For that I will love you forever. Thank you, friends.

Finally, to my mother, Bunnie, my father, Jim, and my brother, Greg, who were several of my biggest supporters. Without your assistance, I would not be as far as I am today. To my mom and dad, your love and support for me throughout this process have been overwhelming. The sacrifices that you have made to ensure that I finish my education deserve unending thanks. I will continue to make you proud of me wherever I go and whatever I do. To my brother, Greg, for providing me with an outlet to unwind, joke, and relax. Your assistance helped me to take my mind off my thesis when it needed a rest from research. Thank you, Mom, Dad, and Greg.

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# Chapter I - Introduction

## 1.1 Statement of problem/ focus

Multi-dimensional perfectionism is a description used to depict the setting of straightforward or problematic high standards of outcome and performance. This thesis is aimed at studying the prevalence of perfectionism in university students and its impact on their quality of life. This study has three purposes: (a) to determine the degree to which perfectionistic thinking exists within a post-secondary setting (i.e., the education faculty), (b) to further explore what is deemed to be the multi-dimensional nature of perfectionism (adaptive and maladaptive), and (c) to explore the relationship between multi-dimensional perfectionism and quality of life.

There are increasing numbers of studies focussing on the topic of "perfectionism". These studies suggest that perfectionism is not a one-dimensional, but a multi-dimensional characteristic that can be classified as carrying positive and negative attributes (Hamachek, 1978; Frost, Heimberg, Holt, Mattia, and Neubauer, 1993; Grezegorek, J. L., Slaney, R.B., Franze, S.; & Rice, K.G., 2004; Martin & Ashby, 2004; Rice, Kenneth G., Bair, Callie J., Castro, Jennifer R., Cohen, Benjamin N., Hood, Camille A., 2003; Rice & Lopez, 2004). Instead of looking at perfectionism as a negative trait, Hamachek (1978), one of the many researchers who now thinks perfectionism is multidimensional, believes that there are two distinct categories of perfectionism: normal and neurotic. These categories have similar characteristics, but also differ in many ways.

This thesis explores the existence of multidimensional perfectionism categories in post-secondary students using the research of Slaney et al. (1996). It first seeks to determine if undergraduate educational students can be categorized into three groups – normal (adaptive) perfectionists, neurotic (maladaptive) perfectionists, and non-perfectionists. Such a finding would provide support for the concept of multi-dimensional perfectionism. The study also investigates how multi-dimensional perfectionism (maladaptive perfectionists, adaptive perfectionists, and non-perfectionists) is related to the quality of life (i.e., physical health, mental health, social life, academic achievement, employment, and marital status) that students experience.

The Interdisciplinary Committee on Ethics in Human Research (ICEHR), which normally receives proposals for research in the social sciences, humanities, sciences and engineering fields at Memorial University of Newfoundland's St. John's campus, has given approval for this research (Appendix A).

## 1.2 Significance of study

The Education Faculty at Memorial University of Newfoundland has a recognized undergraduate educational program that receives over 500 applications each year for admission. However, only 40% of the applicants manage to enter the program. It is likely that some of these successful students may be perfectionistic because of the competitive environment and high academic limits associated with entering the program. It is also likely that some proportion of these students may also experience excessive and

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debilitating stress from perfectionism, which could significantly impact their academic success and even their stay in the program.

Few studies investigate the level of perfectionism within a competitive university program and no known available studies investigate the level of quality of life that different perfectionistic students have. Research on this relatively new and interesting concept of multi-dimensional perfectionism would add to the growing knowledge base. Furthermore, collecting information about students' quality of life and tying it into perfectionism will add a new dimension to this area. Exploring this concept and using current knowledge of perfectionism and quality of life within the Faculty of Education may provide more insight and understanding into the academic lives of education students.

This thesis will help determine future research of multi-dimensional perfectionism and whether cognitive interventions might help subjects become aware of maladaptive characteristics. From the limited knowledge available on perfectionism, unhealthy perfectionist attitudes have been associated with both an unsophisticated cognitive style and with such cognitive distortions as dichotomous thinking (all-or-nothing thinking), overgeneralization, and self-critical, ruminative thoughts (Martin & Ashby, 2004). There is also some evidence that suggests that maladaptive perfectionism can be ameliorated through interventions and shifts in epistemic assumptions using Cognitive Theory (CT) and the use of CT literature (Martin & Ashby, 2004). Cognitive Theory "perceives

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psychological problems as stemming from commonplace processes such as faulty thinking, making incorrect inferences on the basis of inadequate or incorrect information, and failing to distinguish between fantasy and reality" (Corey, 2001, p. 310).

## 1.3 Objectives

This thesis:

1.  Investigates whether undergraduate education students display "perfectionism" (as defined by Slaney, Rice, Mobley, Trippi and Ashby (2001) and verified by Rice and Slaney (2002), (see Definitions, p. 5)) and the distribution of that trait within the target population.

2.  Seeks to examine the magnitude of multi-dimensional perfectionism within the student population completing a Bachelor of Education Degree at Memorial University of Newfoundland. More specifically, it will assess the degree to which the three dimensions of multi-dimensional perfectionism (adaptive perfectionists, maladaptive perfectionists, and non-perfectionists - as determined by the Almost Perfect Scale – Revised (APS-R) questionnaire (Appendix B)) are found in undergraduate educational students.

3.  Investigates the relationship between multi-dimensional perfectionism and the quality of life education students experience.

4. Investigates the relationship between multi-dimensional perfectionism and grade point averages (GPA) that education students achieve.

## 1.4 Definitions

Perfectionism: According to Slaney et. al (2001), the defining positive aspects of perfectionism are reflected in high standards and orderliness. The defining negative aspects of perfectionism are reflected in the discrepancy, or difference perceived between the standards that the person has and the actual performance that the person perceives him or herself displaying. The constant factor of a perfectionist, according to Slaney et al. (2001), seems to be high standards and high order qualities. "The endorsement of extremely high personal performance standards is central to every definition of perfectionism" (Martin & Ashby, 2004, p. 62). Thus, a person who has high standards would be either an adaptive or a maladaptive perfectionist. The difference between both types of perfectionists takes into account the high standards and high order qualities, but also the negative aspect of perfectionism mentioned earlier: discrepancy. According to Martin and Ashby (2004), maladaptive perfectionists seem to have higher standards and a higher sense of distress (discrepancy) when they do not meet these standards and adaptive perfectionists have higher standards, but have a lower sense of distress when standards are not met. It would seem that the key in determining which type perfectionist a person corresponds with is the Discrepancy Subscale of the Almost Perfect Scale – Revised. The Discrepancy Subscale is a central aspect of the perfectionism contrast and is a key factor in determining whether a person is an adaptive perfectionist or a maladaptive

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perfectionist (Flett and Hewitt, 2002). In contrast to perfectionists (adaptive and maladaptive perfectionists), there are also non-perfectionists. Non-perfectionists do not show high standards and high order qualities and, as an alternative, set low standards and have less order qualities (Slaney et al., 2001).

Presently, there is no definitive definition of perfectionism that has been agreed upon within the field. It is important that researchers remain cognizant of the differences among the various measures of perfectionism because the definition used may influence the direction and focus of the study (Flett and Hewitt, 2002).

Quality of Life: According to the World Health Organization (WHO), the quality of life is defined as:

"...Individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a broad-ranging concept affected in a complex way by persons' physical health, psychological state, personal beliefs, social relationships and their relationship to salient features of their environment." (http://www.who.int/evidence/assessment-instruments/qol/ql1.htm)

This definition will provide a framework of understanding through analysis of quality of life in the research study.

# Chapter II - Literature Review

A strong case can be made that one of the most significant developments in the field of perfectionism is that perfectionism is multidimensional. The initial research of Hamachek (1978), Hewitt and Flett (1990) and Frost et al. (1993) has led to the discovery of this multi-dimensional construct. Hamachek (1978) suggested that there are two types of perfectionism: normal perfectionism, also known as adaptive perfectionism, and neurotic perfectionism, also known as maladaptive perfectionism. Both types endorse very high personal standards, but are vastly different in that adaptive perfectionists enjoy some flexibility in meeting their standards, whereas maladaptive perfectionists are strict with their standards and become very disappointed when they do not meet them (Martin & Ashby, 2004). According to Martin and Ashby (2004), adaptive perfectionists are more flexible and less self-critical than maladaptive perfectionists and they appear to demonstrate less self-criticism than non-perfectionists. Adaptive perfectionism has also been associated with a greater sense of efficacy, greater self-esteem and enhanced stress-coping resources (Martin & Ashby, 2004). Maladaptive perfectionists are harshly self-critical individuals who consistently evaluate their performance as failing to meet the standards they set (Slaney, Rice & Ashby, 2002) and appear to be at a greater risk for depression and anxiety (Rice et al., 2003). "The evaluation of performance in comparison to one's personal standards not only distinguishes adaptive and maladaptive

perfectionists, but also reflects the nature and complexity of one's cognitive processes"
(Martin & Ashby, 2004, p. 62).

Research for this paper came from the studies and findings of Johnson (1993);
Slaney et al. (1996); Slaney et al. (2001); and Slaney, Rice, and Ashby (2002). These
researchers have been fundamental in the development and revision of the Almost Perfect
Scale (APS) and the Almost Perfect Scale – Revised (APS-R) (Appendix B). Their
research sought to explore and measure the construct of perfectionism from an unbiased
point of view (Enns and Cox, 2002). They believe that perfectionism has both positive
and negative aspects (Slaney, Ashby, and Trippi, 1995; Enns and Cox, 2002). The
concept of the APS evolved from the supervision of two doctoral students, who each had
a client whose psychological concerns were not easily classifiable. Both clients were
doing quite well academically in their university environment, but could not derive any
sense of accomplishment from their success. In fact, they seemed to interpret their
academic performance as signs of failure as opposed to success (Slaney, Rice, and
Ashby, 2002). "These early observations developed into a series of discussions with
students and colleagues and, eventually, to a review of the available literature on
perfectionism" (Slaney, Rice, and Ashby, 2002). As a result, a research team was formed
at Pennsylvania State University that consisted of interested students and faculty. One of
the interested students, Doug Johnson, became particularly interested in perfectionism
and started research and a dissertation on the topic. He, along with others, has been
instrumental in developing and refining terms to construct potential scales to measure the

dimensions of perfectionism (Slaney, Rice, and Ashby, 2002). Johnson's (1993) dissertation involved initial analyses of the new terms and a comparison of the perfectionistic clients who were in counselling. His results were published in Johnson and Slaney (1996). The Johnson and Slaney (1996) study provided the initial reliability and validity data and support for their perfectionism scale: the Almost Perfect Scale (APS) (Slaney, Rice, and Ashby, 2002). The original APS involved five (5) dimensions: (a) having high standards, (b) being orderly, (c) being anxious, (d) having tendencies to procrastinate, and (e) having problems with interpersonal relationships (Slaney, Rice, and Ashby, 2002). The subscales in the APS consisted of a combined Standards and Order scale (12 items); an Anxiety scale (4 items); a combined Interpersonal and Counselling Relationship scale (12 items); and a Procrastination scale (4 items).

Much research and data followed the conception of the APS and the investigation into the data began to raise the question of whether the APS subscales adequately captured the major defining dimensions of perfectionism, especially the maladaptive dimensions of perfectionism, and whether the perfectionism construct was one-dimensional or more of a multi-dimensional construct (Slaney, Rice, and Ashby, 2002). The researchers thought that the Standards and Order subscales were proven to be the positive dimensions of perfectionism because there was unanimity in dictionary definitions, literature, scale development, and interview studies. However, the negative dimensions of perfectionism lacked such a strong scale in the Almost Perfect Scale (Slaney, Rice, and Ashby, 2002). The anxiety subscale, which can be seen as a negative

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cause and effect of perfectionism, has strong arguments, which dismiss this subscale as a defining negative aspect of perfectionism. In addition, the relationships and procrastination dimensions, which might be described as another cause and effect of perfectionism, have no research support as assessments of essential negative aspects of perfectionism (Slaney, Rice, and Ashby, 2002). Since all of the negative subscales in the APS were insufficient, the researchers had to come up with stronger defining negative aspects. After much thought and discussions with students and colleagues, Slaney, Rice, Mobley, Trippi and Ashby (1996) settled on the concept of discrepancy. Discrepancy is the perception that one consistently fails to meet the high standards one has set for oneself. To the researchers, it seemed to initially capture the negative aspects of perfectionism. As a result, a revision of the APS was completed. The researchers developed the Discrepancy Subscale that measured the concept of discrepancy, clarified and revised the Standards Subscale, and reviewed the Order Subscale consequently determining that it was adequate. The revision of the APS resulted in a new scale, the Almost Perfect Scale – Revised (APS-R) (Slaney et al., 1996; Slaney et al., 2001; Slaney, Rice, and Ashby, 2002). The APS-R is still a work in progress, but studies on the measure seem promising. The factor structure of the scale has been solidly supported by the initial confirmatory analyses, and a growing number of studies report measures of internal consistency that support the reliability of the subscales (Slaney, Rice, and Ashby, 2002).

