THE COMPONENTS, CONSTRUCTION AND CORRELATES OF QUALITY OF SCHOOL LIFE IN SECONDARY EDUCATION

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ATHANASIOS KARATZIAS

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Abstract of Thesis

The present thesis is an investigation of the components, construction and correlates of Quality of School Life (Q.S.L.). Firstly, a new Q.S.L. scale was constructed and its psychometric properties tested. Secondly, the association between demographics (gender, age / school grade, school), school stress, well – being and personality (self – esteem, affectivity, locus of control) and Q.S.L. was studied. Cross – cultural comparison between Scotland and Greece regarding levels of Q.S.L., as well as correlates and predictors of Q.S.L. across cultures, were also investigated. Finally, the association between Q.S.L. and school performance, school misbehaviour, bullying / victimisation and substance use, in comparison with school, well – being and personality factors, was studied. Participants consisted of a sample from two secondary schools in Stirling area, in Scotland (n = 425) and a sample of Greek secondary school pupils from Agrinio region (n = 173). Data were collected by means of questionnaires. Eleven scales were administered to the Scottish sample (e.g. demographics, affectivity) and six scales (e.g. demographics, school stress) were administered to the Greek sample. Univariate parametric (e.g. t – test, ANOVA) and non – parametric tests (e.g. chi – square) were used in data analysis. Mutli – variate tests (e.g. Logistic regression) were also used. Seven cross – sectional studies are reported.

Results indicated that the new Q.S.L. scale has good psychometric qualities both in the Scottish and the Greek sample, although such qualities need to be investigated further. Personality factors were found to be the best predictors of Q.S.L. in two studies. In the study regarding the correlates of Q.S.L., it was found that school self – esteem was the best predictor of Q.S.L., whereas in the cross – cultural study between Scotland and Greece it was found that, for both Scottish and Greek samples, positive

affectivity was the best predictor of Q.S.L. However, both Greek and Scottish samples in the cross – cultural study consisted of 4th to 6th graders, whereas the sample in the study regarding the correlates of Q.S.L. (Scottish only) consisted of 1st to 6th grade secondary school pupils. Greek and Scottish pupils were found to differ in relation to Q.S.L. levels total and across domains with a privilege of Scottish pupils regarding Q.S.L.

Q.S.L. was not found to be the best predictor of self – rated performance neither across subjects nor overall. School self – esteem was found the best predictor of self – rated performance overall. However, Q.S.L. was found to be associated with school misbehaviour, but again it was not its best predictor. The best predictor of school misbehaviour was found to be gender, with males being more likely to misbehave than females. Nevertheless, Q.S.L. was found the best predictor of overall involvement in bullying and / or victimisation, alongside with school stress, implying its significant association with the phenomenon as a whole. It was also found that peer self – esteem and demographics, such as gender, differentiate bullies and victims. Finally, Q.S.L. was found to predict at best smoking maintenance, whereas other factors (e.g. school stress) where found to predict at best experimentation with smoking, alcohol and illicit drugs and maintenance of alcohol use.

The role of Q.S.L. as well as of demographic, school stress, well – being and personality factors in relation to school performance, school misbehaviour, bullying and substance use are discussed. The results of each study are discussed in relation to previous relevant literature, practical implications for each area, limitations of the research, and some suggestions for future research are also provided.

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Preface of Chapters

The present thesis is an investigation of association between Quality of School Life (Q.S.L.) with various issues that may concern adolescents, their parents and educators, such as performance, school misbehaviour, bullying and substance use. However, since previous research regarding Q.S.L. in secondary school pupils, in terms of instruments and correlates, appeared to be rather limited, the construction of a new scale and the investigation of its correlates also became a central theme in the thesis. It may also be important to note that Q.S.L. - and its association with the aforementioned issues - was not studied alone, but in comparison to other demographic (age / school grade, gender, parental socio-economic and educational status) school stress, well – being and personality factors (self – esteem, affectivity, locus of control), as one of the prime aims of the theis was to compare Q.S.L. and other factors regarding their effects on such important issues.

The current thesis is divided into six parts and eleven chapters.

Part A includes two chapters which involve review of the literature of the main variables of the present project including Quality of Life (Q.O.L.) and Q.S.L. However, it might be important to mention that relevant literature regarding issues that have been studied in the project (i.e. bullying, substance use) in relation to Q.S.L., are also presented in results chapters (4 to 10). Thus, the first chapter reviews the literature on Quality of Life (Q.O.L.) which provided the basis for the construction of the concept of Q.S.L., for which main theoretical and research issues are presented in chapter 2.

Part B, which contains chapter 3, outlines the methodological issues that will be dealt in the course of the majority of the results chapters (5, 7, 8, 9, 10) and these include samples, procedures and measures used in these chapters.

Part C consists of chapter 4, which describes the construction and the psychometric properties of the Q.S.L. scale that was extensively used in the thesis. Chapter 5 describes the construction of a Q.S.L. model that included school stress, demographic and personality variables as well. Finally, chapter 6 of part C describes the results of a cross - cultural study in relation to the levels of Q.S.L., the correlates and predictors of Q.S.L., between Scotland and Greece.

Parts D and F compare Q.S.L. and other variables (demographic, school stress, well – being and personality) and their levels of association with school performance (chapter 7), school misbehaviour (chapter 8), bullying (chapter 9) and substance use (chapter 10). In chapter 7, the results of a study concerning the association between Q.S.L. and other factors with self – rated performance, both overall and across different subjects (English, arts, maths, science, modern studies and geography) are presented. Chapter 8 highlights the findings of a study regarding the association between demographic factors, school factors – including Q.S.L., well – being and personality factors on school misbehaviour. In chapter 9, the role of Q.S.L., demographics, school stress, well – being and personality factors are comparatively studied in relation to bullying and victimisation, in order to identify both, significant factors that are different and factors that are common in bullies and victims. In part F that includes, chapter 10, the same factors that were used in chapter 9, are studied in relation to use and maintenance of use of tobacco, alcohol and illicit drugs.

Finally in part G, chapter 11 summarises the main findings of the research studies (chapters 4 to 10) of the present thesis, discusses limitations and practical implications of the thesis and explores avenues for future research.

Part A – Literature Reviews Regarding

Quality of Life (Q.O.L.) and Quality of School Life (Q.S.L.).

Chapter 1: Quality of Life: Theoretical and Research Implications

1.1 Introduction

Quality of Life (Q.O.L.) has been appeared across the past literature as a blurred, and multi-meaning concept (Kovac, 1995). Past research has also raised a number of questions such as: "what does Q.O.L. really include? Can we objectively measure Q.O.L. using scientific methods or does it refer only to individual abstractions, which are beyond measurement?" However, Q.O.L. became a central theme in various research areas including psychological, anthropological and medical studies. In addition, Q.O.L. is an everyday and widely used term by politicians and policy makers to describe ideal living conditions.

Although this area of research seems to be rather confused, the following review attempts to highlight some problems related to the definition and research of the concept.

1.2 Historical context

Q.O.L. has been always a major concern of all people and cultures and has been widely discussed in philosophical and literature texts, with an attached meaning of "well – being". Aristotle (as cited in Barrow, 1980) in 5th century b/c claimed that people should adopt a plan of life towards a final end (a goal). Seeking to fare well could lead to the experience of "eudaimonia" (well - being). Stoics emphasised that attitudes and activities that facilitate detachment from the world lead also to well - being. Rousseau, placed the source of well - being in animate things (e.g. food) and Thoreau, claimed that well - being and happiness comes from activity (Diener, 1984). All these earlier representations are also reflected in modern theories of Q.O.L., discussed later (i.e. objective and subjective indicators of well - being).

Q.O.L. or Subjective Well - Being (S.W.B.) came into being as a research field around 1960. The Report of President Eisenhower's Commission on National Goals (1960) and Bauer's work (1966) (as cited in Schuessler and Fisher, 1985), both conducted in USA, on the effects of the national space program on American society, have contributed towards the study of Q.O.L as a separate field in scientific research. The American President Johnson reported in 1964 (as cited in Campbell, 1981) that:

"The task of the Great Society is to ensure our people the environment, the capacities, and the social structures which will give them a meaningful chance to pursue their individual happiness. Thus, the Great Society is concerned not with how much, but with how good - not with the quantity of goods but with the quality of our lives".

Gurin's (1960) earlier work on individual happiness provided the American community with results concerning sources of happiness or unhappiness, things that may cause worries and estimates of future happiness. Research in the area of Q.O.L. in the 1970's started from the Board of Directors of the American Research Institutes conference, which reviewed any Q.O.L. research activities till then and introduced new research directions for the future. Early research targeted the increase of productivity, organisational training and improvement in the educational goals. At the above meeting, which was carried out in 1971, it was agreed that it would be desirable to identify and study the main determinants of Q.O.L. and use these research findings as the basis for future research attempts (Flanagan, 1982).

Later, two important research attempts in the area of Q.O.L. were carried by Campbell et al. (1976) and Andrews and Witney (1976) at the University of Michigan, at a national level, in order to identify Q.O.L. indicators in USA. The core characteristics of these two studies were:

- they focused on the individual perception of well - being rather than the objective indicators, such as family income, health, productivity, accident rates etc. which had been the main focus of Q.O.L. research till then. Since then, more emphasis has been paid to S.W.B.
- they attempted to assess the well being of the American population "globally" and "generally" and not partially.
- they used measures with respect to specific life - domains (Flanagan, 1982) such as marriage, family life, health, neighbourhood, friendship, housework, job, life in USA, the city or county, work, housing, usefulness of education, standard of living, level of education and savings.

Unfortunately, these early attempts in the area of Q.O.L. in the USA had not much impact in Europe. Although the general concern in science and literature was about quality rather than quantity of life, early European research has lacked thorough systematic and scientific research in the area of Q.O.L., at least in the way it was approached in the USA. Later, in the 1980's and 1990's, research on Q.O.L. in Europe has predominantly focused on physical and mental health (e.g. Hopkins, 1992; Fayers and Machin, 2000), due to the increasing focus on health promotion. Thus Q.O.L. became a synonym of "positive health" (Bowling, 1991; Oliver et al., 1996). Nevertheless, Thuriaux (1988) has evaluated 32 European member states of the WHO (World Health Organisation) and reported that only two countries had made attempts as regards the quantitative measurement of health status, indicating that further work needs to be done. In addition, the definition of health from the WHO, which incorporates physical, psychological and social components, has stimulated research on subjective rather than objective indicators of health (e.g. subjective general well – being), across the world. More recently new instruments have been developed and

validated by the WHO with focus on health and general Q.O.L. (e.g. The WHO Well – being Scale, Heun et al., 1999). Bowling (1991) in her text "Measuring Health – A review of quality of life measurement scales" has presented and described measures of functional ability, health status, psychological well – being, social networks and social support and measures of life satisfaction and morale, as measures of Q.O.L. Such dimensions of Q.O.L. are still dominant in current research, with main focus on physical health (e.g. cancer, epilepsy), learning disabilities as well as mental health (Seed and Lloyd, 1997).

1.3 The meanings of Q.O.L.

Since Q.O.L. reflects numerous notional representations, it is worth looking at the various meanings the term has taken across literature.

- The first meaning of the term describes Q.O.L. as "fulfilment of personal goals". This meaning has its roots in the Ancient Greek civilisation and has been represented by the self - actualisation and the self - fulfilment theoretical perspectives of Maslow (Maslow, 1968).
- The second meaning concerns the ability to lead a "normal life". The idea of Q.O.L. as normality is extremely vague, since it could take as many different meanings as the individual entities of the population. It is mainly used by politicians and it has been kept vague and rather undefined (Edlund and Tagredi, 1985).
- The third meaning of the concept refers to personal "social utility". Since socially useful behaviour incorporates individual variants, various potential meanings of the term would appear. Although this ideological variant could be represented via

family, personal values or employment, it is mainly used in the political arena where economic considerations are dominant.

- The fourth meaning includes the "individualistic" view of Q.O.L. According to this meaning each individual defines personally what constitutes his / her own Q.O.L. Andrews and Witney (1976), found that 99% of their sample perceived their Q.O.L. as a quite personal matter. However, this notional representation is risky when it comes to issues like suicide, where society usually develops its own mechanisms to prevent such phenomena (e.g. suicide prevention programmes) (Edlund and Tagredi, 1985). This example illustrates the limitations of personal choice on Q.O.L. issues. Apart from the above limitations, the "individualistic" view of Q.O.L. has become a popular idea lately.
- Finally, Q.O.L. is used in everyday situations in terms of positive over negative affect (Bradburn, 1969). This meaning of Q.O.L. incorporates pleasant emotions derived from the experience of positive affect. Either the experience of positive emotions or the predisposition to such emotions could lead to higher levels of Q.O.L., whether or not these are experienced regularly (Diener, 1984).