This theory of multi-dimensional perfectionism has its critics. According to Flett and Hewitt (2002), "...the distinction between adaptive and maladaptive perfectionism has been accepted without criticism by some researchers, who have incorporated this distinction into their empirical work" (p. 17). They believe that the issue is far from resolved and that a number of related issues have not been evaluated. These issues include:

a) The degree to which adaptive perfectionism overlaps with conscientiousness. Flett and Hewitt (2002) believe that comparative research is lacking and they believe it is clearly needed. Items that assess self-oriented forms of perfectionism need to be evaluated to determine whether they allow researchers to make the subtle, but important, distinction between people with high levels of conscientiousness and people who go a step further and demand absolute perfection from themselves.

b) The assumption that different types of perfectionists differ qualitatively in their characteristics, that categories of perfectionists exist, and that discontinuities can be identified. Flett and Hewitt (2002) believe that people differ in degrees of perfectionism rather than in kinds of perfectionism. They believe that it has not been determined whether continuities or discontinuities exist because a thorough taxometric investigation has not yet been conducted in the perfectionism field.

c) The reactions that adaptive perfectionists have to life problems. Even though research outcomes have not always supported the stress depression model, enough findings in the literature show that a supposedly adaptive dimension of perfectionism can be linked with dysphoria when a person experiences negative

events. Flett and Hewitt (2002) also note that adaptive aspects of perfectionism are associated with symptoms of anxiety when people experience ego-involving situations that threaten the self. They believe that these findings emphasize the need for a comprehensive evaluation of environmental factors and life situations when determining the adaptiveness and maladaptiveness of perfectionism.

"Few studies have directly examined the potentially damaging impact of perfectionism on behaviour, emotions, or cognitions in real life situations such as work or school contexts" (Bieling, Israeli, Smith, and Antony, 2003, p. 164). Furthermore, there is more research needed to determine how life satisfaction and quality of life could differ with respect to perfectionist subtypes (Gilman & Ashby, 2003). Therefore, probing students' quality of life with different subtypes of perfectionism could bring up some new findings and add more research to the field. The most interesting finding related to this topic so far is that:

> ...the prediction of standards to total life satisfaction varied according to
>
> changes in discrepancy. This particular result suggests that the prediction
>
> of high standards to overall life satisfaction is moderated by the perceived
>
> difficulty in continually meeting these high standards (Gilman & Ashby,
>
> 2003, p. 228-230).

There are also studies that relate perfectionism to eating disorders, suicide, depression, anxiety, procrastination, neuroticism, and obsessive-compulsive personality

disorder (Schweitzer & Hamilton, 2002). In addition, Schweitzer & Hamilton (2002) found that, overall, elevated levels of perfectionism are associated with high scores on a broad range of indicators of psychological distress. Within Schweitzer's and Hamilton's sample, their analyses revealed a significant positive correlation between perfectionism and depression, perfectionism and anxiety, and perfectionism and stress. With the exception of stress, these associations were independent of age and gender. Furthermore, through the study and the sample they used, one aspect of perfectionism, clients' doubts about their actions, was related consistently and specifically to psychological distress and negative emotional states.

Martin and Ashby (2004) have found that unhealthy perfectionists' attitudes have been associated with both an unsophisticated cognitive style and with such cognitive distortions as dichotomous thinking (all-or-nothing thinking), overgeneralization, and self-critical thoughts. This pattern of thinking prevents maladaptive perfectionists from engaging in the critical reasoning and a more objective evaluation that could moderate their negative self-appraisal. Bieling et al. (2003) have found that attributions about performance have also been shown to have consequences for psychological adjustment in a variety of contexts. For example, Bieling et al. (2003) state that internal attributions for failure in a classroom context appear to be more damaging to self-esteem than external attributions. This cognitive style, internal attribution for failure, has recently been linked to risk of depression.

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While anxious, depressed, or dependant (i.e., alcohol, drug, and gambling-dependent) clients can easily be identified as problematic and require treatment, individuals with a maladaptive perfectionist personality may not seek treatment or may not be viewed as possessing problematic behaviours, the reason being that the desire to excel is often described as an admirable attribute in today's society (Schweitzer & Hamilton, 2002). In addition, some clinicians "have observed that perfectionism is treatment resistant and that perfectionists in treatment require long-term psychodynamically-oriented approaches for the most effective treatment outcome" (Schweitzer & Hamilton, 2002, p. 693). Individuals may not abandon their maladaptive perfectionism even if these dysfunctional cognitive strategies are consistent with their thought process (Martin & Ashby, 2004). However, if therapists could assist their clients in shifting their thinking assumptions, then they may help clients to "develop a more sophisticated worldwide view that no longer justifies the evaluation of failure that is associated with their distress" (Martin & Ashby, 2004, p. 71).

For many, finding reason and quality in one's life is of the utmost importance. Similarly, much counselling can be viewed as a service offered to help clients improve or find increased acceptance for the quality of their lives. This study, in addition to studying the nature of perfectionism, is looking at perfectionism in relation to one's quality of life.

Encarta World English Dictionary (1999) defines quality of life as "the degree of enjoyment and satisfaction experienced in every day life ..." (p. 1468). In other words,

quality of life can mean the amount and quality of happiness and, perhaps, the well-being a person experiences in one's life. Even though this dictionary definition may seem straightforward, using the concept of quality of life in research becomes complex. It is a subjective and qualitative notion and therefore is not readily quantified. The challenge of the researcher was to either develop or find an existing tool that would measure an abstract concept such as "quality of life". The tool must be able to analyse and compare self-reports received from individuals. The tool must also ensure that the "degree[s] of enjoyment and satisfaction" experienced by different people and different cultures can be described in a way that it can be compared. There were few quality of life instruments available to the researcher; however, one was found that was developed by the World Health Organization.

In the past ten (10) years, the World Health Organization (WHO), with the aid of 15 collaborating centres around the world, has made an effort to research the topic of quality of life and to develop an instrument to measure this abstract concept. The World Health Organization, which was established on April 7, 1948, is a specialized agency for health within the United Nations (UN). The WHO is governed by 192 Member States through the World Health Assembly. The Health Assembly is composed of representatives from WHO's Member States. The objective of the WHO is to attain the highest possible level of "health" for all peoples of the world. Their definition of "health" does not merely mean the absence of disease or infirmity, but also includes the state of complete physical, mental and social well-being (http://www.who.int/about/en/).

WHO has made progress in developing a tool that seeks to effectively measure health and quality of life of an individual. The purpose of their research was to develop an instrument that was very versatile in its uses (e.g., medical, research, audit, and policy making applications) and that could be used in any particular cultural setting. They also wanted to develop an instrument that could quantify and compare "quality of life" across different cultures (http://www.who.int/evidence/assessment-instruments/qol/q2.htm). As a result, they developed a questionnaire that placed primary importance on the perception of quality of life of the individual. In other words, they believed that assessing one's perception of his or her quality of life would offer a valid means and starting point for assessing quality of life that could be quantifiably analyzed and compared. The WHO's definition of quality of life focuses on the individual's perception of his/her position in life within the context of the person's culture and value systems. It also takes into account one's goals, expectations, standards, concerns, and where one resides. WHO believes that quality of life is a broad concept affected by the person's perceptions of physical health, psychological health, personal beliefs, social relationships and his/her relationships with salient features of one's environment (e.g., physical environment, financial need, leisure activities, access to health services, and transportation services) (http://www.who.int/evidence/assessment-instruments/qol/ql1.htm).

As a result of their research, the WHO, along with their 15 collaborating partners, developed an instrument for measuring quality of life called the World Health Organization Quality of Life – 100 (WHOQOL-100). This 100-question questionnaire

measured the quality of life and reflected the issues "that a group of scientific experts as well as lay people in each of the field centres felt were important to quality of life" (http://www.who.int/evidence/assessment-instruments/qol/ql5.htm). Six (6) domains of quality of life, and twenty-four facets are covered in this questionnaire.

Following the development of the above instrument, there was another questionnaire developed by the WHO, which was named the brief World Health Organization Quality of Life questionnaire (WHOQOL-BREF). The WHOQOL-BREF, which was used in this study, contained 26-items, two questions items from the Overall Quality of Life and General Health domains, and one item from each of the 24 facets included in the WHOQOL-100 (http://www.who.int/evidence/assessment-instruments/ qol/ql6.htm). The WHOQOL-BREF contains merged domains from the WHOQOL-100 and therefore creates four domains of quality of life (physical health, psychological health, social relationships and environment). According to the WHO, domain scores produced by the WHOQOL-BREF have been shown to correlate at around 0.9 with the WHOQOL-100 domain scores (http://www.who.int/evidence/assessment-instruments/ qol/ql3.htm).

The WHOQOL-BREF was chosen over the WHOQOL-100 because it was thought that a shorter questionnaire would be easier for participants to complete. It was also thought that giving the shorter questionnaire, the WHOQOL-BREF, would increase validity of results. Giving the much longer questionnaire, the WHOQOL-100, would

either negatively influence the answers given by participants or discourage participants from participating altogether. It was deemed that the WHOQOL-BREF questionnaire was a satisfactory instrument to obtain the necessary quality of life information.

Other researchers have also adopted the WHOQOL-BREF questionnaire into their studies. It has been used in studies relating to schizophrenia (Dogan, Dogan, Tel, Coker, Polatoz, and Dogan, 2004), the role and value of sex in later life (Gott and Hinchliff, 2003), psychosis and self-esteem (Gureje, Harvey and Herrman, 2004) and chronic regional pain (Lung, Huang, Shu, Lee, 2004). Based on the importance of quality of life as a dimension of personal meaning and based on the questionnaire being an instrument deemed useful in assessing its nature and level, it was used as a the dependent variable in this study.

There is not much literature known to the researcher concerning multi-dimensional perfectionism and whether it has any relationship to quality of life. As a result, the researcher picked the quality of life dimension because the researcher wanted to assess whether perfectionism interfered, enhanced, or had no effect on everyday life of a university student. An attempt was made to add more research to the multi-dimensional perfectionism field concerning quality of life and it was hoped that the new research would add to the field of the study of perfectionism.

The final dimension to this study included achievement. Achievement is defined as "...something that somebody has succeeded in doing, usually with effort; that act or process of finishing something successfully..." (Encarta World English Dictionary, 1999). Achievement, as with quality of life, can be subjective in nature. Achievement is widely viewed as an important factor when assessing one's self and in comparisons made by others. The researcher decided that one could concretely compare one student's achievement to another on the basis of one's grade point average. (GPA). GPA scores of individuals were used to define the "success" of a student. In this study, achievement and GPA scores were used to investigate whether multi-dimensional perfectionism had any relationship to achievement.

## 2.1 Instruments

This study utilized a questionnaire, developed by the author, to collect demographic information from respondents (Appendix C) and two other instruments, the Almost Perfect Scale – Revised (APS-R) and the World Health Organization Quality of Life – BREF (WHOQOL-BREF) questionnaire (Appendix D), to collect perfectionist and quality of life data.

The developed demographic questionnaire (Appendix C) collected several pieces of information such as age, Grade Point Average (GPA), and ethnic status. The APS-R, developed by Slaney, Rice, Mobley, Trippi and Ashby (1997), assessed the presence of adaptive, maladaptive and non-perfectionistic subjects in a sample through a 23-item

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questionnaire. Each question used a seven point Likert Scale that questioned personal standards (7 items, e.g., "I have high standards for my performance at work or at school."), discrepancy, perceived distance between set standards and where they see themselves (12 items, e.g., "I often feel frustrated because I can't meet my goals."), and the person's self-defined orderliness and neatness (4 items, e.g., "I am an orderly person."). The minimum scores for the standards, discrepancy, and order subscales are 7, 12, and 4, respectively. The maximum scores for the standards, discrepancy, and order subscales are 49, 84, and 28, respectively. From the studies that have researched perfectionism using this questionnaire, many have used college students as participants and it has been noted that "over two thirds of the sample could be clustered into perfectionism groups..." (Rice & Slaney, 2002, p.41). Most research on perfectionism has relied on self-reports from subjects (Enns and Cox, 2002). Permission to use this questionnaire for research purposes has been granted.

Gilman and Ashby, in 2003, (Slaney, Mobley, Trippi, Ashby, and Johnson, 1996) reported Cronbach's coefficient alphas for Discrepancy Subscale (.92), Standards Subscale (.85), and Order Subscale (.68) among samples taken from college students. Due to the low score on the Order category, caution was suggested in using this particular scale (Gilman and Ashby, 2003).