Although it seems difficult to find similarities in all the above categorical representations of Q.O.L. there are three basic similarities:

- Firstly, Q.O.L. seems to be mainly subjective. Campbell (1976) has proposed that S.W.B. resides within the experience of the individual. However, objective conditions such as health, comfort or wealth are incorporated in the meaning of S.W.B. or Q.O.L. although they are absent from the actual definitions (Kammann, 1983). Other theorists in the area, proposed that such conditions as the ones described above are part of the Q.O.L. (Diener, 1984).

- Secondly, Q.O.L. or S.W.B. incorporates positive meanings. Although the relationship between the positive and negative factors is not very clear, it is estimated that Q.O.L. is more than the absence of negative factors.
- Thirdly, Q.O.L includes a global assessment of all the aspects of a person's life. Despite of the method of assessment (questionnaire, interview etc.) used, emphasis is given on integrated judgements. Moreover, time is another issue in Q.O.L. studies, since there are some suggestions that the perception of Q.O.L. could be subject to changes over time. Nevertheless, measures studying Q.O.L. may vary from a few days to weeks or the entire life. Decisions concerning the time frame of the study should be based on the individual research necessities (subject, population etc.) (Diener, 1984).

1.4 Defining Q.O.L.

Till now numerous attempts have been made in order to provide a definition of Q.O.L. Analysing the term in its parts, specialists have agreed that the term "quality" has a relevant meaning as the term "grade" and that grade might range from low to high or from better to worse. In contrast, less agreement has been reached about the term "life". Dominant trends have restricted its meaning only to mental life, but this hypothesis neglects the environmental aspects of the term (Schuessler and Fisher, 1985).

Since Q.O.L. has been presented as an elusive concept across the literature, no universally acceptable definition is available at the moment. Romney et al. (1994) have presented various reasons for this:

- First, psychological processes related to experiences of Q.O.L. could be interpreted through different and various conceptual fields. Thus, discrepancies in the views of

different researchers might arise in terms of their models or the facts they present. These discrepancies provide difficulties in the integration of Q.O.L. models.

- Second, the term Q.O.L. represents a "value" context. "Superior" Q.O.L. has been defined and valued by studies in contemporary society predominantly including middle class populations.
- Third, the term encompasses developmental issues related to human growth, life span and psychological processes, which are consequently influenced by various environmental factors and personal value systems.

In addition to the above, the term has taken various meanings across the literature. Many authors have used the term interchangeably with other concepts such as well - being, psychological well - being, happiness, morale, life satisfaction or affectivity (Diener, 1984; Rice, 1984; Cheng, 1988; George, 1992). Other authors have used the term as a higher order concept describing S.W.B., positive - negative affect or life satisfaction (Davis and Fine-Davis, 1991; King et al., 1992; Frish et al., 1992). Others have argued that Q.O.L. refers to a multidimensional concept, which includes measures of life satisfaction or positive - negative affect (Pavot and Diener, 1993; Abbey and Andrews, 1986). In the present review S.W.B. and life satisfaction are used interchangeably with the term Q.O.L., since the above terms were treated as equal in the past.

Despite the diversity that exists among different theorists and researchers, a number of studies have proposed high inter-correlations among different measures of Q.O.L. based on different theoretical models. Pelizarri and Evans (1992) have attempted to examine the relationships among different measures of Q.O.L. The measures included the Quality of Life Questionnaire (Evans and Cope, 1989 - student version), a set of Perceived Q.O.L. scales designed for the needs of the study (Pelizarri, 1992 as cited in

Evans, 1994), the Positive / Negative Affect Schedule (Watson et al, 1988); the Satisfaction with Life Scale (Diener et al., 1985) and the Ryff Scales of Psychological Well - Being (Ryff, 1989). Their sample consisted of 212 introductory psychology students. Factor analysis performed on the global measures described above (except the Ryff scales since they are not a global measure) and one factor solution was obtained accounting for the 57% of the Q.O.L. total variance. The correlations between the measures and the single factor were:

Measure	**Correlation with the single factor**
Quality of Life Questionnaire Score	0.83
Perceived Quality of Life Score	0.83
Positive Affect Score	0.73
Negative Affect Score	- 0.59
Satisfaction with Life Score	0.77

Studies like this suggest that Q.O.L. is a multidimensional concept, which includes affective and cognitive components, in terms of its measurement and perception.

On the other hand, Brock (1993) proposed three dominant approaches to determine and define Q.O.L. The first approach is related to life characteristics based on religious, political or other domains of the contemporary society. For example, helping others might lead to high levels of Q.O.L. (Diener and Suh, 1997). The second approach to Q.O.L. refers to the satisfaction of certain preferences. Thus, people are selecting those sources of satisfaction, which could enhance high levels of Q.O.L. Finally, the third definition, highlights the role of personal experience. Feelings of joy or pleasure are paramount to this approach (Diener and Suh, 1997).

Thus, what is Q.O.L.? One of the most acceptable definitions across the literature describes Q.O.L. as "a general sense of well - being" (Campbell et al., 1976). Although this definition appears to be rather general, it incorporates the multiple meanings of the term described earlier on.

1.5 Research models of studying Q.O.L.

The two basic models for the study of Q.O.L. found across the literature are the domain approach and the discrepancy approach.

1.5.1 The domain approach

The domain approach starts from the assumption that the overall Q.O.L. is related with feelings of satisfaction or dissatisfaction that people have in several life domains. Andrews and Witney (1976) have proposed three clusters of domains:

- the first cluster includes domains from the primary social group (family, marriage, friendship)
- the second cluster includes domains that related to the man / environment transaction (work / educational level).
- the third cluster includes domains concerning general environmental aspects (e.g. transportation, neighbourhood).

The above clusters have been found to be maintained in different populations and the relationship between different domains and global Q.O.L. assessment has been found to be a linear one. A third point, concerning the relationship between global Q.O.L. scores and domain scores, refers to the application of equal or different weights to the scores of the domain satisfaction approach. Research in the area has shown that certain domains are more strongly correlated with global life satisfaction than others (Vermunt et al., 1987). However, the weighted summation model (equal weights of

the different domains) has been supported in the studies of Michalos (1980, 1983) and Campbell et al., (1976) and has been accepted as the best solution.

1.5.2 The discrepancy approach

The discrepancy approach which was originally developed by Michalos (1985), explains human satisfaction as a function of the perceived discrepancy between the present situation and the situation(s) where the individual compares his / her present situation. This comparison might be due to past expectations, future expectations (e.g. Campbell, 1976), aspirations (Michalos, 1983), the perceived situation of others' (e.g. Emmons and Diener, 1985) personal needs (e.g. Andrews and Witney, 1976), personal experiences in the past and personal values.

Research conducted by Michalos (1985) resulted in the development of the Multiple Discrepancies Theory (MDT), which consists of the following hypotheses.

1. Q.O.L. or satisfaction is a process of the perceived discrepancy between what one has and:

- what one aspires to
- what relevant others have
- the best situation one has had in the past
- what one expected three years ago to have now
- what one expects to have in the future (over five years)
- what one deserves
- what one needs

2. All the above discrepancies except the one between what someone has and what he / she aspires to, represent objective and measurable discrepancies which can influence the levels of ones satisfaction and behaviour.

3. The discrepancy between what one has and what aspires to is the mediating variable between all the other discrepancies and the levels of Q.O.L.
4. The need to get and / or to maintain satisfaction is a behavioural motive, which facilitates the perception of expected levels of satisfaction.
5. All the discrepancies could be influenced by various other factors such as age, educational level, ethnicity, income, self - esteem and social support (conditioners).
6. Discrepancies are influenced by the general human behaviour and the conditioners.

Michalos (1985) has tested MDT hypothesis with success. However, the relative salience may vary in different populations and cultures (Vermunt, 1989).

Although Andrews and Whitney (1976) and the M.D.T. models seem to be rather different they hold many similarities. Both models make the following assumptions, which have been highlighted in Campbel's (1976) work:

- Self-perceptions determine man / environment transaction and that perception is influenced by personal values, expectations, personality characteristics, demographic variables etc.
- Feelings of satisfaction result from the perception of the present situation. Rules, expectations and the objective characteristics of the environment might affect this perception.
- The amount of the perceived satisfaction is the product of the perceived discrepancy between the present situation and the situation that is used for the comparison.
- People guide their behaviour in order to increase their level of satisfaction.
- Changes in the amount of satisfaction that someone perceives could be a result of:

- changes in the circumstances of objective life.

- changes in the perceived situation.

- changes related to factors used for the evaluation of the situation.

■ Levels of domain satisfaction could be influenced by the perceived attributes to the domains (Vermunt et al., 1989).

The above analysis suggests that the two models could function in a complementary manner. The domain approach emphasises the areas under which the Q.O.L. study should be carried out, while the discrepancy approach is mainly focusing on Q.O.L. perception. Future research should focus in the different ways that these two models overlap each other, as well as ways of integrating them.

1.6 The distinction between top - down and bottom - up theories of Q.O.L.

Research in the area of Q.O.L. has proposed "top - down" and "bottom - up" theories in relation to global or life domain satisfaction (Stones and Kozma, 1985). Bottom - up theories assume that global Q.O.L. results from the subjective weighting of satisfaction in various life domains (e.g. Headey et al., 1985). For example Rice et al. (1985), viewed family, work, friendships, housing, transportation, religion, self - esteem, free time, financial security and neighbourhood as leading to overall Q.O.L.

Top - down models, on the other hand, claim that global Q.O.L. determines the levels of satisfaction with various life domains. For example, Watson and Clark (1984) proposed that general predisposition towards positive or negative affectivity could affect global Q.O.L., and the levels of Q.O.L. within specific life - domains. Top - down theories view Q.O.L. as stable and not automatically changing due to changes in specific life domains (Lance et al., 1989).

However, both models have found strong support in the area of Q.O.L. Current research directions has focused on bi-directional models of Q.O.L. which are

combining top - down and bottom - up theories, assuming reciprocal influences between global and life - domain satisfaction. Lance et al. (1989) in their study comparing bottom - up, top - down and bi - directional models of Q.O.L., in a sample comprised of University of Georgia professors, found bi - directional models of Q.O.L. as being more useful in comparison with the other two.

1.7 Theorising on Q.O.L.

Literature in the area of Q.O.L. has proposed several theoretical perspectives, which have attempted to investigate what constitutes Q.O.L. The present review will attempt to summarise these different theoretical formulations and separate them into distinctive categories.

The basic distinction to be made between Q.O.L. theories refers to the subjective versus objective oriented theories. Objective theoretical formulations emphasise the use of statistical reports, demographic breakdowns, unemployment rates, levels of pollution, crime statistics etc. However, Tolman's work (1941), which proposed the "Psychological Man" as opposed to the "Economic Man", emphasised the need to focus on psychosocial factors. Thus, subjective oriented theories include general perceptual and experiential aspects of life with focus on subjective judgements concerning particular or global aspects of Q.O.L. (Palys and Little, 1980). Objective oriented aspects may also reflect the economic aspects of the community. The basis of this approach lies on the assumption that financial matters merely contribute to the social growth. Econometric measures could also operate as the most sophisticated tools of Q.O.L. estimation (Bauer, 1966).

1.7.1 Theoretical formulations concerning objective indicators of Q.O.L. (social indicators)

Social indicator has been defined as: *"a statistic of direct normative interest which facilitates concise, comprehensive and balanced judgements about the condition of a major aspect of society; it is, in all cases, a direct measure of welfare.....If it changes in the right direction.....things have gotten better, or people are better off".*

This definition assumes that a social or objective indicator must have face validity or *"receive consensual validation as to the direction of change judged to be good for society"* (Zautra and Goodhart, 1979).

Social indicators or economic approaches stress the people's need to allocate material resources, which lead to the "production" or the "utility" of satisfaction. Liu (1976) and Juster et al. (1981) proposed that material well - being could result from the utility maximisation of the basic capital goods such as money, time, and assets or skills, such as knowledge or social interactions. Thus, Q.O.L. is a by - product of the maximisation of the available stocks, contexts and time.

There are a large number of social indicators. Indicatively, the list proposed by Flax (1972) is described below, which was resulted from Q.O.L. studies in Urban areas in USA. The list includes (Zautra and Goodhart, 1979).

1. Percentage of labour force unemployed.
2. Percentage of households of income less than $3000 per year.
3. Per capita income adjusted for cost living.
4. Cost of housing a moderate - income family of four.
5. Infant (under 1 years old) deaths per 1000.
6. Reported suicides per 100000.
7. Reported robberies per 100000.

8. Ratio between non - white and white employment rates.
9. Per capita contributions to the United Fund Appeal.
10. Percentage of voting - age population vote in the last presidential elections.
11. Median school years completed by adults.
12. Cost of transportation for a moderate - income family of four.
13. Average yearly concentrations of three air pollution components and change in the concentration of suspended particulates.
14. Estimated number of narcotics addicts per 10000 population.

Although different lists of social indicators have been proposed by different authors, some commonalties have emerged, about the types of social problems addressed by the social indicators. Bloom (1978) for instance suggested that health, social welfare, education, and public safety are the most important and crucial social problems that social indicators have to address. Convergence concerning the different lists might be possible according to Kulckholm and Stoodbeck (1961), who argued that the majority of the population share similar concerns. Again, it becomes important to note that such lists have been emerged for USA population, whereas European published literature lacks the development of such lists.