The APS-R (see Appendix B), as used in this study, attempted to sort the different types of perfectionism present within undergraduate educational students completing a

Bachelor of Education Degree. The three categories identified by the instrument represented the independent variables in the study (Slaney et al., 2001; Martin and Ashby, 2004). The subjects were classified as:

a. Adaptive perfectionists when they had a higher score in the Standards Subscale, a higher score in the Order Subscale, and a lower score in the Discrepancy Subscale.

b. Maladaptive perfectionists when they had a higher score in the Standard Subscale and a higher score in the Discrepancy Subscale.

c. Non-Perfectionists when they had a lower score in the Standards Subscale and a lower score in the Discrepancy Subscale. It is presumed that holding lower standards for performance should reduce the amount of discrepancy appraised by individuals, since the perceived distance between those lower standards and their actual perfectionism is decreased (Martin & Ashby, 2004).

The World Health Organization Quality of Life – BREF (WHOQOL-BREF) questionnaire (see Appendix D), is a brief version of the WHOQOL-100. This 26-item survey measures the perceived quality of life of the respondent and is based on his/her observations over the two (2) weeks prior to testing. Each question uses a five-point Likert scale and measures overall quality of life ("How would you rate your quality of life?"), general health ("How satisfied are you with your health?") and quality of life in four domains: physical health, psychological health, social relationships, and environment. Several facets are incorporated within each of the four domains. The

'Physical Health' domain consisted of daily activities, medical needs, energy, and work capacity (See: WHOQOL-BREF Questionnaire, questions 3, 4, 10, 15, 16, 17, and 18 in Appendix D). The 'Psychological Health' domain is comprised of positive and negative feelings, self-esteem, spirituality, thinking, and body image (See: WHOQOL-BREF Questionnaire, questions: 5, 6, 7, 11, 19, and 26). The 'Social Relationship' domain assesses personal relationships, social support, and sexual activity facets (See: WHOQOL-BREF Questionnaire, questions: 20, 21, and 22). The 'Environment' domain focuses upon financial resources, freedom, physical safety, security, home environment, opportunities for acquiring new information and skills, recreation, and leisure physical environment (See: WHOQOL-BREF Questionnaire, questions: 8, 9, 12, 13, 14, 23, 24, and 25). Table 2.1.1 summarizes the domains noted above.

**Table 2.1.1   WHOQOL-BREF Domains and Their Facets.**

| Domain | Facets in Domain |
|---|---|
| 1. Physical Health (i.e., "To what extent do you feel that physical pain prevents you from doing what you need to do?") | Activities of daily living<br>Dependence on medicinal substances and medical aids<br>Energy and fatigue<br>Mobility<br>Pain and discomfort<br>Sleep and rest<br>Work Capacity |
| 2. Psychological Health (i.e., "How much do you enjoy life?") | Body image and appearance<br>Negative feelings<br>Positive feelings<br>Self-esteem<br>Spirituality / Religion / Personal beliefs<br>Thinking, learning, memory and concentration |
| 3. Social Relationships (i.e., "How satisfied are you with your sex life?") | Personal relationships<br>Social support<br>Sexual activity |

**Table 2.1.1   WHOQOL-BREF Domains and Their Facets (cont'd).**

| 4. Environment (i.e., "How safe do you feel in your daily life?") | Financial resources |
|---|---|
| | Freedom, physical safety, and security |
| | Health and social care: accessibility and quality |
| | Home environment |
| | Opportunities for acquiring new information and skills |
| | Participation in and opportunities for recreation / leisure activities |
| | Physical environment (pollution / noise / traffic / climate) |
| | Transport |

According to the World Health Organization (http://www.who.int/evidence/ assessment-instruments/qol/ql3.htm), the WHOQOL-100 and the WHOQOL-BREF have been shown to display good discriminant validity, content validity and test-retest reliability. Their sensitivity to change is currently being assessed. The domain scores (Physical Health, Psychological Health, Social Relationships, and Environment) derived from the WHOQOL-BREF have been shown to correlate at around 0.9 with the WHOQOL-100 domain scores (http://www.who.int/evidence/assessment-instruments/qol /ql3.htm). Raw scores were converted into transformed scores using an equation for each domain. These transformed scores had a minimum number of zero (0) and a maximum number of 100 for each domain and produced scores using a positive direction scale (i.e., higher scores denote higher quality of life). The WHOQOL-BREF, which was funded and organized by the World Health Organization and 15 other collaborating centres around the world, attempts to measure quality of life and was used in assessing each undergraduate education student.

Permission to use this questionnaire came from Dr. Anita E. Molzahn, a representative for the WHOQOL-BREF questionnaire in Canada, at the University of Victoria, Victoria, British Columbia (see Appendix E). She stated that the researcher has "...permission to use either instrument [WHOQOL-BREF or the WHOQOL-100] for the purposes of research, provided [that] the instrument is not changed or adapted in any way."

## 2.2 Research Question

Does multi-dimensional perfectionist thinking exist within a post-secondary setting and if so, what relationship exists between multi-dimensional perfectionism and both self-reports of quality of life and grade point averages in undergraduate education students?

questionnaires that outlined the purpose of the study and the rights they had as participants. Students had the right to decide whether they wished to partake. They did not receive any reward or incentive for participating. If the participants chose to take part, they were instructed to fill out a three-part questionnaire, which consisted of an APS-R, a WHOQOL-BREF and a demographic questionnaire. Completing part or all of this survey was voluntary and they could choose not to return the survey, without penalty. Upon completion of the survey, each student was asked to place completed forms into a labelled box at a conveniently located library on campus. No individual data were shared with anyone else, including the classroom instructors, and all data were held confidential. Subjects had the right to view and the option of having a written summary of the study's findings upon its completion.

The scoring of the APS-R was based on the procedures set out by Slaney et al. (2001). The APS-R was scored by obtaining a aggregated score for each of the three group headings (personal standards, orderliness, and discrepancy) on each questionnaire. The added results of each group heading were recorded into a spreadsheet program and were analyzed using SPSS (Version 13.0, 2004). The scoring of the WHOQOL-BREF was based on the procedures set out by the World Health Organization (WHO) and its collaborating members.

The WHOQOL-BREF questionnaires were scored by accumulating the results of the four quality of life domains (physical, psychological, social, and environment), the quality of life question, and the general health question and recorded into a spreadsheet.

Each of the four domains of the WHOQOL-BREF was compiled, added, and converted into a number between 0 and 100. The converted numbers were scaled in a positive direction where higher numbers denoted a higher quality of life in the domain and were inputted into the statistical program. When there was a questionnaire that had more than 20% of data missing from the assessment, the assessment was discarded. When there was an item missing within a domain, the mean of other items in the domain was substituted for the missing number. When there were more than two pieces of data missing from a domain, the domain score was not calculated (with the exception of social relationships domain, where the domain should only be calculated if < 1 item is missing).

## 3.3 Analyses

Data were analyzed to determine the degree to which multidimensional perfectionism is found in education students at Memorial University, to assess the relationship between the subscales of the APS-R and the relationship between multi-dimensional perfectionism and the quality of life. This study also examined the relationship between multi-dimensional perfectionism and grade point average (GPA). The statistical procedures utilized included cluster analyses, analysis of variances (ANOVAs), Person Correlations and chi-tests. Post-hoc analyses were also used to explore selected findings within the initial data.

Cluster analysis is a "wide range of numerical methods for examining multivariate data with a view to uncovering or discovering groups or clusters of

homogenous observations" (Everitt, Landeau and Leese, 2001, p. ix). This type of analysis explores data sets to assess whether or not they can be summarized meaningfully into a relatively small number of groups or clusters of objects (Everitt, Landeau and Leese, 2002). Rice and Slaney (2002), along with other researchers, utilized this type of analysis when investigating adaptive and maladaptive perfectionism. The analysis was also used on the advice of statistical experts within the Faculty of Education at Memorial University of Newfoundland to identify groups.

This study utilized a two-step cluster analysis model reflecting the analyses used by Rice and Slaney (2002) because it was deemed to support their methodology and assumptions. Within this model, data from the APS-R were used to determine if the three (3) groups predicted by these authors could be identified (based on means and standard deviations).

To further investigate whether significant differences existed between the clusters (adaptive, maladaptive, and non-perfectionists), analyses of variance (ANOVA) were completed on each of the APS-R subscales (Standards, Order, and Discrepancy) independently. Based on the findings, post-hoc analyses were performed, using mean differences of clusters (adaptive, maladaptive, and non-perfectionist), in each of the APS-R subscales to assess the significant differences further. These post-hoc analyses provided further evidence of the identity of each cluster.

To examine if quality of life differences existed between the clusters (adaptive perfectionists, maladaptive perfectionists, and non-perfectionists), analyses of variance were used on each of the WHOQOL-BREF domains (Physical Health, Psychological Health, Social Relationships, Environment, Overall Quality of Life, and Health). Based on the findings, post-hoc analyses, using multiple comparisons of means, were completed to further investigate the differences between the clusters.

Pearson's Correlation assessed the relationship between the three subscales of the APS-R. Correlations between the APS-R and the WHOQOL-BREF were also generated to assess the relationship between multi-dimensional perfectionism and quality of life.

A chi test ($x^2$) was performed to assess whether there was a significant difference between the types of perfectionists (adaptive, maladaptive, and non-perfectionists) and the GPA scores of respondents.

Demographic data on the subjects (birth place, gender, employment status, age, martial status, ethnic background, religion, population of home community, high school average, and highest level of education) were collected for descriptive purposes. It was deemed beyond the scope of this thesis to investigate possible relationships between these variables and the factors discussed above.

Since the developers of the APS-R and the WHOQOL-BREF performed reliability tests on their questionnaires in prior studies, reliability scores, using "Cronbach's coefficient alphas", were also calculated in this study. Cronbach's coefficient alphas, an internal consistency reliability formula, use intercorrelations among comparable parts of the same test to measure the uniformity, or homogeneity, of the items throughout the test (Sattler, 2001). Cronbach's coefficient alpha "essentially indicates the average intercorrelation between test items and any set of items drawn from the same domain" (Sattler, 2001, p. 103). In other words, this coefficient represents the mean of all possible split-half coefficients that could be obtained by various test splittings. Higher estimates of reliability mean more homogenous items (Sattler, 2001). The purpose of computing these scores was to compare results with prior studies to assess reliability and validity of the questionnaires.

# Chapter IV – Results

This study investigated whether undergraduate education students display "perfectionism", as defined by Slaney, Rice, Mobley, Trippi and Ashby (2001), and the distribution of that trait within the sample population. It also examined the magnitude of multi-dimensional perfectionism within the student population completing a Bachelor of Education Degree. More specifically, it assessed the degree to which the three dimensions of multi-dimensional perfectionism (adaptive perfectionists, maladaptive perfectionists, and non-perfectionists - as determined by the Almost Perfect Scale – Revised (APS-R) test) were found in undergraduate education students. The relationship between multi-dimensional perfectionism, achievement and the quality of life that education students experience was also assessed.

Data from the 75 returned questionnaires were used. Two of these participants returned questionnaires that had the WHOQOL-BREF component incorrectly filled out or left incomplete, but offered the APS-R and the demographic information. The incorrectly completed WHOQOL-BREF were discarded and the correctly completed portions of these two (2) questionnaires were included with APS-R and demographic data set.

## 4.1 Cluster Analysis

The results from the cluster analyses used in this study were similar to those found in analyses performed by Rice and Slaney (2002). In this current study, it was found that there were three clusters (groups) within the sampled population. The cluster analysis identified three groups with 31 participants in the first group, 24 participants in the second group, and 20 participants in the third group (see Table 4.1.1).

**Table 4.1.1  Frequency of Participants in Each Cluster**

| Cluster Number | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| Cluster 1 | 31 | 41.3 | 41.3 |
| Cluster 2 | 24 | 32.0 | 73.3 |
| Cluster 3 | 20 | 26.7 | 100.0 |
| Total | 75 | 100.0 | |

Cluster 1 results had means of High Standards Subscale (Standards Subscale) = 43.58; Order Subscale = 22.61; and Discrepancy Subscale = 30.16. Cluster 1 had standard deviations of Standard Subscale = 2.43; Order Subscale = 2.36; and Discrepancy Subscale = 7.24. Cluster 2 results had means of Standard Subscale = 42.75; Order Subscale = 23.25; and Discrepancy Subscale = 60.83. Cluster 2 had standard deviations of Standard Subscale = 3.04; Order Subscale = 2.85; and Discrepancy Subscale = 9.77. Cluster 3 results had means of Standard Subscale = 37.10; Order Subscale = 16.30; and Discrepancy Subscale = 37.50. Cluster 3 had standard deviations of Standard Subscale = 3.89; Order Subscale = 4.37; and Discrepancy Subscale = 9.32 (See Table 4.1.2).