Objective indicators reflect important aspects of the society, which could be "precisely" measured. However, differences in living standards in different areas, subjective decisions on the measurable variables or cultural differences could lead to research inconsistencies (Diener and Suh, 1997).

1.7.2 Theoretical formulations concerning subjective indicators (psychological indicators)

Psychological indicators attempt to explain Q.O.L. by assessing people's subjective reactions to life experiences. The following theoretical perspectives might be

accountable for the individual differences in Q.O.L. levels (Zautra and Goodhart, 1979). All these different theoretical models have not only tried to define Q.O.L. in their terms but also to offer rationale for possible relationships between Q.O.L. and correlates.

1.7.2.1 The epidemiological perspective

The epidemiological perspective focuses on factors that might increase the probability of disease development. Stressful life events play a crucial role in explaining Q.O.L. levels according to this perspective. These events may vary from marital dysfunction to job loss and other social disruptions and could potentially lead to the development of psychopathology (Dohrenwend, 1973) or physical illness (Dohrenwend and Dohrenwend, 1974). From this point of view the amount of stress produced is a by-product of the level of disruption the event causes to life functioning (see for example Selye, 1956, and the General Adaptation Syndrome).

1.7.2.2 Life - crisis theory

In accordance with this perspective, Q.O.L. results from any crisis induced by developmental or environmental changes. Successfully resolved crisis promotes psychological growth and increases the ability for coping with future crisis. In contrary, unsuccessfully resolved crisis could lead to psychological deterioration and decrease the abilities for future crisis management (Zautra and Goodhart, 1979). At this point social support could play a crucial role since it could provide information or other resources, in order to help overcoming the crisis (Casses, 1975).

1.7.2.3 The competence approach

Competence theories suggested that Q.O.L. results from experiences of self - mastery (Jahoda, 1958), self - efficacy (Bandura, 1977) and competency (White, 1959). This view assumes that people possess inner tendencies to develop skills, promote their

learning and act as independent agents mastering their lives. An environment, which provides an unbalanced level of demands (either too much or too little), could decrease the levels of Q.O.L.

1.7.2.4 Need theories

The need approach which rooted in the works of Freud (1930), Murrey (1951) and Maslow (1954), predisposes that S.W.B. results from the satisfaction of people's own needs. This process changes constantly since people could have many needs that could be satisfied in different ways. These personal needs could be genetically endowed but they could be also influenced by social interactions and processes.

1.7.2.5 Phenomenological approaches

The phenomenological approach, as presented by Ziller (1974) and Gerson (1976) claims that Q.O.L. inheres in self - appraisal which lies in the interaction of self with significant others. This approach underlines the subjectivity, the relativity and the complexity of the Q.O.L. concept (Smedley, 1979), as self – appraisal can be rather subjective.

1.7.2.6 Activity theories

Activity theories start from the assumption that Q.O.L. is a product of human activity (Diener, 1984). The most explicit formulation of these approaches has been expressed via the theory of "flow" (Csikszentmihalyi, 1975). "Flow theory" claims that these activities are pleasurable when the activity challenge is matched to the person's skill level. High levels of Q.O.L. result from people's involvement in interesting for them activities. The interesting aspect of activity theories is that Q.O.L. is due to personal efforts.

1.7.3 The ecological approach

The ecological approach of Q.O.L. (Bubolz et al., 1980) views S.W.B. as a sum of elements which constantly influence each other. Thus, Q.O.L. depends on habitat, which changes as people make various efforts to improve their Q.O.L. The ecological perspective examines the interconnectedness of both animate and inanimate things, with respect to Q.O.L. Thus, it combines social indicators, which are focusing on animate things and psychological subjective indicators that are focusing on inanimate ones. Consequently, the ecological model could be considered as a complete model of Q.O.L. since it combines both objective and subjective indicators of Q.O.L. It has been suggested (Diener and Suh, 1997) that parallel use of objective and subjective indicators could provide positive alternative explanations to the study of Q.O.L., since these two accounts are unlikely to be influenced by common measurement errors. Milbrath (1982) has also presented a Q.O.L. model with many ecological elements. According to him, Q.O.L. and habitat interrelate in such a way, which leads to environmental changes. Millbrath's (1982) approach suggests that Q.O.L. changes all the time following a dynamic process.

All these different subjective models of Q.O.L. have been found to possess stability in their measurement over time and as having a significant ability to capture the individual experiences. However, the fact that they could be influenced by personality and other factors (e.g. mood) may limit the validity and the reliability of measures based on these models (Diener and Suh, 1997). The previous analysis suggests that both types of analyses possess advantages and limitations. Undoubtedly, Q.O.L. comes from a combination of objective and subjective indicators. Nevertheless, how these diverse kinds of indicators interact should be subject to future research.

1.8 Theoretical models explaining the perception of Q.O.L.

Judgement theories claim that the perception of Q.O.L. results from a comparison between a standard and a given condition. Social comparison theory suggests that people perceive Q.O.L. through comparisons with other people. If someone perceives himself / herself as better in comparison with others, then he / she will perceive higher levels of Q.O.L. (Michalos, 1980).

In Adaptation Level theory (Brickman and Campbell, 1971) personal past life is used to set the standards. If the person perceives his / her present life as exceeding his past life, then he also perceives higher levels of Q.O.L. According to Adaptation Level theory adaptation occurs from the continuation of appearance of positive events (Diener, 1984). The experience of continuation of positive events facilitates adaptation, which may alter the perceived levels of Q.O.L.

Aspiration Level theory assumes that S.W.B. depends on the discrepancy between aspiration and actual conditions in a person's life (Carp and Carp, 1982). The level of aspiration depends on previous experiences and goals. However, although there is some evidence supporting the relationship between the levels of Q.O.L. perception and the levels of aspiration, this relationship does not appear to be very strong (Diener, 1984).

Although Judgement theories have positively contributed to the understanding of Q.O.L. perception, many questions still remain unanswered. Firstly, judgement theories do not clarify whether or not comparisons occur within the Q.O.L. domains or generalise across the domains. On the other hand, judgement theories do not clarify the type of comparison, which takes place each time (social comparison, adaptation etc.). A final criticism concerning judgement theories refers to their limits in justifying

whether or not various events have a specific hedonic value, prior to the comparison, and, how this value, if any, influences the perception of Q.O.L. (Diener, 1984).

1.9 The role of cognition and affect in the Q.O.L. perception (Associonistic theories)

Although cognitive approaches of S.W.B. perception are in their infancy (Diener, 1984), some theoretical perspectives have been developed in order to explain Q.O.L. perception through memory, conditioning or other cognitive and cognitive - behavioural principles (Evans, 1994). Lazarus (1991) for example defined cognitive appraisal "as an evaluation of what is believed about the significance of what is happening for ones general, or specific well - being, or quality of life".

Bower (1981) found that people tend to recall memories, which are congruent with their current emotional state. General research on memory networks has shown that people usually develop a rich network of positive memories and a poor network of negative ones. Predisposition to either positive or negative associations influences the perception of Q.O.L. in a positive or a negative way, respectively.

Classical Conditioning theory (Zanjock, 1980) illustrates that prolonged exposure to positive life events could influence positively the perception of Q.O.L., by creating a positive condition that could be triggered by a positive stimuli. Conditioning and memory networks could function in an automatic way. Furthermore, limited research in the area has also suggested that conscious efforts to alter affective associations may be possible. For example, Fordyce (1977) proved that conscious attempts to reduce negative thoughts could increase the levels of subjective well - being.

Studies on the influence of feelings in the perception of Q.O.L. have shown that people tend to perceive negative feelings related to specific events, as influencing

global judgements (Keltner et al., 1993). In addition, literature has indicated that negative feelings affect negatively judgements on well - being (Strack et al., 1985). Attribution theory (Kelly, 1973), which has tried to account for the relationship between feelings and Q.O.L. perception, suggests that negative specific self - attributions as well as situational negative attributions could result in the perception of lower levels of general Q.O.L. Nevertheless, there might be circumstances where this process operates in the opposite way (i.e. lower levels of general Q.O.L. lead to negative attributions) (e.g. Keltner et al.,1993). Keltner et al. (1993) concluded that Q.O.L. judgements result from the relationships between current feelings and the various Q.O.L. domains.

Generally speaking it could be concluded that affective and cognitive factors are important in understanding the perception of Q.O.L. (McKennel and Andrews, 1983). The way these two factors interact and their impact in different Q.O.L. domains should be the focus of future research. It still remains unclear, for example, if different Q.O.L. domains are influenced predominantly by affective or cognitive factors. Research attempts till now have provided inconsistent results (see for example Mc Kennel and Andrews, 1983 and Keltner et al., 1983).

1.10 Correlates of Q.O.L.

Research in the area has indicated that a number of factors could affect or influence Q.O.L. These factors include objective (e.g. income) as well as subjective factors (e.g. personality characteristics). In general, subjective factors are found to relate more strongly with Q.O.L. than the objective ones. Diener (1984) has proposed two reasons for this. Firstly, subjective measures might share method variance with Q.O.L., since both describe abstract judgements. Secondly, objective factors might be highly

correlated with subjective ones. Campbell (1981), for example found that the satisfaction with self (i.e. self - esteem) presents the highest correlation with life satisfaction (r = .55) whereas the relationship between life satisfaction and satisfaction with health is rather moderate (r = .29).

1.10.1 Demographic correlates

1.10.1.1 Income

There are a considerable number of studies, which have shown a strong relationship between Q.O.L. and income. This positive relationship has also been found across different countries (Larson, 1978). Although the effect of income on Q.O.L. seems to be small when other variables are controlled (e.g. educational level), these variables are found to be dominated by income (Easterlin, 1974). However, high income does not necessarily guarantee high levels of Q.O.L. (Campbell, 1981). This critical relationship could be explained by a number of reasons. First of all, income could have an effect only in extreme poverty situations and not when the basic needs are met (Campbell, 1981). Secondly, status and power, which could be responsible for the income effect, are usually societal factors and they do not necessarily increase as the income increases. Thirdly, the effect of income might be dependent on social comparisons where people know how satisfied they are by comparing themselves with others. Finally, high income could have some negative as well as positive effects on peoples' lives. For example, high income is usually related with hard working and overtime (Diener, 1984). Future research in the area, should focus on the effects of range of income on Q.O.L. levels.

1.10.1.2 Age

The effect of age on Q.O.L. remains a matter of controversy in the area. Early studies (e.g. Gurin et al., 1960) have suggested that younger people tend to report higher

levels of Q.O.L. than the older ones. Later research in the area opposed these results and proposed no age effects on Q.O.L. (Andrews and Witney, 1976). A meta - analysis of the relevant studies in the area by Stoch et al. (1983), argued that the correlation between age and S.W.B. was near 0. The controversy among the results of different studies might be due to narrow age ranges (e.g. Larson, 1978), lack of control for factors which covary with age (e.g. Cameron, 1975), and use of cross - sectional designs rather than longitudinal ones (e.g. Knapp, 1976). Recent research trends in the area focus not on the number of years (age) but on the different life stages which also predispose different demands and rewards (e.g. Medley, 1980).

1.10.1.3 Gender

Research in the area has suggested that some difference between the two sexes does exist in relation to life satisfaction (Andrews and Witney, 1976; Campbell, 1976). To be more specific, Medley (1980) has concluded that younger women report higher levels of life satisfaction than younger men do and older women report lower levels of life satisfaction than older men. This age effect usually deteriorates around the age of 45.

1.10.1.4 Race

Race studies in relation to Q.O.L. have predominantly focused on possible differences between blacks and whites. Research in USA it was shown that black people have usually lower levels of S.W.B. than white people (e.g. Andrews and Witney, 1976). However, black people and white people differ in respect to various social and cultural characteristics (e.g. education, income etc.). Although many studies in the area have attempted to control for these variables, the effect of race was still present (Campbell et al., 1976). Nevertheless, a large proportion of studies in the area have

used small subsamples with respect to black minorities, affecting this way the results in favour of whites.

1.10.1.5 Employment

Campbell et al. (1976) have shown that unemployment is one of the strongest negative predictors of Q.O.L. This effect has been found strong, even though other objective factors such as income were controlled. Since homemakers have not reported less satisfaction than people in paid jobs (Wright, 1978), there is an indication that job satisfaction in general and not income might be a strong predictor of S.W.B.

1.10.1.6 Education

The effect of education on S.W.B. remains a matter of controversy in the area Although, Campbell (1981) found a positive relationship between Q.O.L. and level of education, in favour of those who have received higher education, other studies (e.g. Palmore, 1979), suggested that this relationship is rather weak. It is important to note that the level of education has also found to interact with other variables (e.g. income) and when these variables were controlled, the effect of the educational level on Q.O.L. disappears (Toseland and Rasch, 1979 - 1980).