Table 4.1.2  APS-R Means and Standard Deviations by Cluster Group

| Subscale | Cluster 1 (n = 31) | | Cluster 2 (n = 24) | | Cluster 3 (n = 20) | | F | Effect Size $(\eta^2)$ |
|---|---|---|---|---|---|---|---|---|
| | M | SD | M | SD | M | SD | | |
| Perfectionism | | | | | | | | |
| Discrepancy | 30.16 | 7.24 | 60.83 | 9.77 | 37.50 | 9.32 | 88.08 | 0.71 |
| High Standards | 43.58 | 2.43 | 42.75 | 3.04 | 37.10 | 3.89 | 29.65 | 0.45 |
| Order | 22.61 | 2.36 | 23.25 | 2.85 | 16.30 | 4.37 | 32.31 | 0.47 |

To identify and name each cluster, a comparison was done between the patterns identified in this study and those identified by Rice and Slaney (2002). It was determined that the APS-R subscale (Standards, Order, and Discrepancy) scores' means and standard deviations for each unknown cluster compared favourably with those of the APS-R subscales' means and standards deviations for the multi-dimensional perfectionists types identified in Rice and Slaney's (2002) study and identified in the Slaney et al. (2001) study.

The first cluster is deemed to represent the "adaptive perfectionist" identified by Rice and Slaney's (2002). Similarly, the second cluster is deemed to represent the "maladaptive perfectionist" and the third cluster is deemed to represent the "non-perfectionist cluster". The specific means and standard deviations found by Rice and Slaney can be found in Table 4.1.3

Table 4.1.3 Means and Standard Deviations by Cluster Group from Rice and Slaney's Data
(Rice and Slaney, 2002, p. 40)

| Subscale | Adaptive Perfectionists (n = 112) | | Maladaptive Perfectionists (n = 66) | | Non-Perfectionists (n = 80) | | F | Effect Size |
|---|---|---|---|---|---|---|---|---|
| | M | SD | M | SD | M | SD | | |
| Perfectionism | | | | | | | | |
| Discrepancy | 31.75 | 7.58 | 61.18 | 10.16 | 42.48 | 12.09 | 186.25 | 0.59 |
| High Standards | 44.53 | 3.59 | 43.47 | 3.95 | 34.66 | 6.63 | 107.85 | 0.46 |
| Order | 23.16 | 3.81 | 23.56 | 3.41 | 15.41 | 4.81 | 104.71 | 0.45 |

## 4.2 Analysis of Variance

To further investigate whether significant differences existed between the clusters (adaptive, maladaptive, and non-perfectionists), analyses of variance (ANOVA) were used on each of the APS-R subscales (Standards, Order, and Discrepancy) independently. These ANOVAs indicated that the clusters had significant differences between their means in each of the APS-R subscales. The analysis of variance performed on the Standards Subscale, found the existence of significant differences, (F (3, 75) = 29.65, p < 0.01, $\eta^2$ = 0.45). In addition, the analysis of variance performed on the Order Subscale found significant differences, F (3, 75) = 32.31, p < 0.01, $\eta^2$ = 0.47, along with the analysis of variance on the Discrepancy Subscale, which found significant differences, F (3, 75) = 88.08, p < 0.01, $\eta^2$ = 0.71 (See Table 4.2.1).

**Table 4.2.1 ANOVA of Multi-dimensional Perfectionists (APS-R subscales)**

|  |  | Sum of Squares | Df | Mean Squares | F | Sig. |
|---|---|---|---|---|---|---|
| Standards | Between Groups | 558.338 | 2 | 279.169 | 29.65 | 0.00** |
|  | Within Groups | 677.848 | 72 | 9.415 |  |  |
|  | Total | 1236.187 | 74 |  |  |  |
| Order | Between Groups | 642.612 | 2 | 321.306 | 32.31 | 0.00** |
|  | Within Groups | 716.055 | 72 | 9.945 |  |  |
|  | Total | 1358.667 | 74 |  |  |  |
| Discrepancy | Between Groups | 13262.140 | 2 | 6631.070 | 88.08 | 0.00** |
|  | Within Groups | 5420.527 | 72 | 75.285 |  |  |
|  | Total | 18682.667 | 74 |  |  |  |

** Significant at the 0.01 level (2-tailed)

Given the evidence of significant differences between the clusters on each of the subscales of the APS-R, post-hoc analyses were performed using each APS-R subscale separately to assess what significant differences existed between the clusters. Post-hoc analyses were performed by using the clusters' (adaptive, maladaptive, and non-perfectionist) means in each APS-R subscale and were investigated for significant differences in the means. Significant differences between cluster means were deemed to exist.

A post-hoc analysis was completed on the Standards Subscale and the means of the three clusters (adaptive perfectionists$_{avg}$ = 43.58; maladaptive perfectionists$_{avg}$ = 42.75; and non-perfectionists$_{avg}$ = 37.10; See Table 4.1.2) were tested for significant differences. Using post-hoc tests, it was found that the adaptive group's mean score and the maladaptive group's mean score were not significantly different from each other (mean difference = 0.83, p > 0.05). However, the adaptive group (mean difference = 6.48,

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p < 0.01) and the maladaptive group (mean difference = 5.65, p < 0.01) mean scores were both found to be significantly different from the non-perfectionist group mean score. The adaptive and maladaptive groups each had significantly higher standard mean scores than that of the non-perfectionist group.

An analysis of the Order Subscale showed the means of the three groups were: adaptive perfectionists$_{avg}$ = 22.61; maladaptive perfectionists$_{avg}$ = 23.25; and non-perfectionists$_{avg}$ = 16.30 (See Table 4.1.2). Using post-hoc tests, it was found that adaptive and maladaptive group means were not significantly different (mean difference = 0.64, p > 0.05) from each other; however, the adaptive and maladaptive groups' order mean scores were both significantly different compared to the non-perfectionist group. Compared to the non-perfectionist group, the adaptive group had a mean difference of 6.31 (p < 0.01) and the maladaptive group had a mean difference of 6.95 (p < 0.01).

The three groups had means of adaptive perfectionists$_{avg}$ = 30.16; maladaptive perfectionists$_{avg}$ = 60.83; and non-perfectionists$_{avg}$ = 37.50 (See Table 4.1.2) on the Discrepancy Subscale. In a post-hoc analysis, it was found that the discrepancy mean scores for adaptive and maladaptive groups were significantly different (mean difference = 30.67, p < 0.01) from each other. In addition, it was found that the non-perfectionist group had a mean score that was significantly different from the adaptive and maladaptive groups. The non-perfectionist group had a higher discrepancy mean score compared to the adaptive group (mean difference = 7.34, p < 0.01); however, it had a

lower discrepancy mean score compared to the maladaptive group (mean difference = -23.33, p < 0.01).

Using ANOVAs, significant differences were also found in the sample for three of the four domains assessed by the WHOQOL-BREF (See Table 4.2.2). Analysis of the Physical Health Domain found that the groups' (adaptive, maladaptive, and non-perfectionist) Physical Domain mean scores had significant differences between them (F $(3, 73) = 4.61$, $p < 0.05$, $\eta^2 = 0.12$) in the sample (See Table 4.2.2). Analysis of the Psychological Health Domain (F $(3, 73) = 4.74$, $p < 0.05$, $\eta^2 = 0.12$) and Social Relationship Domain (F $(3, 73) = 3.74$, $p < 0.05$, $\eta^2 = 0.10$) also revealed significant differences between the groups' means (See Table 4.2.2). There were no significant differences found within the Environment Domain, the Quality of Life Domain (QOL), or the Satisfaction of Health Domain (Health).

Table 4.2.2   ANOVA of Multi-dimensional Perfectionist (WHOQOL-BREF)

|  |  | Sum of Squares | Df | Mean Squares | F | Sig. |
|---|---|---|---|---|---|---|
| Physical Health | Between Groups | 1765.972 | 2 | 882.986 | 4.61 | 0.01* |
|  | Within Groups | 13399.699 | 70 | 191.424 |  |  |
|  | Total | 15165.671 | 72 |  |  |  |
| Psychological Health | Between Groups | 1639.760 | 2 | 819.880 | 4.74 | 0.01* |
|  | Within Groups | 12103.281 | 70 | 172.904 |  |  |
|  | Total | 13743.041 | 72 |  |  |  |
| Social Relationships | Between Groups | 3224.956 | 2 | 1612.478 | 3.74 | 0.03* |
|  | Within Groups | 30223.209 | 70 | 431.760 |  |  |
|  | Total | 33448.164 | 72 |  |  |  |

**Table 4.2.2  ANOVA of Multi-dimensional Perfectionist (WHOQOL-BREF) (cont'd)**

| Environment | Between Groups | 531.080 | 2 | 265.540 | 1.54 | 0.22 |
|---|---|---|---|---|---|---|
| | Within Groups | 12049.249 | 70 | 172.132 | | |
| | Total | 12580.329 | 72 | | | |
| Overall Quality of Life (QOL) | Between Groups | 1.141 | 2 | 0.571 | 1.46 | 0.24 |
| | Within Groups | 27.379 | 70 | 0.391 | | |
| | Total | 28.521 | 72 | | | |
| Health | Between Groups | 0.946 | 2 | 0.473 | 0.62 | 0.54 |
| | Within Groups | 53.739 | 70 | 0.768 | | |
| | Total | 54.685 | 72 | | | |

\* Significant at the 0.05 level (2-tailed)

Based on the findings of significant differences between the clusters, post-hoc analyses, using multiple comparisons of means, were completed to further investigate the differences between the clusters. Post-hoc analyses were performed by using the clusters' (adaptive, maladaptive, and non-perfectionists) means in each of the WHOQOL-BREF subscales. Significant differences between cluster means were deemed to exist.

An examination of the first domain, Physical Health, indicated that the three groups had the following means: adaptive perfectionists$_{avg}$ = 80.87; maladaptive perfectionists$_{avg}$ = 69.61; and non-perfectionists$_{avg}$ = 73.53 (See Table 4.2.3). Post-hoc analyses found that the adaptive group's mean score was significantly different (mean difference = 11.26, $p < 0.05$) than that of the maladaptive group's mean score. However, there were no significant differences found between the adaptive and the non-perfectionist group mean scores (difference = 7.35, $p > 0.05$), and between the maladaptive and the non-perfectionist group mean scores (difference = -3.92, $p > 0.05$).

Within the Psychological Health Domain, the three groups had mean scores of adaptive perfectionists$_{avg}$ = 72.74; maladaptive perfectionists$_{avg}$ = 62.87; and non-perfectionists$_{avg}$ = 63.53 (See Table 4.2.3). Post-hoc tests found that the mean scores of the adaptive group and the maladaptive group were significantly different. The mean difference found between these two groups was 9.87 (p < 0.05). However, there were no significant differences found between the adaptive and non-perfectionists groups and the maladaptive and non-perfectionists groups. The Social Relationship Domain means for each group were: adaptive perfectionists$_{avg}$ = 73.23; maladaptive perfectionists$_{avg}$ = 59.00; and non-perfectionists$_{avg}$ = 60.89 (See Table 4.2.3). Using post-hoc tests, there was a significant difference found between the means of the adaptive and maladaptive perfectionist groups, which had a mean difference of 14.23 (p = 0.05). No other significant differences were found.

Table 4.2.3  WHOQOL-BREF Means and Standard Deviations by Cluster Group

| Subscale | Adaptive Perfectionists (n = 31) | | Maladaptive Perfectionists (n = 23) | | Non-Perfectionists (n = 19) | | | Effect Size |
|---|---|---|---|---|---|---|---|---|
| | M | SD | M | SD | M | SD | F | $(\eta^2)$ |
| Quality of Life | | | | | | | | |
| Physical | 80.87 | 11.39 | 69.61 | 15.03 | 73.53 | 15.88 | 4.61 | 0.12 |
| Psychological | 72.74 | 11.46 | 62.87 | 15.38 | 63.53 | 12.81 | 4.74 | 0.12 |
| Social | 73.23 | 17.71 | 59.00 | 23.50 | 60.89 | 21.93 | 3.74 | 0.10 |
| Environment | 70.06 | 12.28 | 65.96 | 12.13 | 63.63 | 15.44 | 1.54 | 0.04 |
| Overall QOL | 4.42 | 0.50 | 4.17 | 0.58 | 4.16 | 0.83 | 1.46 | 0.04 |
| Health | 3.90 | 0.75 | 3.87 | 0.92 | 3.63 | 1.01 | 0.62 | 0.02 |

## 4.3 Pearson's Correlations

Pearson's Correlations were used to investigate whether there were relationships between the subscales (Standards, Order, and Discrepancy) of the APS-R and between the subscales of the APS-R and the domains of the WHOQOL-BREF. There were significant correlations found between the subscales of the APS-R and between the APS-R subscales and the WHOQOL-BREF domains. Analysis of the APS-R subscales revealed that there was a significant positive correlation found between the Standards Subscale and the Order Subscale, which was found to be +0.43 (See Table 4.3.1). There were no other significant correlations between any other subscales of the APS-R.

Investigation of correlations between the subscales of the APS-R and the WHOQOL-BREF revealed that there were significant negative correlations between the Discrepancy Subscale and three quality of life domains (See Table 4.3.1): Physical Health Domain (n = -0.38, p< 0.05, two tailed), Psychological Health Domain (n = -0.40, p < 0.05, two tailed) and Social Relationship Domain (n = -0.25, p < 0.05, two tailed).

**Table 4.3.1  Correlations between APS-R and the WHOQOL-BREF**

|  |  | Standards | Discrepancy | Order |
|---|---|---|---|---|
| Standards | Pearson Correlation | 1 | 0.13 | 0.43** |
|  | Sig. (2-tailed) |  | 0.27 | 0.00 |
|  | N |  | 75 | 75 | 75 |
| Discrepancy | Pearson Correlation | 0.13 | 1 | 0.08 |
|  | Sig. (2-tailed) | 0.27 |  | 0.52 |
|  | N | 75 | 75 | 75 |

**Table 4.3.1 Correlations between APS-R and the WHOQOL-BREF (cont'd)**

| Order | Pearson Correlation | 0.43** | 0.08 | 1 |
|---|---|---|---|---|
| | Sig. (2-tailed) | 0.00 | 0.52 | |
| | N | 75 | 75 | 75 |
| Physical Health | Pearson Correlation | 0.07 | -0.38** | -0.02 |
| | Sig. (2-tailed) | 0.58 | 0.00 | 0.87 |
| | N | 73 | 73 | 73 |
| Psychological Health | Pearson Correlation | -0.03 | -0.40** | 0.08 |
| | Sig. (2-tailed) | 0.81 | 0.00 | 0.52 |
| | N | 73 | 73 | 73 |
| Social Relationships | Pearson Correlation | 0.11 | -0.25* | 0.15 |
| | Sig. (2-tailed) | 0.36 | 0.03 | 0.21 |
| | N | 73 | 73 | 73 |
| Environment | Pearson Correlation | -0.005 | -0.23 | -0.02 |
| | Sig. (2-tailed) | 0.97 | 0.052 | 0.89 |
| | N | 73 | 73 | 73 |
| Overall Quality of Life (QOL) | Pearson Correlation | -0.08 | -0.21 | 0.14 |
| | Sig. (2-tailed) | 0.52 | 0.08 | 0.25 |
| | N | 73 | 73 | 73 |
| Health | Pearson Correlation | -0.12 | -0.10 | 0.15 |
| | Sig. (2-tailed) | 0.30 | 0.42 | 0.21 |
| | N | 73 | 73 | 73 |

Note: Pearson's correlations were used because skewness of all data fell between −1 and +1.

* Significant at the 0.05 level (2-tailed)

** Significant at the 0.01 level (2-tailed)

## 4.4 Chi Test

A chi test ($x^2$) was performed to investigate whether there was a significant difference in GPA scores amongst the multi-dimensional perfectionist types (adaptive, maladaptive, and non-perfectionist). There were no significant differences of GPA scores amongst the observed groups, $x^2$ (2, n = 74) = 2.386, p > 0.05. Although not a significant chi-square, it was found that the adaptive group did have a noticeably higher number of participants with a GPA >= 3.5 than those of the maladaptive group (20 versus 11

participants) and the non-perfectionist group (20 versus 9 participants). In addition, the

number of participants in the maladaptive and non-perfectionist groups (11 versus 9

participants) had a similar number of participants with a GPA of greater than or equal to

3.5 (See Table 4.4.1).

Table 4.4.1 Cross Tabulation of GPA Scores with Perfectionist Types

|  |  | Adaptive | Maladaptive | Non-perfectionist | Total |
|---|---|---|---|---|---|
|  |  | Group 1 | Group 2 | Group 3 |  |
| GPA>=3.5 | Count | 20 | 11 | 9 | 40 |
|  | % within Two-Step Cluster Number | 64.5% | 47.8% | 45.0% | 54.1% |
| GPA < 3.5 | Count | 11 | 12 | 11 | 34 |
|  | % within Two-Step Cluster Number | 35.5% | 52.2% | 55.0% | 45.9% |
| Total | Count | 31 | 23 | 20 | 74 |
|  | % within Two-Step Cluster Number | 100.0% | 100.0% | 100.0% | 100.0% |

## 4.5 Reliability

The reliability of scales used in the study, the APS-R and the WHOQOL-BREF

was discussed in the previous chapter. In this study, reliability was also assessed using

Cronbach's coefficient alphas. Reliabilities of the Discrepancy, Standards, and Order

subscales for the APS-R questionnaire were found to be .95, .74, and.87, respectively.

The overall Cronbach's coefficient alpha of the APS-R questionnaire was .90. Using

Cronbach's coefficient alphas, reliabilities of the four domains of the WHOQOL-BREF,

were found to be .78 for the Physical Health Domain, .76 for the Psychological Health

Domain, .69 for the Social Relationships Domain, and .76 for the Environment Domain.

Overall, reliability of the WHOQOL-BREF questionnaire was 0.83.

# Chapter V - Discussion

There were perfectionists, as defined by Slaney, Rice, Mobley, Trippi and Ashby (2001), found within the undergraduate education population. Fifty-five out of 75 sampled participants (73.3%) at the Faculty of Education of Memorial University were a part of the perfectionists group that scored significantly high on both the Standards Subscale and the Order Subscale. By definition, this percentage of the sampled population, according to Slaney et al. (2001), are perfectionists because their scores signify that, on average, they set high standards and have high order qualities. The remaining students, 20 out of 75 sampled participants (26.7%), formed a group that had significantly low scores on both the Standard Subscale and the Order Subscale. According to the classifications set out by Slaney et al. (2001), these participants are not perfectionists and are considered non-perfectionists because their scores signify that, on average, they set low standards and have low order qualities.

According to Slaney et. al (2001), the defining aspect of perfectionism is reflected in high standard and high orderliness qualities. They believe that people who have high standards will tend to score significantly high on the Standards Subscale and people who have high orderliness skills will score significantly high on the Order Subscale. Using these interpretations, it was found that two out of the three clusters had heightened mean scores (43.58 and 42.75) on the Standard Subscale, which has a maximum score of 49. It

was also found that these same two clusters had heightened mean scores (22.61 and 23.25) in the Order Subscale, which has a maximum score of 28. These high mean scores signified that, on average, participants in these clusters set high standards and had high order characteristics. Therefore, they were labelled perfectionists.

However, the remaining cluster did not have heightened average scores within the Standards and Order Subscale. This cluster had lower mean scores (Standards Subscale = 37.10 and Order Subscale = 16.30) compared to the maximums. In addition, the cluster mean scores were significantly different from both of the other two clusters for both the Standards and Order Subscales. The Standards Subscale showed that the adaptive group (mean difference = 6.48, p < 0.01) and the maladaptive group (mean difference = 5.65, p < 0.01) had mean scores that were both found to be significantly different from the non-perfectionist group mean score. The Order Subscale showed that the adaptive and maladaptive groups' order mean scores were both significantly different compared to the non-perfectionist group. Compared to the non-perfectionist group, the adaptive group had a mean difference of 6.31 (p < 0.01) and the maladaptive group had a mean difference of 6.95 (p < 0.01).

Based on these results, it was concluded that participants in this remaining cluster did not display high standards or high order qualities. Therefore, those in this cluster were not considered "perfectionists" and were labelled "non-perfectionists". Not only is this labelling consistent with Slaney et al. (2001), the results of this "non-perfectionist" group

were consistent with the findings of Rice and Slaney (2002). Rice and Slaney (2002) found that non-perfectionists had scores of Standards = 42.48, Order = 15.41, and Discrepancy = 34.66.

The three types of multi-dimensional perfectionists (adaptive perfectionists, maladaptive perfectionists, and non-perfectionists) were represented in the student population. Of the 75 students identified in the sampled population, 20 out of 75 students (27%) were identified as non-perfectionists, 31 out of 75 students (41%) were identified as adaptive perfectionists, and 24 out of 75 students (32%) were identified as maladaptive perfectionists. As noted earlier, 20 students had been labelled non-perfectionists because they were considered to set low standards and to have low order skills. However, to identify and verify that there were adaptive perfectionists and maladaptive perfectionists within the student population, the perfectionist cluster must be examined. This becomes clearer when one examines the work of Slaney et al. (2001) on discrepancy.

According to the theory of Slaney et al. (2001), adaptive and maladaptive perfectionists are both considered perfectionists. However, to examine the magnitude of multi-dimensional perfectionism in undergraduate students and to investigate the frequency of the three types of multi-dimensional perfectionists among this population, it is necessary to understand how the Discrepancy Subscale distinguishes between perfectionists. The only difference that these two types of perfectionists display is that their scores on the Discrepancy Subscale would be different. According to Slaney et al.

(2001), the Discrepancy Subscale measures the difference perceived between the standards that the person has and where they see themselves in terms of meeting those standards. Because adaptive perfectionists have high standards, high order characteristics, and low discrepancy characteristics, they will tend to achieve high scores on the Standards Subscale, high scores on the Order Subscale, and low scores on the Discrepancy Subscale. In contrast, maladaptive perfectionists, who have high standards, high order characteristics, and high discrepancy characteristics, will tend to achieve high scores on the Standards Subscale, high scores on the Order Subscale, and high scores on the Discrepancy Subscale. The Discrepancy Subscale mean scores provided the necessary information to distinguish adaptive perfectionists from maladaptive perfectionists.

As a result of examining these Discrepancy subscale scores in the current study, the group identified as perfectionists was successfully differentiated into adaptive perfectionists and maladaptive perfectionists. Out of a maximum score of 84, one of the perfectionist clusters had an elevated Discrepancy Subscale mean score (60.83). The other perfectionist cluster had a low Discrepancy Subscale mean score (30.16). The difference between these two Discrepancy Subscale mean scores was found to be significant through a post-hoc analysis of the mean differences (mean difference = 30.67, $p < 0.01$). Since one of the perfectionist clusters had a low Discrepancy Subscale mean score (30.16), it was concluded that this group, on average, had low discrepancy. Therefore, it was labelled the adaptive perfectionist group. The other perfectionist group

that had the high Discrepancy Subscale mean score (60.83) signified that this cluster, on average, had high discrepancy and was labelled the maladaptive perfectionist group.

The kind of perfectionist (adaptive or maladaptive) a student emerges as seems to influence the quality of life that the student perceives in three (3) WHOQOL-BREF domains. Adaptive perfectionists, on average, perceive themselves as having a better quality of life physically, psychologically, and socially compared to maladaptive perfectionists. The Physical Health domain incorporates facets of physical health, such as activities of daily living, dependence on medicinal substances and medical aids, energy and fatigue, pain and discomfort, sleep and rest, mobility, and work capacity (http://www.who.int/mental_health/media/en/76.pdf) within this domain. Since domain scores are scaled in a positive direction from 0 to 100, higher domain scores denote higher quality of life (http://www.who.int/mental_health/media/en/76.pdf). Assessing the Physical Health Domain mean scores for adaptive perfectionists, maladaptive perfectionists, and non-perfectionists for mean differences, there was a significant difference found between the mean of adaptive perfectionists (80.87) and the mean of maladaptive perfectionists (69.61). Mean difference analysis found a difference of 11.26 ($p < 0.05$) between the two perfectionist clusters. The non-perfectionists (73.53) did not have any significant difference in means when compared with either the adaptive or the maladaptive perfectionists. As a result, the non-perfectionists have no significant differences in physical health compared to the adaptive and maladaptive perfectionists. These mean scores in the physical health domain suggest that, on average, adaptive

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perfectionists are more satisfied with the facets of their physical health. This finding is similar to Fry's (1995) conclusion that perfectionism moderates the health outcomes of burnout, self-esteem, and physical symptoms of ill-health (Fry, 1995). Fry concluded that female executives with higher perfectionism scores showed higher levels of physical symptoms denoting ill health than did those with lower perfectionism scores. Fry also found that, compared with female executives with lower perfectionistic standards, highly perfectionistic female executives tended to experience a greater increase in physical illness symptoms and burnout symptoms following an increase in stress.