1.10.1.7 Religion

Religiosity could be defined in different ways and includes many different dimensions (e.g. faith, church attendance, importance of religion etc.) Factors like religious faith, religious traditionalism and importance of religion have been found to positively affect Q.O.L. (e.g. Cameron et al., 1973). In contrary, other studies have proposed that religious participation and attendance do not affect S.W.B. (e.g. Ray, 1979). Although religiosity seems to affect S.W.B. positively, in general, a number of questions remain unanswered. Firstly, it still remains unclear which factors covariate with religiosity

and how different types of faith and religious participation could affect Q.O.L. (Diener, 1984).

1.10.1.8 Marriage and family

Overall the effect of marriage on Q.O.L. has been presented by several studies as rather weak (e.g. Sauer, 1977). However, other studies in the area (Glenn, 1975; Andrews and Witney, 1976) proposed that married individuals tend to report greater satisfaction with life than unmarried. Moreover, marital satisfaction has been found to be one of the strongest predictors of the general S.W.B. (Toseland and Rasch, 1979 - 1980). However, studies on parenthood have proposed neither positive nor negative effects on global Q.O.L. (e.g. Andrews and Witney, 1976; Glenn and Weaver, 1979). Such controversial findings suggest that further research studying the association between marriage and family on Q.O.L. is necessary.

1.10.2 Behavioural variables

1.10.2.1 Social contact

A positive relationship between Q.O.L. and social participation has been proposed in a considerable number of studies (e.g. Campbell et al., 1976). Okun et al., (in press) conducted a meta - analysis on 115 studies which have examined the relationship between social activity and S.W.B. Social activity was found to explain 2 - 4% of the total variance. The effect was remained even though other variables, such as demographics were controlled. They also suggested that this effect was larger for formal social activities rather than informal ones. Another body of studies (e.g. Liang et al., 1980) suggested that there is no effect of social interaction on Q.O.L. The controversy of the above results could be attributed in various causes. An illustrating example could be the covariance between social participation and other variables such

as education, constraint of social setting, or personal need for interaction (Diener, 1984).

General unresolved research issues in the area include the direction of the relationship between life satisfaction and social interaction, the relationship between type of personality (introvert - extrovert) and social contact and the effect of this relationship on life satisfaction, and finally, the effect of different types of social contact on Q.O.L. (Diener, 1984).

Another issue in the area of social contact concerns intimate relationships. Research in the area (e.g. Fredman, 1978) shows that intimate relationships is one of the most important and the most strong predictors of general life satisfaction.

1.10.2.2 Life events

Positive and negative life events have found to influence Q.O.L. since they are inter-correlated with positive and negative affectivity respectively (Reich and Zautra, 1981). However, the relationship between Q.O.L. and positive / negative events is not as straightforward as it firstly appears. It has been found that positive events could influence levels of Q.O.L. negatively, when they provide "a lack of control feeling" (Reich and Zautra, 1981; Guttman, 1978). Past research in the area suffers from a detailed and a clear system of event classification. Too much emphasis has also been paid to smaller daily events. Differences between the impact of daily events and larger scale events on Q.O.L. should be subject to future research (Diener, 1984).

1.10.2.3 Activities

Activity theory has pointed out that involvement in various activities (e.g. sports) could increase Q.O.L. levels. Previous research based on elderly samples gave grounds to the activity theory (Palmore, 1979; Riddick, 1980). There are also a number of studies, which suggest no relationship between activities and S.W.B. (e.g.

Pierce, 1981). Variance might be also shared between activities and variables, such as health, that might contribute to inconsistent results. In addition, activities could take various forms such as social, physical, hobbies, or voluntary participation, an issue rather ignored from past research. In conclusion, research in the area indicates that certain activities could positively influence the levels of Q.O.L., but there is only limited understanding of the parameters accompanying this relationship (Diener, 1984).

1.10.3 Personality variables

Previous literature has suggested that personality is a strong correlate of Q.O.L. (Diener, 1984). Andrews and Witney (1976) suggested that demographics are able to explain less than 10% of the Q.O.L. variance, indicating that personality factors may be better predictors of Q.O.L. A number of personality characteristics and their relationship with Q.O.L. are presented below.

1.10.3.1 Self - esteem

A number of studies have proposed that high self - esteem is one of the strongest predictors of S.W.B. (e.g. Reid and Ziegler, 1980). According to Campbell et al. (1976) self - esteem has the highest positive correlation with life satisfaction than any other variable. It is worth mentioning that any understanding concerning the direction of this relationship remains uncertain, but current research trends suggest that it might be a bi-directional relationship (Diener, 1984).

1.10.3.2 Locus of control

Locus of control, which is usually measured by Rotter's Locus of Control Scale has been found to influence S.W.B. in a number of different populations (e.g. Brandt, 1980). Nevertheless, locus of control depends upon various cultural characteristics. Different cultures may interpret differently the effect of externality or internality in

relation to life satisfaction. If someone lives, for instance, in a restricted environment high levels of external locus of control could contribute positively to S.W.B. In general terms, externality is considered to lead to higher Q.O.L. (Diener, 1984). Like self - esteem, locus of control has an uncertain relationship with Q.O.L. in terms of its direction. The covariance shared between locus of control and other variables, such as life events, might cause difficulties, in reaching consistent results.

1.10.3.3 Extraversion / intraversion

Costa and McCrae (1980) presented extroversion and neuroticism as the two factors, which are associated with positive and negative affect respectively. Thus, affectivity may be one of the basic variables that mediates the relationship between S.W.B. and extraversion / intraversion. This may explain the high relationship between extraversion and Q.O.L. The sociability component of extraversion is another factor, which might lead to higher levels of Q.O.L. (Tolor, 1978).

1.10.3.4 Intelligence

Although intelligence as measured by I.Q. tests, is a valued societal source, it has been repeatedly found in several studies to be unrelated to Q.O.L. (e.g. Sigelman, 1981). Nevertheless, in a number of studies (e.g. Campbell et al., 1976) it was found a positive relationship between intelligence and S.W.B. It is also worth emphasising that in some populations (i.e. students) intelligence might be a strong determinant of S.W.B., as it is being rewarded. In addition, intelligence could broaden people's horizons, aspirations, or awareness and this may bring positive influences on the Q.O.L. levels.

1.10.4 Biological factors

1.10.4.1 Health

It has been found in previous research that perceived health is one of the strongest predictors of Q.O.L. (Toseland and Rasch, 1979 - 1980; Larson, 1978). The effect of health on Q.O.L. is present even when demographics such as age were controlled (Larson, 1978). Campbell et al. (1976) suggested that although health was one of the strongest correlates of Q.O.L., satisfaction with health was the eighth strongest predictor of global life satisfaction. A meta - analysis of studies concerning this relationship (Okun et al., in press) revealed a correlation of .32 between health and Q.O.L. This correlation was found to be stronger for women than for men and also stronger in studies that used subjective measures of health as opposed to objective ones. Nevertheless, the process underlying this relationship between Q.O.L. and objective / subjective health remains unclear.

1.10.4.2 Other biological factors

Finally, a number of studies have focused on several biological factors and their relationship with S.W.B. These include poor sleep (Roth et al., 1976) or seasonal variations in the mood (Andrews and Witney, 1976). In general, it has been suggested that hormonal or other biological events could influence S.W.B., because they may influence mood levels (Diener, 1984).

The above analysis of the influences of the different variables suggests that a simple set of variables (e.g. demographics) is unable to explain the total variance of Q.O.L. This observation highlights issues for future research, where multi - component models of Q.O.L. need to be tested.

It is also important to mention that all the above studies have followed different research designs and ended in different results. Many of them suffer from major

methodological weaknesses such as small or unrepresentative samples and many others have failed to explain the direction of the relationship in question by using unsophisticated research designs and statistical analysis. For the majority of the studies presented, the relationship in question seems to be rather confused. Future research in the area should focus on how these factors are related to Q.O.L., the direction of the relationship and the weighting of these factors in the relationships concerned. Another important issue that needs to be addressed in the future is whether or not these factors could function as correlates of Q.O.L. or they are part of it. However, this dilemma is dependent on the Q.O.L. definition that is adopted.

1.11 Measuring Q.O.L.

1.11.1 Selection of variables

One of the main issues related to the measurement of Q.O.L., refers to the variables that should be included in the measurement. Liu (1974) has suggested that Q.O.L. variables must have the following characteristics. First, they must be universal, so they can be applicable to the majority of the people. Second, when it comes to their selection, they must follow a consensus set of criteria. Third they must be flexible in order to cater for different life styles, in different periods of time. Finally, they must be adaptable to any social, political or physical conditions.

Gillingham and Reece (1980) have argued that these criteria are unsatisfactory, since they are rather vague in terms of their operational content and they do not take into account any individual parameters. Moreover, these criteria concern objective indicators of Q.O.L. rather than subjective ones. Gehrmann (1974) by attempting fifty times to measure Q.O.L. in different levels (national, state, regional) concluded that Q.O.L. results are influenced by the selection of the individuals, by the aggregation of

the indicators to one element, by the weighting or not of the indicators, by the weight of the indicator in different groups of people and finally, by the use of different measurement techniques. Thus, the researcher and the design that employs always influences the results of a Q.O.L. study.

When it comes to subjective indicators, no criteria are available that would function as the basis for selecting Q.O.L. variables. Thus, scientific - objective criteria should accompany the selection of Q.O.L. variables.

1.11.2 *Taxonomy of Q.O.L. measures*

The first dichotomous category concerning Q.O.L. measures refers to objective versus subjective measures (e.g. King et al., 1992; Groenland, 1990). Objective and subjective measures of Q.O.L. mainly reflect the theory presented in a previous section (social versus psychological indicators). It is worth referring that since low correlations have been found between objective and subjective indicators in many studies (e.g. Cheng, 1988), it has been proposed that Q.O.L. may be purely subjective. Allen (1991), on the other hand, suggested that both objective and subjective measures must be combined, in order to obtain an adequate measurement of Q.O.L.

The second category of measures refers to the use of internal or external elements (e.g. individual versus social factors). This category reflects the M.D.T. theory described earlier. Objective measures include only external criteria, but subjective measures may include both internal and / or external references of comparison (Evans, 1994). Using internal criteria, individuals are asked to judge their current situation using personal standards. External criteria include an external comparison criterion. However, a number of authors proposed that Q.O.L. measures should focus on self - ratings based on external references rather than internal ones (Matarazzo, 1992; Jenkins, 1992). For measures that involve an internal referent, there is debate about the standard of

comparison; whether or not it is the self or the others (Chubon, 1987). Although research on Social Comparison theory seems to be promising, there are no "de facto" findings regarding which approach is the best (Evans, 1994).

Another dichotomous category refers to whether or not the measure is based on a normative sample. Objective measures, usually involve normative samples and they attribute the judgement on the values of the sampled population and not on the specific values of a simple observer (Diener, 1984). However, both objective and subjective measures could use normative data (norms) (Evans, 1994).

The fourth distinction that could be made among different Q.O.L. measures refers to the basis upon the response is made. For the objective measures the basis is observatory but for the subjective could be cognitive or affective. Andrews and McKennell (1980), tried to estimate the variance explained from "affect", "cognition" or "method", in eight measures of subjective well being. They found that the contribution of affect ranged from 14% - 33%, the contribution of the cognition from 12 - 35% and of method from 0 - 10% of the total item measure. Their findings suggest that both affect and cognition are components of global well - being. Campbell et al. (1976) also suggested that neither cognition nor affect are superior in terms of their influences on Q.O.L., since both contribute almost equally to the Q.O.L. scores. Satisfaction, which is linked with cognition, shows a slow and systematic change over time. Affect, which is associated with happiness, is vulnerable to everyday situational changes.

Pavot and Diener (1993) proposed a further distinction between cognitive and affective measures. In particular, they have suggested that cognitive measures are usually linked with life satisfaction and the affective ones with positive or negative affectivity.

The majority of the Q.O.L. measures developed till now, focus on the life satisfaction domain followed by the affective domain. These measures, which mainly use internal referents, have underestimated that internal referents may be subject to change over time. From this point of view, external referents are more valid (Evans, 1994).

The final dichotomous category concerns the global versus domain specific measures. Domain specific measures of Q.O.L. use the sum of evaluations in a number of various domains (e.g. family, work etc.) (Abbey and Andrews, 1986; Evans et al., 1985). Global measures on the other hand, ask individuals to assess their Q.O.L. globally and they include items, which refer to life as a whole. It must be noted that both approaches have pros and cons. The domain approach neglects the fact that different domains might be of different importance to different individuals (Davis and Fine - Davis, 1991; McGee et al., 1991), raising again the issue of weighting of domains. There have been measures which calculate different weights for each domain (e.g. McGee et al., 1991; Evans and Cope, 1989) and measures that calculate a weighted sum of domain evaluations (e.g. Chibnall and Tait, 1990). Rice (1984) has argued that any research efforts related to the weighting of factors add very little to the variance accounted for Q.O.L. Global measures, on the other hand, ask the individuals to incorporate the importance of each different domain into their response (Campbell et al., 1976; Pavot and Diener, 1993).