The Psychological Health Domain incorporates facets such as body image, appearance, feelings, self-esteem, beliefs, thinking and concentration (http://www.who.int/mental_health/media/en/76.pdf). Post-hoc analyses on the Psychological Health Domain found that there was only one significant mean difference, which was between the adaptive perfectionist (72.74) and the maladaptive perfectionist (62.87) groups (mean difference = 9.87, $p < 0.05$). The non-perfectionists (63.53) did not have any significant difference in means compared to the adaptive or the maladaptive perfectionists. As a result, the non-perfectionists displayed no significant differences in psychological health compared to the adaptive and maladaptive perfectionists. A higher adaptive perfectionist group mean suggests that adaptive perfectionists, on average, have higher satisfaction with their body image, have more positive feelings, higher self-esteem, higher spirituality, and better thinking, learning, memory, and concentration abilities. Adaptive perfectionists, on average, are also shown to have less negative

feelings and less anxiety than do maladaptive perfectionists. This is similar to Martin and Ashby's (2004) finding that adaptive perfectionism has been associated with greater efficacy, greater self-esteem and enhanced stress coping resources. It also is similar to Rice's, Bair's, Castro's, Cohen's, and Hood's (2003) finding that suggested maladaptive perfectionists appear to be at a greater risk for depression and anxiety than adaptive perfectionists are.

Finally, the facets of the Social Relationship Domain include personal relationships, social support, and sexual activity (http://www.who.int/mental_health/media/en/76.pdf). Adaptive perfectionists (73.23) and maladaptive perfectionists (59.00) exhibit significant differences among social relationships. Using mean differences, the post-hoc analyses of the Social Relationships Domain found that the difference in means of the adaptive perfectionist (73.23) and the maladaptive perfectionist (59.00) groups was the only significant mean difference (14.23, p = 0.05). The non-perfectionists (60.89) did not have any significant difference in means when compared with either the adaptive or the maladaptive perfectionists. As a result, the non-perfectionists had no significant differences in social relationships when compared to the adaptive and maladaptive perfectionists. Since adaptive perfectionists scored a higher average in the Social Relationships Domain, adaptive perfectionists, on average, were deemed to have more satisfaction with areas such as their personal relationships, social support, and sexual activity than maladaptive perfectionists do. These findings are similar to the findings found in an investigation by LoCicero, Blasko, Ashby, Bruner, Martin, and Edge

performed with middle school students. LoCicero et al. repeatedly found that, "...[an] adaptive perfectionist had significantly higher levels of social confidence than both non-perfectionists and maladaptive perfectionists" (Slaney, Rice, and Ashby, 2002, p.79).

The quality of life conclusions found in this study are similar to findings in other studies using different populations (e.g., female executives and middle school students) (Fry, 1995; Slaney, Rice, and Ashby, 2002). This provides evidence suggesting that perfectionism affects the quality of life of many populations, not just university students. It also suggests a relationship exists between perfectionism and quality of life. However, more research needs to be completed to investigate this hypothesis.

The wider the discrepancy (the difference between the standards set and the perception of where the students see themselves in meeting their standards) the lower the quality of life those participants will have in such areas as physical, psychological, and social (relationships) quality of life. Evidence of this was found in significant correlations between the Discrepancy Scale of the APS-R and the three WHOQOL-BREF domains: the Physical Health, the Psychological Health, and Social Relationships Domains. Pearson correlations between the Discrepancy Subscale and the Physical Health Domain showed a significant negative correlation (n = −0.38, p < 0.01). The Discrepancy Subscale and the Psychological Health Domain illustrated a significant negative correlation (n = -0.40, p < 0.01). The remaining correlation involving the Discrepancy

Subscale and the Social Relationships Domain also demonstrated a significant negative correlation of −0.25 (p < 0.05).

These three weak, but significant, correlations suggest a significant relationship between the amount of the participants' discrepancy reported and the quality of life that a participant perceived having. These correlations provide further evidence that maladaptive perfectionists, who, on average, had higher discrepancy, perceive themselves to have a lower quality of life than do adaptive perfectionists in the reported domains. This correlation would also suggest that the more discrepancy perfectionists (adaptive or maladaptive) report, the lower the quality of life in such areas as physical health, psychological health, and social relationship these perfectionists would perceive. That would mean, for example, that a maladaptive perfectionist, who reports very high discrepancy, would also experience a much lower perceived physical, psychological, and social quality of life than would a maladaptive perfectionist who only reported a moderate amount of discrepancy. Higher discrepancy would imply life facets, such as feelings, energy, sleep, body image, self-esteem, concentration, sexual activity, and social support, would be perceived to be much lower. These findings are similar to the findings of Slaney, Rice and Ashby (2002), who found that discrepancy was associated with "...depression (0.49) and inversely correlated with self-esteem (-0.44)..."(Slaney, Rice, and Ashby, 2002, p. 71).

The findings above suggest that the Discrepancy Subscale is a reliable measure of the negative aspects of multi-dimensional perfectionism. However, they also provide further evidence that discrepancy affects participants' perceived quality of life. Even though perfectionism and discrepancy cannot entirely explain the perceived quality of life of perfectionists, it suggests that they are legitimate factors. Therefore, perfectionism and discrepancy are qualities that can be investigated if education students, and the professionals working with them, wish to explore problems related to students' physical health, psychological health, or social health (social relationships).

Participants who set high standards also tend to have high order qualities. A positive correlation found between the Standards Subscale and the Order Subscale ($n = 0.43$, $p < 0.01$) suggests that standards and order attributes are linked in some way and that participants who have high standard scores would also have high order scores. This finding is similar to the finding of Slaney, Rice and Ashby (2002) who found a correlation between the Standards Subscale and the Order Subscale of 0.41. It is possible that for participants to attain their standards, they must be neat and orderly. Another reason could be that participants, who are disciplined, organized, and orderly, tend to find it easier to set higher standards. To fully understand this relationship, further qualitative research would need to be completed.

No significant relationship was found between multi-dimensional perfectionism and GPA achieved. There seems to be no significant academic advantage to being an

adaptive perfectionist, maladaptive perfectionist, or non-perfectionist. These finding are similar to those found by Rice and Slaney (2002) and Rice and Dellwo (in press). Rice and Dellwo (in press) found that maladaptive perfectionism, for a large sample of undergraduates, was unrelated to GPA (Rice and Dellwo, in press; Slaney, Rice, and Ashby, 2002). However, Rice and Slaney (2002) noted "...that similar objective indicators of performance (GPA) might be viewed or perceived in starkly different ways, and it is those psychological variables rather than the objective indicators that bear on emotional distress" (p. 41). In other words, GPA may not be a good indicator of how well a perfectionist achieves because perfectionism relies more on emotional and psychological indicators than on objective indicators such as GPA.

## 5.1 Implications

The findings in this study suggest that perfectionism is a common trait within the Faculty of Education. Many of the students who enter the faculty are adaptive or maladaptive perfectionists who set high standards and have strong order qualities. There is also a minority of non-perfectionists entering the faculty, who set low standards and do not have much order qualities.

According to this research, a case could be argued that maladaptive perfectionists need to either lower their personal standards (become more non-perfectionistic) or to lower their discrepancy (become more adaptive perfectionistic). In this study, it was found that maladaptive perfectionists reported having a lower perceived quality of life in

the physical, psychological, and social domains of their lives, but had grades similar to the other groups. The perceived lower quality of life suggests that maladaptive perfectionists, compared to adaptive perfectionists, have some or all of the following facets: more dependence on medicinal substances/aids, less energy, more pain and discomfort, less sleep, less mobility, poorer body image, more negative feelings, less self-esteem, a harder time thinking, learning, remembering, and concentrating, more problems in relationships, and less sexual activity. In addition, this study has shown that maladaptive perfectionists are no different academically than adaptive perfectionists or even non-perfectionists.

Reducing the discrepancy of maladaptive perfectionists would be predicted to improve the perceived quality of life. This reduction could be achieved though positive changes in self-perception. Similar to the point of view of Martin and Ashby (2004), if educators could assist maladaptive perfectionist students in shifting their perception of where they see themselves in relation to their set standards, then they could help these students to develop a more positive view when their standards are not met.

Some maladaptive perfectionists may not believe that lessening their standards or discrepancy will help. In fact, maladaptive perfectionists may not see themselves as maladaptive perfectionists at all (Schweitzer & Hamilton, 2002). The desire to excel is often an admirable attribute in today's society. What would be a foreseeable reason for maladaptive perfectionists to change? Students may not abandon their maladaptive

perfectionism because they may see nothing wrong with what they are doing. While no one can force the students to change if they do not want to change, subtly educating maladaptive perfectionists on discrepancy and their perception of meeting their standards could facilitate change. The researcher believes that educating students on discrepancy and how it affects their quality of life would benefit all students, not only maladaptive perfectionists. This education on discrepancy would foster a positive change in their quality of life physically, psychologically, and socially. This education could be done three ways: credit courses, information sessions, or counselling sessions. From these sessions, remediation strategies can be determined to help students improve their self-perceptions, which would potentially enable them to have a better quality of life. Instructors and counsellors "might choose to assume the validity of their clients' subjective experience, explore the meaning clients construct from their experience, and work to increase their 'responsible judgement in a context of good reasons'" (Martin and Ashby, 2004, p. 72). Assisting students in intellectual development might facilitate change in students' perceptions that support their discrepancy and reduce their maladaptive tendencies (Martin and Ashby, 2004).

Since GPA scores were not affected by perfectionism, it might be felt that there is no real reason for concern. In addition, there needs to be enough time to implement these informative sessions into the education curriculum. However, even though their grades may not change, this kind of education would help students with their personal development. According to a study by Martin and Ashby (2004), which examined

relationships between types of multi-dimensional perfectionists and the differences in post-adolescent intellectual development, unhealthy perfectionist attitudes have been associated with an unsophisticated cognitive style and with such cognitive distortions as dichotomous thinking, overgeneralization, and self-critical, ruminative thoughts. In addition, Slaney, Rice, and Ashby (2002) also found correlations between discrepancy and depression (0.49) and discrepancy and self-esteem (-0.44) in their analyses of the APS-R instrument. As a result of this study and studies from Slaney, Rice and Ashby (2002) and Martin and Ashby (2004), it has been shown that there is a link between perfectionists with high discrepancy (maladaptive perfectionists) and negative feelings, depression, and low self esteem (Slaney, Rice, and Ashby, 2002). These patterns of thinking, feeling, and perception might prevent maladaptive perfectionists from engaging in the critical reasoning and a more objective evaluation that could moderate their negative self-appraisal (Martin & Ashby, 2004). It would only benefit the student population to research and explore perfectionism within the education program.

It is important for students to achieve some degree of self-awareness or understanding of where they fit within the three (3) types of multi-dimensional perfectionism. It is beneficial for students not only to understand to where they fit, but also why they fit there. Studies such as this can function as a catalyst to foster improvements to a student's quality of life. In addition, the findings of this study support both the importance of perfectionism being addressed in various contexts including counselling and the idea that quality of life can be better understood by looking at

perfectionism. Additional research on the inter-relatedness of these variables is clearly needed.

## 5.2 Future Research

Perfectionism is a relatively new concept that has been researched over the last 15 years. Through researching and completing this thesis, it became very clear that many areas within the topic of multi-dimensional perfectionism could be explored. Since many students in this undergraduate education population are perfectionists, perfectionism would appear to be worthy of future research.

Even though perfectionists were found within this sampled target population, it is highly recommended that future studies, using similar cluster analyses, utilize larger sample sizes. These future studies might use cluster analyses similar to those employed in this study and the study performed by Rice and Slaney (2002). Using a larger sample could strengthen the findings of this study.

This study found that approximately 75% of the sample population of students were perfectionists. It would be interesting to investigate whether the students who are deemed perfectionists were that way before they entered the faculty or if they developed this trait during their time within the faculty. Additional research could be performed to answer this question. In order to complete this study, APS-R and WHOQOL-BREF

questionnaires could be administered to high school students (i.e., Grade 12 students) who indicate an interest post-secondary education.

A related topic would be an investigation into whether undergraduate educational students are perfectionists in every facet of their life or just in certain situations (e.g., academic, career, and/or family) in certain environments (e.g., at school, at work, or at home). To test this hypothesis, it would be necessary to compare their standard, order, and discrepancy characteristics in other environments and situations outside of the university with that of the standard, order, and discrepancy characteristics within the university environment.

As noted earlier, participants who set high standards were also predicted to have high order qualities. Further qualitative research could be completed with participants to find more about this relationship. In order to test this hypothesis, an investigation of students' standards and their maintenance of these standards (being orderly, neat, and organized) might be carried out.

Longitudinal studies on undergraduate students may indicate whether the type of multi-dimensional perfectionism they were deemed to possess would have an impact on whether they graduate from the program. It could be useful to assess whether maladaptive perfectionists have a higher dropout rate and whether the dropout rate was related to higher discrepancy and negative behaviours, such as anxiety, overexhaustion,

overexertion, depression, and burnout. It may be possible to determine whether the qualities outlined in this study – standards, order, and discrepancy – have any effect on graduates' functioning in the future. If so, how would the type of perfectionist they were perceived to be in this study affect their teaching (i.e., in terms of job dissatisfaction, anxiety, overexhaustion, overexertion, depression, and burnout)? In addition, how would the type of perfectionist pattern displayed by a teacher impact on the teacher's students?