1.11.3 Quality of life scales - some examples

The Quality of Life Scale (Chibnall and Tait, 1990)

A seven - item visual analogue scale developed to examine the impact of chronic pain on patient's life quality. Standardisation analysis (n = 393) showed that it is a consistent and reliable instrument. Its authors also proved its validity by showing that it shares variance with measures of psychological distress, pain description and pain

related disability. The domains examined by the specified scale include social life, family life, hobbies and hopes for the future.

The Satisfaction with Life Scale (Diener et al., 1985)

A five - item Likert type scale which attempts to measure global life - satisfaction. This very short scale has shown internal consistency and reliability. It has been found to be moderately correlated with measures of S.W.B. and personality variables in several studies (Diener et al., 1985; Pavot and Diener, 1993). Its items examine life conditions, life expectations or general life satisfaction.

The Quality of Life Questionnaire (Evans et al., 1985)

The Quality of Life Questionnaire is a behaviourally based Likert type scale, which consists of 15 sub-scales (12 item each) and aims to assess material and physical well - being, relationships, job satisfaction and activities.

Quality of Life Index (Ferrans and Powers, 1985)

This is a 32 - item Likert type scale based on studies in healthy populations of students and patients on haemodialysis programmes. The scale assesses both life satisfaction in different domains (physical health, relationships or items related to dialysis treatment specific to patients) and their importance to the individuals assessed. An overall score is obtained by mathematical extrapolation, combining these two different measurement approaches. This scale has been exposed to various test - retest correlations and has been found to possess high content and criterion validity (Goodinson and Singleton, 1989).

1.11.4 General issues concerning Q.O.L. research

1.11.4.1 The influence of current mood state to Q.O.L. response

Q.O.L. scales, which attempt to measure its affective variants, usually measure the current affect of the respondent. Many others include specific time frames. Schwartz

and Clore (1983), have concluded that current affect influence responses of Q.O.L. scales. Nevertheless, Kammann (1983) indicated that current mood or affect does not distort any responses, which come from multi - item scores. More recent studies (e.g. Schwarz and Strack, 1999) have demonstrated that global measures of life satisfaction could be influenced by the mood of the participants or any other situational factors at the moment of responding. Schwarz and Strack (1999) have also shown that even the order of the items within a Q.O.L. scale would affect the responses of the participants. Nevertheless, Eid and Diener (1999) suggested that situational factors are not as important in long – term comparisons. It has also been suggested that social desirability could affect the responses on a Q.O.L. scale, if subjects believe that Q.O.L. is normatively appropriate (Diener, 2000).

1.11.4.2 The stability of Q.O.L. measures over time

The stability of Q.O.L. measures over time has rather recently been raised as a research issue by Q.O.L. researchers (Evans, 1994) indicating that there is little known about whether Q.O.L. is a state or a trait measure. Cheng (1988) proposed that cognitive and affective measures will provide different scores depending on the different stressful life events that influence affect and cognition at a given period of time / assessment. Goodison and Singleton (1989) suggested that domain Q.O.L. measures will provide different scores in different developmental stages. Atkinson (1982), by correlating two administrations of a Q.O.L. measure in a 2 year interval, found that respondents who reported no changes in the above period had higher correlations on both global Q.O.L. and domain satisfaction (0.55 and 0.60 respectively) than those who reported some change (0.52 and 0.56 respectively). These results show that very little change in Q.O.L. measures occurs when stable social circumstances are reported. When dramatic changes occur, then changes in the

reporting Q.O.L. may also occur as a result of the adjustment modifications and processes. Atkinson (1982) concluded that Q.O.L. measures are valid and stable and become sensitive when changes occur.

Andrews and Crandall (1976) have used a multidimensional design to check the validity of 6 questions of S.W.B. In four of the six methods of measurement (different styles of Likert scales) the single item variance was composed of 64% valid variance, 10% of method variance and 26% of measurement error variance. Andrews and Crandall (1976) concluded the Q.O.L. measures could have "substantial validity".

Finally, Pavot and Diener (1993) have tested various possible influences on S.W.B., such as the current mood of the respondent, the cognitive and the social context surrounding the response, using several measurement strategies like single item measures or multiple item measures. They found a significant degree of Q.O.L. stability over time, although effects, such as mood state, were evident.

1.11.4.3 Reliability of Q.O.L. measures

Since Q.O.L. is a multidimensional concept, different measures might not inter - correlate, and there are such instances where they are totally independent the one from the other (Scuessler and Fisher, 1985). Gehrmann (1978) administered different measures of Q.O.L. in different cities in Germany and compared their rankings. He found that Q.O.L. scores are dependent on the measure used. However, Andrews and Witney (1976) have provided evidence for a strong relationship between global and domain - specific measures of Q.O.L.

Scuessler and Fisher (1985) concluded that the selection of a Q.O.L. scale would influence the Q.O.L. scores in a given population and the variance levels explained by the different predictors. In other studies (e.g. Pelizarri and Evans, 1992) it was found that there are high inter-correlations between different Q.O.L. measures including

cognitive and affective measures. Thus, further research is required to determine the actual relationship among different Q.O.L. measures.

1.12 Taxonomy of Q.O.L. studies. Research approaches to Q.O.L.

A distinction among Q.O.L. studies could be made by using two criteria. The first concerning the nature of the population under study and the other the methodology.

Empirical studies on Q.O.L. have mainly focused on the relationship between Q.O.L. and background variables or demographics, the community standard of living, targeted populations and international comparisons. Amos et al. (1982), for instance, compared the levels of life satisfaction of people living in 22 less economically developed counties in Oklahoma and people living elsewhere in the state. No differences were detected between those from economically developed and those from less economically developed counties except from the health domain. They concluded that people coming from less developed countries are satisfied with less since they have minor levels of aspiration.

1.12.1 Population

1.12.1.1 Targeted populations

Targeted populations, is another Q.O.L. research area. These include older populations (e.g. Michalos, 1982), patients suffering from various diseases (e.g. Irwin et al., 1982 for cancer patients) or minority populations (e.g. Nandi, 1980 for Asiatic Americans). Simmons et al., (1977) for example studied the deterioration of the Q.O.L. on patients suffering from haemodialysis after kidney transplant. Irwin et al (1982) concluded that cancer survivors (patients who survive after radiation therapy) tend to be more satisfied with life in general rather than population that never had such an experience.

1.12.1.2 International comparisons

International comparisons in Q.O.L. levels are another area where Q.O.L. research is focused, since such studies facilitate comparisons in the standard of living between different countries. This area of research is particularly useful for E.U. countries because one of the main goals of the European community is the implementation of the same standards of living for all the countries - members. Andrews and Inglehart (1979) compared the levels of life satisfaction of people living in 9 different European countries (8 European and USA) They found that the 8 European countries were more similar to one the other in terms of life satisfaction levels (including personal and social issues) than with USA.

1.12.2 Methodology

The second main dichotomous category of the Q.O.L. studies concerns the research design that relevant studies use. The basic categories are the following:

1.12.2.1 Cross - sectional studies of single variables

Q.O.L. is divided into its domains / components (e.g. marital satisfaction or job satisfaction) and the relationship between this distinctive category and other correlates (e.g. Evans et al., 1993 for marital and job satisfaction) is studied.

1.12.2.2 Cross - sectional studies of multiple variables

The second category includes cross - sectional studies involving general Q.O.L. This category could be divided into three sub categories.

- Firstly, those that investigate the relationships between general Q.O.L. and a set of variables (Ackerman, 1991 for factors related to Q.O.L. in dairy farm couples).
- Secondly, those studies which try to test a predetermined model of general Q.O.L. (e.g. Evans et al., 1993).

- And finally those studies which compare different models of Q.O.L. in order to suggest which one is the best (e.g. Rice et al., 1992, who compared top - down and bottom up theories). All the studies which fall into these categories have contributed to the understanding of the interrelationships among different variables and Q.O.L. (Evans, 1994).

1.12.2.3 Longitudinal studies of single variables

The third basic category concerns longitudinal studies of single Q.O.L. domains. For example, Latten (1989) has tried to assess whether or not biological ageing affects Q.O.L. in the Netherlands. He found a positive effect of ageing on Q.O.L., with older people reporting higher levels of Q.O.L., in general, in comparison to the young ones. This group of studies proposed that Q.O.L. remains quite stable over time and any personality changes that occur later in life could improve the Q.O.L. levels (Evans, 1994).

1.12.2.4 Longitudinal studies of multiple variables

The final distinctive category of Q.O.L in terms of research design concerns longitudinal studies involving general Q.O.L. Brief et al. (1993), for example, integrated top - down and bottom - up theories of Q.O.L. in a single model. This study proved that personality dispositions (negative affectivity) could affect objective life circumstances (health), which in turn influence Q.O.L. Evans (1994) proposed that these studies have shown that three categories of variables could affect the levels of Q.O.L. These include life domains, personality variables and general skills (e.g. coping, communication skills).

1.13 Discussion - conclusions

The previous analysis suggests that Q.O.L. is a broad and vague term. In relation to its measurement, It may be also worth emphasising that Q.O.L. includes both cognitive (life satisfaction) and affective measures (well - being, happiness, affectivity).

Q.O.L. research in USA, which has been very systematic, has mainly focused on objective indicators rather than subjective ones. However, subjective indicators are mainly used as correlates of Q.O.L. and this might be part of confusion in the area.

Although several attempts have been made to study the relationship between Q.O.L. and various correlates, such as demographics and personality the results were inconsistent in different studies. Differences in the results among different studies may be due to methodological weaknesses as well as differences in the research designs employed by different studies. As a conclusion, it is worth noting that research till now has failed to justify with clarity the relationship between Q.O.L. and other factors and also the direction of these relationships.

Q.O.L. research in Europe, although limited, has predominantly focused on the cognitive aspects of Q.O.L. and especially life satisfaction in various distinctive domains (e.g. marital satisfaction). The focus here is not on the global measurement of Q.O.L. but on the study of very specific parts of overall Q.O.L. This approach possesses both pros and cons. The study of a specific Q.O.L. domain or area (e.g. Quality of School Life) is simple and does not require the use of sophisticated research designs. On the other hand, it offers analytical information concerning only this distinct domain. Unfortunately, this information is not global and several factors that may be important remain undetected.

Finally, the present review has also shown that several different research designs have been used in the area of Q.O.L. (longitudinal, cross sectional designs etc.). The

selection of a specific research design should be based on the specific subject and the available resources. Studies that having employed different designs hold certain strengths and limitations and their results could be generalised only to populations with similar characteristics to those of the study concerned.

When it comes to future research there are lots of research questions that need to be investigated further. Firstly, it still remains unclear whether or not there is only one definition of Q.O.L. Populations with different characteristics may define Q.O.L. differently. Furthermore, should objective and subjective indicators of Q.O.L. be combined in single measures and what is the actual relationship among them? All these research questions are subject to future research.

Chapter 2. Quality of School Life – Theoretical and Research Implications

2.1 Introduction

Recently, Quality of Life (Q.O.L.) of children as well as Quality of School Life (Q.S.L.) have been major concerns because of radical family and societal changes (i.e. increase of the one parent families), over the last decades (Keith and Schalock, 1994). The increasing interest in both theory and research of Q.S.L. has predominantly focused on the assessment of the effectiveness of certain educational programmes (e.g. Willitis, 1988) or on special education (e.g. Sailor et al., 1988).

The present review aims to highlight theoretical and research aspects related to Q.S.L. Although the focus of interest lies in secondary education, literature from other educational levels is used, as Q.S.L. in secondary education is a rather neglected research area. Moreover, different educational levels share similar educational goals (production of education and knowledge) and may also have, structural and managerial similarities.

Okun et al. (1986a) suggested two main reasons for studying Q.S.L. in different educational levels. First, students become more and more demanding consumers providing negative criticism for the education they receive. Flanagan (1978) for example, found that although students perceive their education as important, they view their educational needs as not well - met (i.e. they may believe that new skills should be introduced in the curriculum). The second reason concerns the increasing levels of dropouts in secondary and higher levels of education, predominantly in USA, the last years. Research in the area has suggested that improvement of the service provided to students could decrease these levels (Noel, 1978). Furthermore, Q.S.L. factors (e.g. value of school) have been positively associated with effective learning in school (Keys and Fernandes, 1993), school effectiveness (Gray and

Wilcox, 1995), behavioural problems in school (Baker, 1992) and school alienation (Fine, 1986).

In Britain the Ploweden Report (as cited in Barrow, 1980) has emphasised the importance of ensuring qualities such as happiness of pupils in education. Ashton (1973) has also shown that teachers in Britain regard happiness in education as a matter of prime importance.

2.2 Historical context

The late 1970's and the early 1980's saw a large amount of research publications in the area of Q.S.L. (e.g. Austin, 1982) (Benjamin, 1994). However, researchers in the next decade remained rather silent. Even now research publications regarding Q.S.L. are rather limited. Many of the studies published have also been criticised for lack of use of specific validated instruments, for focusing on specific education grades and employment of simplified and atheoretical aspects of Q.S.L. The early 1990's have seen vast research trials not exactly in the area of Q.S.L. but in related research topics. Such research topics have included important Q.S.L. domains. Specifically talking, the 1990's focused on (Benjamin, 1994):

- student experience and student well - being (e.g. Roberts and Clifton, 1992 a, 1992 b).
- teaching and faculty - student relationships (e.g. Butters et al., 1991).
- institutional effectiveness and procedures for its assessment (e.g. Levitz, 1992)
- management of student services (e.g. Keller, 1992).
- learning environment (e.g. Katz and West, 1992).

This bulk of studies ended with the conclusion that Q.S.L. is strongly associated with performance, satisfaction, classroom conduct, extracurricular activity and parent - student interaction (Benjamin, 1994). However, these studies have lacked:

- a conceptual definition of Q.S.L.
- links with theory
- sophisticated measurement (instruments and results analysis)

Thus, research on Q.S.L. has failed to explain what Q.S.L. is, to present a consistent model of Q.S.L., and to justify the correlates of Q.S.L. in order to help educational authorities to improve the service they provide. It is also important to note that Q.S.L., as a term, has been used arbitrarily by many researchers (e.g. focus on learning experiences only), leading to further confusion.

2.3 Defining Q.S.L.

Defining general Q.O.L. is a quite difficult task, since it appears to be a rather abstract and elusive term (Romney, 1994). One of the most acceptable definitions in the literature has described Q.O.L. as a "general sense of well being" (Campbell et al., 1976). By expanding this definition to educational environments it could be suggested that Q.S.L. refers to a " general sense of school well - being" or to a "general sense of student well - being". However, these definitions give rise to many problems and questions, first of all of "what is well - being". School well - being could include mainly those factors arising from managerial and other practical resources related to school and have a strong impact to students. On the other hand, if we try to define "student well being" we may realise that it includes not only school factors, but also family, home and friendship issues. Although it is difficult to isolate those school-related factors, a "clear" study of the Q.S.L. would require to do so, taking into

account the problems with the definition. Hence, the main concern of future research attempts should be to determine what really constitutes Q.S.L. All the previous analysis concerning the definition of Q.S.L. suggests that *it describes a general sense of student well being determined strictly by school related factors and educational experiences resulted from pupils' involvement in school life and from their engagement in the school climate.*

Although, the above definition is applicable to primary or secondary education, when it comes to higher levels of education its utility is rather limited. Other factors, which characterise academic life, and factors related to the transition to adulthood (e.g. living alone) may also affect educational experiences.

2.4 Theoretical context - empirical models of studying and perceiving Q.S.L.

Literature in the area of general Q.O.L. has provided a number of different models, which have tried to explain theoretically, what constitutes Q.O.L. as well as ways of studying it. However, this does not necessarily mean that all these different models could be applied in the area of Q.S.L. The main reason for this discrepancy is that the Q.O.L. models have included the study of several general factors, which might not be applicable in the area of Q.S.L.

The main concern of Q.S.L. is the educational environment and life at school. Benjamin (1994) has allocated the Q.S.L. theoretical models into two basic distinct categories. First is the "exclusionary models" which attempt to gather objective data (such as number of students in school) in order to explain Q.S.L. in a rather limited and focused way. "Inclusionary models", on the other hand, emphasised the incomplete nature of different theories, and, they suggested the use of both qualitative and quantitative methods of data collection. They also argued that social phenomena

are the products of the interaction between the different systems in which people operate (individual, family etc.), hence different sets of variables from these systems should be included in a Q.S.L. model. A basic distinction between the two models, in practical terms, refers to the number of variables they usually involve. Exclusionary models employ only a very limited number of variables in contrast with the inclusionary models which employ a rather broad range of variables.

Two basic models have been appeared in the literature falling into the exclusionary category. Multiple Discrepancies Theory (M.D.T.) is one of those (Michalos, 1985, 1991 a, 1991 b, 1993 a, 1993 b). Michalos has proposed that Q.S.L. results from the discrepancy between what one has and what one aspires to. Using a sample of 17000 undergraduate students in 39 countries, he found that various demographics and seven "discrepancies" were able to explain 50% of the student satisfaction variance but there were differences in the variance explained among differences in the domains (44% - 71%). Although the model has been presented as simple, it has been criticised for not explaining the process that students use to make these cognitive comparisons as well as the role of other psychological variables (e.g. personality) in their contribution in the Q.S.L. variance.

Roberts and Clifton (1992 a, 1992 b) have attempted to distinguish between affective and cognitive dimensions of Q.S.L. Under the affective dimension they have attributed faculty support and under the cognitive dimension, the intellectual challenge that students experience. Till now, their research attempts have validated only the affective domain. This model has been criticised for "its specificity, testability and its attempt to elaborate on what in other models is simply called the academic domain" (Benjamin, 1994). However, narrow focus on specific domains as

well as conceptual confusion between "domains" and "dimensions" are among the basic limitations of the model.

Csikszentmihalyi and Csikszentmihalyi (1988) have offered one of the basic ecological inclusionary models explaining Q.S.L. In general terms, their "Flow Theory" describes feelings of happiness as resulting from people's engagement in diverse activities. According to this model, Q.S.L. is a product of the interaction and the integration of multiple domains of experience such as family, friends, and school. Conceptual clarity and multileveled structure (Benjamin, 1994) are the basic strengths of this model. However overemphasis on behavioural / activity levels and focus on self - centred experiences are among the limitations of the model.

Finally, Campbell et al. (1980) have tried to establish a model of Q.S.L. based on demographic variables, stressful life events, stage of transition and person - environment fit across six life domains. Campbell et al., found a strong effect of academic performance and stressful life events but not of the background variables. This model has been criticised particularly for the notion of the "person - environment fit", for its specificity (Nadler and Tushman, 1980) as it distinguishes between six different types of fit, for its passive nature (Hobbfoll, 1988) because it explains the above relationship in terms of what people experience rather than what they do, and finally, for failing to describe multiple fitting relationships (Baird, 1988).

2.5 Correlates of Q.S.L.

The relationship between Q.S.L. and other variables is examined below. The selection presented has been based on:

- the available literature.

- the importance of these variables for the educational environment following a pupil - centred approach of the present review.

Since research on Q.S.L. has been rather limited, literature from similar areas (i.e. Q.O.L. or life satisfaction) with focus on student populations, where possible, has also been used in the present review. The majority of such research has studied parts or domains of Q.S.L. using a different name for their independent variable (e.g. pupil well – being). It may be also important to note that additional previous research regarding Q.S.L. and the variables of interest is presented in the results chapters 3 to 10.

2.5.1 Demographics

Research concerning the relationship between Q.S.L. and various demographics is quite popular in the area. Different studies though have proposed different and inconsistent results of this relationship. This inconsistency may be due to the Q.S.L. instruments or the use of problematic samples (i.e. unrepresentative).

Okun (1986) found that perceived quality of college life increases linearly with age. However, the effect disappeared when attitudes towards school (values) were controlled. Although he did not use student population, Czaja (1975) also found that life satisfaction is increased as the age increases. Huebner (1991a) by studying the effects of various demographics (grade, age, gender, parent occupational status, parent marital status and grades) on Q.S.L., found absolutely no effects of these variables. Conversely, personality variables such as self - esteem and locus of control were found to account for the variance of the life satisfaction. Hong and Giannakopoulos (1994) in their study with university students found no gender effects on life satisfaction. They reported age effects on higher levels of Q.S.L. in older students. However, in the area of general well – being differences between the two sexes, in

favour of females have been reported (e.g. Medley, 1980). Finally, Dew and Huebner in their study in secondary school pupils (grades 2, 4, 6) found no effects of age, grade or gender on student life satisfaction. Moreover, they found ethnicity to have an effect on Q.S.L. with African American students as reporting lower life satisfaction than white students. It is important to refer though that their results were based on a sample with many age and grade inconsistencies. Hence, further research is needed to determine clearly the relationship between Q.S.L. and various demographics.

2.5.2 School related variables

2.5.2.1 School stress

Extended research in the area of stress in children proposed that school could be a major source of stress for pupils. A number of reasons have been provided for this finding. Freeman (1988) who has examined schools as organisational settings suggested that "stress can be expected in all school organisations". Literature in the area has also proposed several indicators for the increase of stress. Schools are usually stressful environments because they provide students with performance demands (Cole and Sapp, 1989). On the other hand, since children spend a major portion of their life in school, it is expected that school related stress will constitute a large portion of the total stress experienced in their lives (Philips, 1979). Increasing rates of suicide (Cohen - Sandler et al., 1982), depression (Friedich et al., 1982) and substance abuse (Burns and Gerst, 1984) are some of the consequences of the overall stress that children experience. It is assumed that school stress contributes to the overall stress that children experience. However, much of the research in the area has focused general stress rather than school stress.

One of the best ways to study the relationship between Q.O.L. or Q.S.L. and stress refers to the study of the consequences of stress to pupils' life in general and to school

life. De Anda et al. (1997) in their review about the consequences of stress, proposed that stressful life events affect positively psychological disturbance (Johnson, 1979 for school phobia), emotional maladjustment, health and school problems (behavioural adjustment and academic problems. High levels of stress have also been associated with peer disliking, low school achievement and aptitude (Forman and O'Malley, 1984).

Although there is no extended literature in the relationship between Q.S.L. and stress, school stress has been found to have such negative effects in student lives and thus, could result in the deterioration of Q.S.L. However, the relationship between school stress rather than general stress and Q.S.L. has been neglected from previous research.

2.5.2.2 Academic performance

Previous research on academic performance has predominantly focused on its relationship with demographics and personality variables. However, the relationship between various school factors and school performance has been rather neglected from previous research.

What is known from previous research is that school and classroom contextual variables (i.e. teacher qualities) are associated with school success or failure (Whitmore, 1980; Al - Methen and Wilkinson, 1995).

2.5.2.3 School misbehaviour / discipline

When it comes to the relationship between school misbehaviour and Q.S.L. no direct related previous research has been found, although that there has been some evidence that Q.S.L. related factors may be associated with school misbehaviour. Corgan (1979), for example, found that feelings of boredom with the curriculum are associated with misbehaviour. Previous research on school discipline has rather focused on teachers' efficacy in classroom management (e.g. Emmener and Hickman,

1991), pupils' and teachers' attitudes to discipline (e.g. Gullingford, 1988; Caffyn, 1989), effectiveness of disciplinary methods (e.g. Miller et al., 1998; Houghton et al, 1990), effects of punishment on pupils (e.g. Turner and Finkelhor, 1996 and corporal punishment).

2.5.3 Personality variables

2.5.3.1 Self - esteem

Although there is a considerable amount of research concerning the relationship between Q.O.L. and self - esteem in adults, it is rather limited in children or adolescents. A plethora of studies have, however, focused on the study of self - concept in children. Current research has suggested that there are moderate and positive correlations between Q.S.L. and self - esteem (Huebner, 1984; Dew and Huebner, 1994). Such studies have suggested that self - esteem is part of the Q.S.L., especially for the very young children, because their cognitive capabilities and structures may not permit or facilitate differentiation between global Q.S.L. and constructs such as self - esteem (Harter, 1989). Self - esteem has also been found to affect directly several domains of the global Q.S.L. such as program satisfaction (Bhaghat and Chassie, 1978) or even school performance (Kelfikangas - Jarvinen, 1992). Moreover self - esteem could be a significant predictor of Q.S.L. because it has been found to affect positively global Q.O.L. and global Q.O.L. includes factors relevant to occupational settings such as school (Bhaghat and Chassie, 1978; Bamundo and Kopeman, 1980).

2.5.3.2 Locus of control

Locus of control is one of the variables that has been extensively studied in relation to general Q.O.L. Although, the direction of the relationship between these two variables remains unknown, it has been suggested (Diener, 1984) that external locus of control

is associated with higher levels of Q.O.L. When it comes to younger populations (grades 5 - 7), Huebner (1991) suggested that internal locus of control is associated with higher levels of general satisfaction. Perceptual and need differences in differently aged populations could explain the discrepancy of the findings. Cole and Sapp (1988) in their study between locus of control and stress in a sample of secondary school children (n = 60) found a positive relationship between high internal locus of control and low levels of stress. These results indicate that the locus of control might function as a moderator of Q.S.L. levels mediating the relations between Q.S.L. and stress. Future research is needed to determine the relationship between Q.S.L. and locus of control, and how it applies to younger populations.

2.5.3.4 Affectivity

The relationship between Q.O.L. or Q.S.L. and affectivity has been rather neglected from related studies in the area. The reasons for this neglect are that affectivity became a research interest quite recently, and, more importantly that affectivity has been confronted by many theorists as part of Q.O.L. (e.g. Watson and Clark, 1984) rather than as a correlate.

Since no studies are available studying directly this relationship, the best way to present some early predictions concerning the relationship is through the effects of negative affectivity on other measures related to Q.S.L. Watson (1988) for example (n = 80 introductory psychology students) found that negative affectivity is significantly correlated positively with stress. Since stress is a negative correlate of Q.S.L. it could be assumed that affectivity could mediate the relationship between stress and Q.S.L. as well as being significantly and negatively correlated with Q.S.L. The fact that affectivity has not been studied adequately in younger children indicates the need for

future research attempts in the area. High correlations between Q.S.L. and affectivity might confirm the hypothesis that affectivity is associated with Q.S.L.