Multi-dimensional perfectionism studies with other populations besides university students should be carried out. There is evidence of a relationship between the type of multi-dimensional perfectionist university students are and the quality of life they experience. However, whether this relationship is found in other populations remains to be seen. As Rice and Slaney (2002) have pointed out, these relationships may not be applicable to the general population. There have been studies, such as Fry (1995), Martin and Ashby (2004), and Slaney, Rice, and Ashby (2002), that have suggested some kind of relationship between perfectionism and the facets of quality of life with other populations. Performing a large-scale study would provide more insight. Research may determine the degree to which links found in this and other studies carry over to all populations.

## 5.3 Limitations

While this thesis was successful in replicating the studies of Slaney, Rice, Mobley, Trippi and Ashby (2001) and Rice and Slaney (2002), it is recognized that there

were limitations. Both the definition and concept of perfectionism are relative and there is no agreed upon definition. Therefore, any precise measure of it becomes difficult. The fact that this study is seeking to quantify qualitative experiences, issues of validity exist. Because responses in the questionnaires were based on self-reporting, the validity of the study was dependant on the honesty of the respondents.

While this thesis replicated the studies of Slaney et al. (2001) and Rice and Slaney (2002), it is clear that the number of participants used here was lower then found in the studies previously mentioned. There are a lower number of participants in each of the clusters (adaptive perfectionists, maladaptive perfectionists, and non-perfectionists). Practical issues, time restraints and subject availability set limits on the scope of this study. While a larger sample would have been preferred, collecting a larger sample simply was not possible.

Another limiting factor was the degree to which quality of life was assessed by the instrument. Questionnaires were limited in their focus on specific aspects of perfectionism and quality of life. Due to the time restraints of the researcher and sample population, these questionnaires were chosen to give a snapshot of the participants.

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# Appendix A – Interdisciplinary Committee on Ethics in Human Research (ICEHR) Permission

**ICEHR No. 2004/05-092-ED**

Mr. Robert Manning
Faculty of Education
Memorial University of Newfoundland

Dear Mr. Manning:

Thank you for submitting for review the proposal for the research project entitled: *"Investigating multi-dimensional perfectionism an the quality of life in students completing a bachelor of education degree at Memorial University of Newfoundland"*, in which you are listed as the Principal Investigator.

The Interdisciplinary Committee on Ethics in Human Research has reviewed this proposal and regrets that it cannot give its approval to the proposal in its present form. Some modifications will be necessary in order to meet the standards set by the Tri-Council Policy Statement on the Ethical Conduct for Research Involving Humans.

In general, the Committee identified three issues that were of concern: recruitment and distribution, consent, and anonymity. As the proposal currently stands, questionnaires are to be distributed and completed in class, and returned by depositing in an envelope at the front of the class. This procedure may present some undue pressure and compromise the privacy of individuals. As well, as a general rule, class time should not be used for the completion of questionnaires. The typical procedure is to explain the project to students and distribute questionnaires. Those who are interested may return the completed (or partially completed) questionnaire at a later date. By doing so, students have an opportunity to think about the project and decide on their own, and complete the work in private.

The proposal indicates that oral consent will be obtained. Typically, returning the completed questionnaire is taken as an indication of consent, and may be a more respectful option than asking them to speak out in class to indicate consent. In addition, students are told that they do not need to answer any question, participation is voluntary. However, statements on the questionnaires themselves indicate that they are not to omit any questions. This will need to be rectified.

It is also indicated in the proposal that identifying information will be collected. Although steps are taken to protect the identities of the individuals, it appears that this step is not necessary. It is not entirely clear from the proposal why identifying information is needed, or why a code is required. If the questionnaires are distributed as a package, and returned as a package, the necessity for matching questionnaires is obviated.

Some additional information may be added to the information sheets:
      -a statement that participation will not affect grades
      -a statement about the storage and use of data
      -a statement about the nature and purpose of the research
      -a statement that the proposal for this research has been approved by the Interdisciplinary Committee on Ethics in Human Research and if they have ethical concerns about the research that are not dealt with by the researcher, they may contact the Chairperson of ICEHR at            or by telephone at 737-8368

Page 2
Mr. Robert Manning

June 9, 2005


If you would like to discuss your proposal with a member of the Committee, please contact Dr. Anne-Marie Sullivan at                                  or Dr. Tim Seifert at                                  and re-submit it with modifications taking account of her/his suggestions as well as those noted above.

Yours sincerely,


T. Seifert, Ph.D.
Chair, Interdisciplinary Committee on
    Ethics in Human Research


TS/jp

cc:     Dr. Anne-Marie Sullivan
        Supervisor


April 7, 2006

Note to reader: All modifications suggested from The Interdisciplinary Committee on Ethics in Human Research were implemented into the proposal and into the thesis.

Rob Manning

June 9, 2005

T. Seifert, Ph.D.
Chairperson
Interdisciplinary Committee on Ethics in Human Research

Dr. Seifert:

I would first like to express my appreciation to you and the committee for the suggestions recommended for my proposal: "Investigating multi-dimensional perfectionism and the quality of life in students completing a Bachelor of Education degree at Memorial University of Newfoundland". As I was reading over your legitimate concerns, I gained an appreciation for the care that must be taken with human subjects during research. During my analysis of the recommendations provided, a couple of questions pertaining to my proposal came to mind.

My original proposal stated that I was going to distribute and ask students to complete questionnaires in class. When finished, I was going to ask students to return questionnaires by depositing them in an envelope at the front of the class. However, this procedure may present some undue pressure and compromise the privacy of individuals. As well, as a general rule, class time should not be used for the completion of questionnaires. I totally understand your concern. The typical procedure is to explain the project to students and distribute questionnaires. Those who are interested may return the completed (or partially completed) questionnaire later. By doing so, students have an opportunity to think about the project and decide on their own, and complete the work in private.

What have been the best past practices of other student researchers who have required participants to return questionnaires? I understand that participants could be instructed to drop off completed questionnaires later in the day (or some other subsequent time) at a secure and neutral location or instructed to drop them off in a sealed box that can be left with the classroom instructor, who can then collect completed or uncompleted questionnaires during upcoming classroom sessions. However, which option is the best option? If I were to decide to use the sealed box option, what are the requirements for an appropriate sealed box?

Secondly, my original proposal stated that students were to be told that they did not need to answer any question they felt uncomfortable answering and that participation is voluntary. However, statements on the questionnaires themselves indicated that they are not to omit any question. Unfortunately, this presents a conflict and I am unsure how to resolve this problem in order to meet ethical and copyright standards. On the one hand, I

must provide the participant the right to omit any question, but on the other hand, I need all questions answered on the APS-R and the WHOQOL-BREF to obtain overall accurate data. Any questions left unanswered will dramatically affect the accuracy of the information and could mean shredding the individual's data. In addition, my permission to use one of the questionnaires, the WHOQOL-BREF, is conditional to the fact that this questionnaire cannot be altered. Dr. Molzahn stated, "You have my permission to use [the WHOQOL-BREF] instrument for the purposes of your research, provided the instrument is not changed or adapted in any way."

If I need all the information on each questionnaire to be answered and also need to allow the participants the right to omit a question, then what course of action would be the best for this situation? What do I need to do in order to follow your ethical concerns while encouraging participants to answer all questions for accurate data and fulfilling my obligation to the WHO in using its unaltered questionnaire? How can I state that on the questionnaire to the participants?

I would appreciate your expert advice concerning these issues. Thanks again for your recommendations and I look forward to incorporating your advice into my new thesis proposal.

Sincerely,
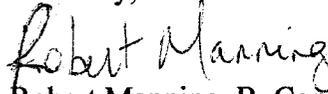
Robert Manning, B. Comm. (Co-op)
Masters of Education student
Memorial University of Newfoundland
St. John's, NL

cc:     Dr. Anne-Marie Sullivan
        Supervisor
        Interdisciplinary Committee on Ethics in Human Research

        Dr. Gary Jeffery
        Thesis Supervisor
        Memorial University of Newfoundland

**Re: ICEHR No. 2004/05-092-ED**

T. Seifert, Ph.D.
Chairperson
Interdisciplinary Committee on Ethics in Human Research

Dr. Seifert:

I have a correction and an addition to my proposal that I would like to bring to your attention.

There is an editorial error in the revised proposal sent to you June 14th, 2005. Under the "Instrument" subsection in the "Methodology" section, it states that, "Several pieces of demographic information will also be collected including name, age, community population size, Grade Point Average (GPA), and employment status." I would like to clarify that "name" should not be written and names will not be taken from participants. The inclusion of names as written in the subsection is an editorial error.

I would also like to add in the thesis that if I am unable to collect a sufficient amount of data for the study, then I would like to get your permission to set up an information table in the hallway of the education building. At this table I will inform students of the study and distribute questionnaires to willing participants. I will follow all the same rights, guidelines, and consent issues that I will be following through the explanation and distribution of questionnaires in classrooms. I will ask participants to drop off the forms in the CMC Library. Under the "Procedure" subsection in the "Methodology" section, I would like to add the following:

> "Pending the levels of response, an effort to collect additional data will be made by inviting persons to participate through posters or other means, such as an information table in the education building. The same procedures and rules respecting the offering of data, right to not participate, confidentiality, sharing of results with participants, and an anonymous drop location will be used. The researcher may also request persons to participate through posting a request for volunteers on the education list serve."

If you have any issues or concerns with the editions that I have outlined, please let me know. Thank you for your patience and understanding.

Sincerely,
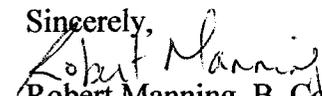
Robert Manning, B. Comm. (Co-op)
Masters of Education student
Memorial University of Newfoundland
St. John's, NL

# Memorial
University of Newfoundland

Office of Research

June 23, 2005

ICEHR No. 2004/05-092-ED

Mr. Robert Manning
Faculty of Education
Memorial University of Newfoundland

Dear Mr. Manning:

Thank you for your submission to the Interdisciplinary Committee on Ethics in Human Research (ICEHR) entitled "*Investigating multi-dimensional perfectionism and the quality of life in students completing a bachelor of education degree at Memorial University of Newfoundland*". The ICEHR is appreciative of the efforts of researchers in attending to ethics in research.

The Committee has reviewed the proposal and we agree that the proposed project is consistent with the guidelines of the Tri-Council Policy Statement (TCPS). Full approval is granted for one year from the date of this letter.

If you intend to make changes during the course of the project which may give rise to ethical concerns, please forward a description of these changes to ICEHR for consideration.

If you have any questions concerning this review you may contact Dr. Anne-Marie Sullivan at am.sullivan@mun.ca. We wish you success with your research.

The TCPS requires that you submit an annual status report to ICEHR on your project, should the research carry on beyond June 2006. Also, to comply with the TCPS, please notify ICEHR upon completion of your project.