2.5.4 Behavioural variables

2.5.4.1 Bullying

In recent years, bullying has become an increasingly area of research interest in the UK. In a recent survey in Sheffield area (Whitney and Smith, 1991 as cited in Sharp and Smith, 1991) it was found that 10% of the secondary school pupils have been bullied more than once or twice during the term up to the survey date. The Elton report (1989) commissioned by the British Government to investigate discipline problems in schools expressed major concerns about the suffering or the "damaging effects" of bullying on pupils and school life as a consequence. This way of approaching bullying, in terms of the consequences for pupils, might be one of the best ways to refer to the relationship between Q.S.L. and bullying.

Sharp (1995) in her study of secondary schools (723 students in total) concluded that 44% of the students who had experienced bullying reported symptoms of irritability, 35% symptoms of nervousness in school, 32% reported recurring traumatic memories, 29% impaired concentration and 22% symptoms of physical illness. This symptomatology resulting from exposure to bullying experiences could have deteriorating effects to school life. In addition, there has been some research indicated that Q.S.L. related variables might be associated with bullying. Davison (1985), for example, suggested that school ethos may be responsible for aggressive behaviour in school. Further research is needed to establish the relationship between Q.S.L. and bullying.

2.5.4.2 Substance use

Like bullying, substance use / misuse becomes an increasing problem for young people all over the world (Silbereisen et al., 1995). The transition from adolescence to young adulthood (freedom from parental authority, supporting oneself, developing intimate relationships, living on ones' own) or even problems that children experience in adolescence (e.g. school related stress, future career) could be some of the causes of substance use / misuse at this age. (Newcomb et al., 1986). Johnston et al. (1984) found that 93% of high school seniors had alcohol in the last 30 days up to the date the study was conducted. Although, there is no extensive literature for the relationship between Q.O.L. or Q.S.L. and substance use, some studies have illustrated alcohol's deteriorating effects on general well being. Thus, future research is needed to determine the direction of this relationship between these two factors.

Srivastava and Srivastava (1986) though pointed out that tranquilliser users (aged between 20 - 35) tend to experience lower levels of life satisfaction than drug users. Stewart et al. (1995) have also reported that smoking cessation could improve health related Q.O.L. as measured with a broad range of indicators of physical and mental health. Since general Q.O.L. could be affected by substance use, it can be assumed that Q.S.L. is also affected. In addition, Newcomb et al. (1986) found that alcohol consumption is associated with dissatisfaction in relation to school, work, and peer relationships. Similar results were reported by Murray et al. (1983) in relation to smoking.

2.6 Q.S.L. methodological concerns

The first concern in the measurement of Q.S.L. has to do with the theoretical background under which relevant studies have been based. Many studies in the area

could be criticised for their adultocentric theoretical basis, where adults beliefs and needs are imposed on pupils. However, studies, which have tried to establish new questionnaires using pilot studies have ended in different domains and variables from what really constitutes Q.S.L. To be more specific, different scales examine different sets of variables claiming that these are the ones that truly measure Q.S.L.

Another methodological issue is time, that is if pupils should be asked for their present or their past experiences. Although there is evidence to support that present accounts are much more valid than past ones (Csiksentmihalyi and Larson, 1984), a number of practical issues are raised from this approach. Subjects, for example, must be interviewed or keep diary sheets every single day or within small time intervals. On the other hand, although the actual memories could be distorted after a period of time, important events are always well - remembered. Moreover, accounts, which provide a general estimate of a long period of time are more valid since they could provide information not only about a specific event or attitude but also about the effects of this event to the person concerned. Repetitive measures could also manage, to some extend the issue of timing, since they could test their reliability over time.

The last issue concerns the data collection method. Studies in the area have used different methodologies for data collection, ranging from structured questionnaires to various interviewing techniques. Roberts and Clifton (1991) suggest that data coming from structured scales hold numerous advantages. Among others are listed the low cost and the reliability since they are not based on observer ratings. However, survey methods could present a number of disadvantages such as their vulnerability to the social desirability response bias (Diener, 1984).

Student interviews pose a number of advantages and disadvantages as well. They involve rich descriptive accounts of data, which could precisely reflect student

perspectives. However, Webb et al. (1981) argued that qualitative accounts are expensive and require a lot of effort. Moreover, they are dependent on interviewers' qualities.

It might be worth concluding that there is no best way of data collection. The choice should mostly rely on the available resources, the nature, and the objectives of the specific study.

2.7 Q.S.L. research examples

Q.S.L. has been studied under various approaches and methods across different research projects and over time. This means that there are studies, which have approached the area through an educational orientation, societal, or student inquires. Educational inquiries focus on the school as an institution, societal inquiries deal with the role of society on approaching school parameters whereas student inquiries search for the student views about their school. Benjamin (1994) reviewing different studies in the area proposed a worthwhile model, which could include all the different Q.S.L. studies. According to this model studies are classified in terms of their approach to inquiry and domain of inquiry. The "approach to inquiry" concerns whether or not the specific approach examines direct (outsider) or indirect (insider) behaviours using observations or self - reports respectively. The domain of inquiry, on the other hand, concerns the target population or even populations where the study will take place. It could take a societal, institutional or a student form. This complete model describes all the different study forms under which Q.S.L. has taken place. However, the adoption of a pupil - centred approach (i.e. student inquiry) could facilitate the avoidance of adultocentric attitudes and beliefs about Q.S.L. Apart from the student

inquiry, all the other possible combinations arising from the above model predominantly concern epidemiological and social parameters.

The following table aims to present some of related research studies in the area.

Authors	Subjects	Objective	Instruments	Results	Advantages	Disadvantages
Huebner and Dew, 1993	222 Secondary School Children	Factor Analyse the PLSS (Perceived Life Satisfaction Scale)	Perceived Life Satisfaction Scale	4 Factors (peer activities, physical development, relationships with parents, personal independence, environment) emerged as able to explain 57% of the PLSS variance	Sample of young school population	Non- homogeneous sample. Only the higher grades were included.
Hong and Giannakopoulos, 1994	1749 adult Australians (students and non)	To detect differences in life satisfaction in terms of age, sex and university status	Satisfaction with Life Scale	Sex and university status found not affecting satisfaction with life. However, higher life satisfaction was found in older adults.	Comparing student and non – student samples	Non- homogeneous sample in terms of age, although this was a main variable of the study.
Dew and Huebner, 1994	222 pupils from grades 8, 10, 12	To examine the validity and reliability of Students Life Satisfaction Scale and study the effects of various demographics and personality variables on life satisfaction.	Student Life Satisfaction Scale	Life satisfaction was not found associated with age, grade or gender. It was found to be associated with socio-economic status. Family related self - concept was a strong predictor of life satisfaction.	Focus on secondary education	Inconsistent sample in terms of age / grade and cultural background.
Huebner, 1991b	79 students from grades 7 - 9	To study the relationship between life satisfaction and demographic and personality variables	Student Life Satisfaction Scale	No demographic effects on life satisfaction were detected. However, higher life satisfaction found to be associated with high self - esteem, extraversion and internal locus of control low anxiety and neuroticism.	Study of the effects of various personality tests on life satisfaction	Small and inconsistent sample in terms of gender.

table continued.

Authors	Subjects	Objective	Instruments	Results	Advantages	Disadvantages
Epstein and Mc Partland, 1976	4266 students (elementary, middle and high school	To test the reliability and the validity of the Quality of School Life Scale.	Quality of School Life Scale	Q.S.L. is defined by satisfaction with school in general, commitment to school work, attitudes towards teachers.	Standardisation of a new scale across different educational levels. Large sample.	None
Okun et al., 1986	113 psychology university students	To study the effects of age and college values on Q.O.L.	New unstandardised scale	Q.O.L. increases linearly with age. However no significant effects of age were detected. Older students tended to value more the quality of education more and less the social life than younger ones. No relationship was found between college values and Q.O.L.	Study of the effects of college values on Q.O.L.	Unstandardised scale. Small sample. Wide age range and ethnic variability in the sample.
Benjamin and Hollings, 1995	266 University Students	To standardise a global measure of Q.S.L. (Life and Campus Satisfaction)	New unstandardised scale	Satisfaction found to be greater in social areas rather academic ones. Satisfaction with university life includes personal, interpersonal and academic components.	Split up the Q.S.L. of university students in campus and academic related factors which is important for this age group.	Small sample used for the initial construction of the scale. A-theoretical basis for items selection.

The majority of the above studies have predominantly focused on the study of general Q.O.L. in younger children or on the study of education related Q.O.L. on older populations (e.g. university students). No study has been found assessing global Q.S.L. in secondary education. In studies where school satisfaction was a major concern (e.g. Epstein and Mc Partland, 1976) the area of Q.S.L. has not been assessed globally, but in relation to a few dimensions only (see below), neglecting some others (e.g. school physical environment). Therefore, previous research has illustrated the

need to construct a new Q.S.L. scale, incorporating as many of relevant dimensions as possible and to establish its reliability and validity. Furthermore, to study Q.S.L. correlates by use of this scale and its association with various school phenomena (e.g. bullying).

2.8 Research instruments of Q.S.L.

Research in the area of Q.S.L. is rather limited in comparison with the research on general Q.O.L. However, there have been some research attempts to structure and standardise Q.S.L. scales. The majority of these studies have focused on higher education (university or college) while primary and secondary education has been rather neglected. There are several reasons for this neglect. One of these is the availability of financial resources for research. It is also assumed that older students have much more needs than younger ones, since they are in a transcending stage of their lives. They are expected to demonstrate abilities and behaviour of both students and professional adults.

Previous scales in the area of Q.S.L. tend to include general rather than school related items. Huebner's (1991) scale for example represents an attempt to measure general life – satisfaction. It is presented in this report because of its popularity, its extended use in past literature and its good psychometric properties.

Three instruments are presented briefly as follows:

Roberts and Clifton (1992 a, 1992 b)

Roberts and Clifton have attempted to structure and standardise two instruments assessing the cognitive and affective domains of Q.S.L. in university students. The affective Q.O.L. scale consisted of 34 items (4 sub-scales). The 4 dimensions measured by the scale are positive and negative affect, interaction with students and

professors. The alpha reliability coefficients of these sub-scales range from 0.75 to 0.93. The Cognitive Q.S.L. consists of 12 items of 3 sub-scales each, assessing methodology of teaching, cognitive development of pupils and subject expertise (4 items in each sub-scale). Alpha coefficients for the sub-scales ranged from 0.72 to 0.75.

Life satisfaction Scale (Huebner, 1991)

Huebner's Life Satisfaction Scale is one of the few scales in the area, which have been standardised in secondary school pupils. It consists of 9 items assessing general rather than school factors. Later attempts of the same author have led to the development of larger scales. The present scale has demonstrated high validity when correlated with other personality, clinical and satisfaction scales ($r = 0.53 - 0.62$) as well as high reliability (alpha = 0.82).

Quality of School Life (Epstein and McPartlend, 1976)

The Quality of School Life scale was one of the first scales designed to assess Q.O.L. in elementary and secondary schools. It consists of 28 items defined by three dimensions: satisfaction with school in general, commitment with schoolwork and attitudes towards teachers. The scale has been exposed to various tests of validity and reliability and has been proven to be a valuable instrument.

It is important to refer that all the above instruments have failed to measure Q.S.L. globally starting from the needs and the experiences that pupils might have at school. Quality of School Life scale is one of the very few published instruments in the area which is quite pupil – centred, but it is quite old. Since its construction major educational changes have been emerged.

2.9 Conclusions

Although many attempts have been made to measure and study pupil's experiences at school, little is known on how pupils view their own school life. The area is particularly neglected in primary and secondary education. Moreover, past studies are becoming less valid in our days, since the educational system is continually changing and readjusting to the needs of the pupils. The present educational system is well organised and provides certain indicators and methods for its quality assessment. Mc Glynn (1996) in the document "How good is our school" has organised certain performance indicators that a certain secondary school should meet in order to ensure Q.S.L. of pupils. Future research in the area should take into consideration all these parameters.

Q.S.L. research appears unsatisfactory in general. It has failed to determine what really constitutes Q.S.L. or which are its main correlates. Atheoretical research designs, small samples and use of instruments not based on specific theoretical models are some of the reasons for this confusion. Future research in the area should start with the validation of a precise definition of the Q.S.L. as well as the structure of a worthwhile (consensus, valid and reliable) measurement based on this definition.