Yours sincerely,

T. Seifert, Ph.D.
Chair, Interdisciplinary Committee on
Ethics in Human Research

TS/jp

cc:     Dr. Anne-Marie Sullivan
        Supervisor

# Appendix B – Almost Perfect Scale – Revised

# Questionnaire

# Part II: Almost Perfect Scale - Revised (APS-R) Questionnaire

**Instructions**
The following 23 items are designed to measure attitudes people have toward themselves, their performance, and toward others. There are no right or wrong answers. Use your first impression and do not spend too much time on individual items in responding. Respond to each of the items using the scale below to describe your degree of agreement with each item. To answer each question, circle the appropriate number to the right of each question.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree | Strongly Agree |

1. I have high standards for my performance at work or at school.　　1 2 3 4 5 6 7

2. I am an orderly person.　　1 2 3 4 5 6 7

3. I often feel frustrated because I can't meet my goals.　　1 2 3 4 5 6 7

4. Neatness is important to me.　　1 2 3 4 5 6 7

5. If you don't expect much out of yourself, you will never succeed.　　1 2 3 4 5 6 7

6. My best just never seems to be good enough for me.　　1 2 3 4 5 6 7

7. I think things should be put away in their place.　　1 2 3 4 5 6 7

8. I have high expectations for myself.　　1 2 3 4 5 6 7

9. I rarely live up to my high standards.　　1 2 3 4 5 6 7

10. I like to always be organized and disciplined.　　1 2 3 4 5 6 7

11. Doing my best never seems to be enough.　　1 2 3 4 5 6 7

12. I set very high standards for myself.　　1 2 3 4 5 6 7

13. I am never satisfied with my accomplishments.　　1 2 3 4 5 6 7

14. I expect the best from myself.　　1 2 3 4 5 6 7

15. I often worry about not measuring up to my own expectations.　　1 2 3 4 5 6 7

16. My performance rarely measures up to my standards.　　1 2 3 4 5 6 7

17. I am not satisfied even when I know I have done my best.　　1 2 3 4 5 6 7

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree | Strongly Agree |

18. I try to do my best at everything I do.                                   1 2 3 4 5 6 7

19. I am seldom able to meet my own high standards of performance.            1 2 3 4 5 6 7

20. I am hardly ever satisfied with my performance.                           1 2 3 4 5 6 7

21. I hardly ever feel that what I've done is good enough.                     1 2 3 4 5 6 7

22. I have a strong need to strive for excellence.                            1 2 3 4 5 6 7

23. I often feel disappointment after completing a task because I know I could 1 2 3 4 5 6 7
have done better.

(Slaney, Mobley, Trippi, Ashby, & Johnson, 1997)

# Appendix C – Demographic Information

# Part I: Demographic Information

**Instructions**
Please check one of the provided answers for each question.

I was born in:

☐ Newfoundland and Labrador      ☐ United States of America (USA)

☐ Canada (another province/territory)      ☐ Another country besides Canada/USA

My gender is:

☐ Male     ☐ Female

My employment status outside of school is:

☐ Part-time     ☐ Self-employed

☐ Full-time     ☐ Unemployed

☐ Retired     ☐ Homemaker

I am between _____ years old:

☐ 19 – 23     ☐ 34 – 38

☐ 24 – 28     ☐ 39 – 43

☐ 29 – 33     ☐ 44 – 65

My martial status is:

☐ Single     ☐ Widowed

☐ Engaged     ☐ Separated

☐ Married/United     ☐ Divorced

My ethnical background is:

☐ European Descent (Caucasian)      ☐ East Indian

☐ African Descent (Black)      ☐ Hispanic/Latino

☐ Aboriginal      ☐ Middle Eastern

☐ Asian      ☐ Other

The religion I practice is:

- ☐ Christianity
- ☐ Islam
- ☐ Hinduism
- ☐ None/Agnostic
- ☐ Buddhism
- ☐ Other
- ☐ Judaism

My home community has a population of:

- ☐ More than 5,000 people
- ☐ Less than 5,000 people

The average in my last year of high school was between:

- ☐ 90 – 100
- ☐ 60 – 69
- ☐ 80 – 89
- ☐ Less than 60
- ☐ 70 – 79
- ☐ Did not finish High School

My current Grade Point Average (GPA) in the undergraduate program is:

- ☐ 3.50 – 4.00
- ☐ 2.00 – 2.49
- ☐ 3.00 – 3.49
- ☐ Less than 2.00
- ☐ 2.50 – 2.99
- ☐ Not Available

The highest level of education I have completed is:

- ☐ Some College
- ☐ An Undergraduate Degree
- ☐ A College Diploma
- ☐ Two Undergraduate Degrees
- ☐ Some University
- ☐ A Post-Graduate Degree

# Appendix D – World Health Organization Quality of Life Scale (WHOQOL-BREF)

## Part III: WHOQOL-BREF (Quality Of Life) Questionnaire

## Instructions

This assessment asks how you feel about your quality of life, health, & other areas of your life. If unsure about which response to give to a question, please choose the one that appears most appropriate. This can often be your first response.

Please keep in mind your standards, hopes, pleasures and concerns. We ask that you think about your life in the **last two weeks.** For example, thinking about the last two weeks, a question might ask:

|  | Not at all | Not much | Moderately | A great Deal | Completely |
|---|---|---|---|---|---|
| Do you get the kind of support from others that you need? | 1 | 2 | 3 | 4 | 5 |

You should circle the number that best fits how much support you got from others over the last two weeks. So you would circle the number 4 if you got a great deal of support from others as follows.

|  | Not at all | Not much | Moderately | A great Deal | Completely |
|---|---|---|---|---|---|
| Do you get the kind of support from others that you need? | 1 | 2 | 3 | (4) | 5 |

You would circle number 1 if you did not get any of the support that you needed from others in the last two weeks.

**Please read each question, assess your feelings, and circle the number on the scale for each question that gives the best answer for you.**

| | Very poor | Poor | Neither Poor nor Good | Good | Very Good |
|---|---|---|---|---|---|
| 1. How would you rate your quality of life? | 1 | 2 | 3 | 4 | 5 |

| | Very Dissatisfied | Dissatisfied | Neither Satisfied nor Dissatisfied | Satisfied | Very Satisfied |
|---|---|---|---|---|---|
| 2. How satisfied are you with your health? | 1 | 2 | 3 | 4 | 5 |

The following questions ask about **how much** you have experienced certain things in the last two weeks.

| | Not at all | A Little | A moderate amount | Very much | An Extreme amount |
|---|---|---|---|---|---|
| 3. To what extent do you feel that physical pain prevents you from doing what you need to do? | 1 | 2 | 3 | 4 | 5 |
| 4. How much do you need any medical treatment to function in your daily life? | 1 | 2 | 3 | 4 | 5 |
| 5. How much do you enjoy life? | 1 | 2 | 3 | 4 | 5 |
| 6. To what extent do you feel your life to be meaningful? | 1 | 2 | 3 | 4 | 5 |

| | Not at all | A Little | A moderate amount | Very much | Extremely |
|---|---|---|---|---|---|
| 7. How well are you able to concentrate? | 1 | 2 | 3 | 4 | 5 |
| 8. How safe do you feel in your daily life? | 1 | 2 | 3 | 4 | 5 |
| 9. How healthy is your physical environment? | 1 | 2 | 3 | 4 | 5 |

The following questions ask about **how completely** you experience or were able to do certain things in the last two weeks.

| | Not at all | A little | Moderately | Mostly | Completely |
|---|---|---|---|---|---|
| 10. Do you have enough energy for every day life? | 1 | 2 | 3 | 4 | 5 |
| 11. Are you able to accept your bodily appearance? | 1 | 2 | 3 | 4 | 5 |
| 12. Have you enough money to meet your needs? | 1 | 2 | 3 | 4 | 5 |
| 13. How available to you is the information you need in your day-to-day life? | 1 | 2 | 3 | 4 | 5 |
| 14. To what extent do you have the opportunity for leisure activities? | 1 | 2 | 3 | 4 | 5 |

| | Very Poor | Poor | Neither poor nor good | Good | Very Good |
|---|---|---|---|---|---|
| 15. How well are you able to get around? | 1 | 2 | 3 | 4 | 5 |

The following questions ask you to say how **good or satisfied** you have felt about various aspects of your life over the last two weeks.

| | Very Dissatisfied | Dissatisfied | Neither Satisfied nor Dissatisfied | Satisfied | Very Satisfied |
|---|---|---|---|---|---|
| 16. How satisfied are you with your sleep? | 1 | 2 | 3 | 4 | 5 |
| 17. How satisfied are you with your ability to perform your daily living activities? | 1 | 2 | 3 | 4 | 5 |
| 18. How satisfied are you with your capacity for work? | 1 | 2 | 3 | 4 | 5 |
| 19. How satisfied are you with yourself? | 1 | 2 | 3 | 4 | 5 |
| 20. How satisfied are you with your personal relationships? | 1 | 2 | 3 | 4 | 5 |
| 21. How satisfied are you with your sex life? | 1 | 2 | 3 | 4 | 5 |
| 22. How satisfied are you with the support you get from your friends? | 1 | 2 | 3 | 4 | 5 |
| 23. How satisfied are you with the conditions of your living place? | 1 | 2 | 3 | 4 | 5 |
| 24. How satisfied are you with your access to health services? | 1 | 2 | 3 | 4 | 5 |
| 25. How satisfied are you with your transport? | 1 | 2 | 3 | 4 | 5 |

The following question refers to **how often** you have felt or experienced certain things in the last two weeks.

| | Never | Seldom | Quite Often | Very Often | Always |
|---|---|---|---|---|---|
| 26. How often do you have negative feelings such as blue mood, despair, anxiety, depression? | 1 | 2 | 3 | 4 | 5 |

Did someone help you to fill out this form? ...............................................................................
.......................................................................................................................................

How long did it take you to fill this form out? .......................................................................
.......................................................................................................................................

Do you have any comments about the assessment?
.......................................................................................................................................
.......................................................................................................................................

## THANK YOU FOR YOUR HELP

# Appendix E – WHOQOL-BREF Permission

## WHOQOL-BREF Permission

From: Anita Molzahn [mailto:amolzahn@uvic.ca]
Sent: May 2, 2005 11:24 PM
To: Rob Manning
Subject: RE: Permission to use WHOQOL-100 and WHOQOL-BREF


Hi Rob, The instruments are available on the website:
http://www.who.int/evidence/assessment-instruments/qol/. The scoring
instructions for the BREF are on the front page of the BREF. Once you decide
what instrument you plan to use, I can send you a complete scoring manual.
We have asked people if they would be willing to share their data for
further psychometric testing, but that is not a requirement for use. You
have my permission to use either instrument for the purposes of your
research, provided the instrument is not changed or adapted in any way. If
you need a more formal letter for your thesis with this authorization, let
me know. Let me know if you have any questions. Good luck with your
research. All the best, Anita Molzahn

Anita Molzahn, PhD, RN
Professor, School of Nursing
PO Box 1700
Victoria, B.C., Canada V8W 2Y2
(250)721-7958
(250)721-6231 (fax)

# Appendix F – Classroom Explanation

## Classroom Explanation

The introduction will be as follows:

"Good morning/afternoon. My name is Robert Manning and I am a Masters of Education student here at Memorial University of Newfoundland. I am currently completing a thesis that is researching whether there is a relationship between multi-dimensional perfectionism and self-reports of quality of life experienced by undergraduate education students. I am here today to ask you for your help in completing two short questionnaires and a demographic questionnaire. The purpose of my thesis is (a) to determine the degree to which perfectionistic thinking (adaptive and maladaptive) exists within the education faculty, (b) to provide supporting evidence to the multi-dimensional concepts of perfectionism, and (c) to determine if there is a relationship between multi-dimensional perfectionism and quality of life.

You can help me by completing these straightforward questionnaires. The three-part questionnaires will take approximately 15 minutes to complete and participation is voluntary. Completing part or all of this survey is voluntary, and you can stop answering questions at any time, without penalty. Your identity is not required and your tests will be held confidentially in a locked cabinet and locked room. There will be no sharing of the data with the instructor and participation will not affect your grades. Only the researcher will have access to the information and provided information will only be used for research purposes. You have the right to have a summary of study results upon request. Please put completed questionnaires into the labelled box in the CMC Library.

The proposal for this research has been approved by the Interdisciplinary Committee on Ethics in Human Research and if you have ethical concerns about the research that are not dealt with by the researcher, you may contact the Chairperson of ICEHR at icehr@mun.ca or by telephone at 737-8368. Does anyone have any questions?"

**Appendix G – Letter to Participants**

# Quality of Life and Multi-Dimensional Perfectionism

To keep submissions anonymous, please do NOT provide your name. This three-part questionnaire will take approximately 15 minutes to complete.

## Purpose of questionnaire

My name is Rob Manning and I am a Masters of Education candidate studying at Memorial University of Newfoundland. The purpose of this questionnaire is to explore whether there is a relationship between multi-dimensional perfectionism and self-reports of quality of life experienced by undergraduate education students.

## Your rights

Before you consider becoming a participant, I would like to advise you of your rights. You have a choice on whether to complete and return this questionnaire. If you choose to complete it, then you have the right to:

- Skip any question you feel uncomfortable answering, without penalty.
- Discontinue your participation at any time, without question.
- Have your data secured and kept anonymous.
    - You are not required to provide your name to complete this survey.
    - Your questionnaires will be held confidential in a locked cabinet in a locked room and only the researcher will have access to the information.
    - There will be no sharing of the data with the instructor and participation will not affect your grades.
- Have a summary of the study results upon request.

You are assured that the highest standards of professional conduct will be upheld in the collection and reporting of the information you provide. You will not receive any reward or incentive for participating. The proposal for this research has been approved by Memorial University's Interdisciplinary Committee on Ethics in Human Research (ICEHR). If you have ethical concerns about the research (such as the way you have been treated or your rights as a participant), you may contact the Chairperson of the ICEHR at icehr@mun.ca or by telephone at 737-8368.

Please follow the instructions for each part of the questionnaire very carefully. Please put completed questionnaires into the labelled box in the Curriculum Materials Centre (CMC) room ED-2030.

Sincerely,

Robert (Rob) Manning, B. Comm. (Co-op)
Masters of Education Candidate
Memorial University of Newfoundland
Email: k79rjm@mun.ca   Room: ED-4007B