Part B – Methodology of Results Chapters

Chapter 3: Methodology of Results Chapters (5, 7, 8, 9, 10): Samples, Procedure, Measures, Data Analysis

3.1 Introduction

The results chapters in the present thesis aimed to investigate the construction, correlates and effects of Quality of School Life (Q.S.L.). In particular, it was aimed to construct a new Q.S.L. scale, specifically for secondary schools, to study the correlates of Q.S.L. and its association with performance, school misbehaviour, bullying and substance use in comparison with demographics (school, year, gender, parental educational and socio-economic status), school stress, well – being, and personality factors (self – esteem, affectivity, locus of control). However, different result chapters may also incorporate other aims and may investigate additional research questions, specific to the independent variable of interest (e.g. performance or bullying) and they are outlined in each result chapter separately. Previous research regarding the association between Q.S.L. and all the above issues has been rather rare as it was concluded in literature reviews (chapters 1 and 2) and as illustrated in the introductions of the result chapters for separate themes (e.g. substance use).

Since the methodology is common in the majority of the chapters in the present thesis, the present chapter is devoted to the discussion of the samples, procedure, measures and data analysis used in the results chapters 5, 7, 8, 9 and 10. However, some methodological issues (e.g. selection of variables) that concern all the chapters are also addressed in the present chapter.

3.2 Selection of variables

The choice of variables for all results chapters has been based on whether there has been previous literature to support a significant association between dependent and

independent variables, or if no study between dependent and independent variables was available, but there were some indications from related research that there might be an association between dependent and independent variables, or alternatively, if it has been suggested by previous research that the association between dependent and independent variables should have been investigated further. In addition, the variables chosen to be studied in chapters 5 – 10 were applicable to all pupils and not only to subgroups and also they were variables that were potentially subject to change, in order to influence positively behavioural outcomes, when manipulated accordingly.

However, it is important to mention that for chapters 7, 8, 9 and 10 the same demographic (school, year, gender, parental educational and socio-economic status), school stress, well – being and personality factors (self – esteem, affectivity and locus of control) were studied in conjunction with Q.S.L. and in relation to school self – rated performance, school misbehaviour – punishment, bullying / victimisation and substance use, in order to investigate the strength of Q.S.L. as a correlate and predictor both within the particular area of study (e.g. bullying) and between different areas of study (e.g. bullying and misbehaviour). This choice was made to allow us to detect any changes in the degree of significance of a factor across different areas.

For chapter 5 the same variables were used, as in chapters 7 – 10. The variables selected to be studied in relation to Q.S.L. in chapter 5 had been found previously to be significantly associated with Q.S.L. Such a design enabled comparisons among the same variables regarding their associations with Q.S.L. and other areas of interest. Consequently, any differences or similarities regarding the factors that are associated with Q.S.L. and other school factors / areas (e.g. bullying) would become evident. In chapter 6, that describes a cross – cultural study between Scotland and Greece in relation to Q.S.L., any factors that were not found to be associated with Q.S.L. in

chapter 5 (i.e. locus of control, parental educational and socio-economic status) were excluded from the research design of the study in chapter 6. This enabled a reduction of variables to be studied in relation to Q.S.L., cross – culturally, in chapter 6. Thus, in chapter 6 demographics (year and gender), well – being, school stress and personality (self – esteem, affectivity) were studied in relation to Q.S.L.

3.3 Method

A set of self – report scales (see below) was administered to pupils. Prior to administration, written consent from the pupil's parents had been requested by the Head teachers. During allocated class time individual teachers distributed the scales to pupils, accompanied by an information letter (Appendix I). The information letter contained information about the general scope of the study and participation in the project was entirely voluntary and anonymous. Completion time of the set of scales was approximately 30 to 35 minutes.

All studies presented in the results chapters have employed cross – sectional designs. Cross - sectional designs appear to be simpler in comparison to longitudinal research designs, and are common in correlational studies. In cross - sectional designs, data are collected at one point in time. Cross - sectional designs are used to investigate the relationship between independent variables and dependent variables of interest. Although the simplicity of employing cross - sectional designs has increased its use in psychological research, it also involves some drawbacks. Among those the prevention of any detection of causality among dependent and independent variables is classified. Although longitudinal designs allow the study of causal relationships between dependent and independent variables, as data are collected in various points of time, they also include many drawbacks. Firstly, they are financially and time consuming

and may be rather difficult to follow and conduct subjects over a prolonged period of time. Considering the time required to collect data from schools, which is usually class time, the mobility of pupils through schools and grades, the choice to employ cross – sectional design in the present studies becomes evident.

3.4 Sample

Sample for chapters 5, 6, 7, 8, 9 and 10 consisted of 425 pupils form two secondary schools in Stirling area in Scotland. Approximately one third of the student population was sampled from each school. This comprised of 197 pupils (46.4% of the total sample used) from school A and 228 pupils from school B (53.6% of the total sample used) (Total n = 425). The scales were administered in two classes each selected randomly from grades 1 to 6 in both schools. Mean age was 14.2 (Sd = 1.3). The first year constituted 13.4 % (n = 57) of the sample, the second 16.0% (n = 68), the third 17.4% (n = 74), the fourth 24.9% (n = 106), the fifth 21.9% (n = 93) and the sixth 5.9 % (n = 25). However, 0.5 % (n = 2) did not report their grade. The majority (70.4%) reported that they were living with both parents and brothers / sisters. The rest reported that were living in single - parent families or with both their parents but did not have brothers / sisters or other family patterns. When it comes to the educational status of the father, 36% of the participants reported that their father had finished higher education (University or College) and 40.5 % that he had not. A proportion of 21.4% reported that they did not know whether their father attained higher education. Mother's educational level was found high (had attained higher education) for 39.5% of the participants and lower (had not attained higher education) for 38.1%. A proportion of 20.9% did not know whether their mother had attained higher education or not. Measurement of parental socio-economic status was obtained using the

classification system from the Registrar General's Classification of Occupations that comprised of five basic socio-economic categories (Professional, Intermediate occupations, Skilled occupations - manual or non / manual, Partly skilled occupations, Unskilled occupations) and economically inactive categories (i.e. retired). Socio-economic status was measured separately for fathers and mothers. Father's socio-economic class tended to be among the 2nd (26.4%) (intermediate) and the 3rd (31.8%) (skilled non-manual). Similarly to father's socio-economic status, mother's socio-economic status was found to range between the 2nd (26.4%) and the 3rd (24.9%) for the majority of the pupils, although a substantial number of mothers appeared economically inactive (18.4%) (key to socio-economic classes: 1st = professional, 2nd = intermediate, 3rd = skilled, 4th = partly skilled, 5th = unskilled and 6th = economically inactive). The majority of both mothers (48%) and fathers (79.8%) of the participants had a full time job at the time the study took place. Place of residence of the school children was reported as 42.4% living in a town and 49.9% in a village.

The Greek and Scottish samples used in chapter 6 are discussed in the same chapter.

3.5 Measures

A set of self – reported scales, a mixture of standardised and unstandardised, was distributed to the pupils and is described below. Standardised scales include a number of advantages. Loewenthal (1996) has suggested that standardised scales could provide quickly and cheaply accurate reliable and valid data. However, when such scales are not available, or they present with limitations (e.g. discrepancy between breadth and scope of existing instrument and own study aims) development of related instruments is advisable. This was the case for Q.S.L. scale. Linguistic and scaling alterations in standardised scales may also be advisable since meaningfulness of the

task should never be compromised (Lowenthal, 1996). Such alterations took place in some of the scales used and are described for each scale separately.

Overall, it might be worth noting that assessment by use of scales has been criticised for the fact that outcomes may be influenced by examiner (e.g. warm vs. cold, rigidity) and situational variables (e.g. fatigue). Test anxiety may also influence the data obtained (Anastasi, 1998). However, well – organised administrations and specific guidelines for the examiners may eliminate such effects. In addition, research regarding the nature and the extent of such effects remains inconclusive (Anastasi, 1998).

The scales used in the results chapters are described as follows.

3.5.1 Demographics

A measure of basic demographics (age, gender, school grade, parental socio-economic and educational status,) was used (Appendix II).

3.5.2 Measures of School Factors

3.5.2.1 Quality of School Life Scale

The Quality of School Life Scale, described in detail in chapter 4, has been designed to assess several aspects of school life that could be a source of satisfaction or dissatisfaction (cognitive perspective) for pupils. Its construction, reliability and validity are described in chapter 4. It consists of 14 domains each containing four statements (example: I am satisfied with the timetable at school). Each statement is scored from one to four depending on the amount of disagreement or agreement (dissatisfaction / satisfaction). The construction of the scale has been based on the Scottish Office guidelines (McGlynn, 1996) for the evaluation of the schools, using school performance indicators, and on previously used questionnaires for its style and

format (Banjamin and Hollings, 1995; Keith and Schalock, 1994; Huebner, 1991b; Epstein and McPartland, 1976) (Appendix III).

3.5.2.2 Student Stress Inventory (SSI - Children's Version) (Alban Metcalfe et al., 1982)

SSI is a standardised scale designed to assess student stress in school aged children from a number of sources. It consists of 40 items but the item "parents made redundant" has been excluded due to its confusing meaning and its little relevance to the school context. Subjects respond in a four - point scale, ranging from "no stress at all" to "extreme stress". For the purposes of the study, items 9, 24 and 25 were linguistically altered to enhance clarity (Appendix IV).

Reliability

Alpha coefficient (for the whole scale): .90 (Alban Metcalfe et al., 1982).

Validity

High correlations ($r = .44$, $p<.001$ for boys and $r = .49$ $p<.001$ for girls) between SSI total and W-ANX (Subscale of WIDIS - a 120 item inventory which yields fourteen scales concerned with "dispositional characteristics") (Alban Metcalfe et al., 1982).

3.5.3 Measure of well - being

3.5.3.1 P.G.I. General Well - Being Scale (Verma et al, 1983)

P.G.I. General Well - Being Scale was designed to assess general well - being (physical, mental, social) in various aged groups. It was based on the scales used by Fazio (1977) and Dupuy (1970). Verma et al. wanted to develop a short scale assessing well - being, since pre – existing well – being scales appeared rather long.

For the purposes of the present study, phrasing of the questions was slightly modified / amended, in order to make them more suitable for younger children. However, the meaning of all items were kept the same as in the original scale. The above alterations

were made to cater for cultural differences and also as an attempt to enhance clarity. A new 4 - point answering scale (ranging from not al to frequently or all the time) has been introduced for making the scale similar to other well – being measures (Appendix V).

Reliability (of the original scale)

Reliability coefficient: .98 (Verma et al, 1983).

Item Consistency: Item - total correlations ranged from .16 to .84, which have been accepted, as satisfactory by the authors (Verma et al, 1983).

Validity (of the original scale)

No significant correlations have been found between the P.G.I. General Well - Being Scale and the P.G.I . Health Questionnaire N - 2, P.G.I. Achievement Value Index and Eysenck Personality Inventory. This suggests that subjective feelings of well – being, as measured by this instrument, are not related to health or personality variables (Verma et al, 1983).

Reliability of the version used:

Cronbach's alpha: .869 (20 items)

3.5.4 Measures of behavioural outcomes

3.5.4.1 Performance scale

Performance of the pupils was assessed by asking pupils to respond to a 4 point scale (does not apply to me, lower level, middle level, upper level) about the grades received the year prior to the commencement of the study, in English, maths, science, geography / history, modern studies and arts / music / drama (Appendix VI).

3.5.4.2 School Punishment Scale

School Punishment was assessed by administering a short scale (two questions) to pupils asking them whether they had experienced punishment during the current

school year and if "yes", what kind of punishment. It was assumed that the experience of punishment would be associated with a form of misbehaviour (Appendix VII).

3.5.4.3 Bullying Questionnaire

A set of six questions about the incidence, types and sources of bullying and victimisation, related to a specific time frame (i.e. since the current school year began). Format and style of items was based on previous relevant literature (e.g. Sharp, 1995) (Appendix VIII).

3.5.4.4 Substance Use Scale

A set of 8 questions assessing whether pupils had tried cigarettes, alcohol and drugs, frequency of consumption and rates of consumption of these substances (Appendix IX).

3.5.5 Measures of Personality Factors

3.5.5.1 Hare Self - Esteem Scale (HSES) (Hare, 1985)

HSES is a standardised 30 - item scale measuring self - esteem of school age children. Total score of the 30 items is treated as a general self - esteem score. The sum of each 10 - item sub-scale provides sub - scores for peer, home and school self - esteem. These are considered as the main areas of interaction in which children develop self - worth. Item number 10 (from the school sub-scale) was linguistically altered for cultural reasons and to enhance ease of understanding. Subjects respond in a four – point Likert type, agree – disagree scale (Appendix X).

Reliability

Test - retest correlations (3 - month interval): $r = .56$ - $.65$ for the sub-scales, $r = .75$ for the whole scale (Hare, 1985).

Validity

The general scale was found highly correlated r = .83 with both Coopersmith Self - Esteem Inventory and the Rosenberg Self - Esteem Scale (Hare, 1985).

3.4.5.2 Positive and Negative Affect Schedule (PANAS) (Watson et al., 1988a)

The Positive and Negative Affect Schedule was developed as a brief measure for the assessment of positive and negative affect dimensions. It consists of twenty adjectives, ten assessing positive and ten assessing negative affect, describing different feelings and emotions. The scale can be used to assess state or trait dimensions, on the condition that time instructions are modified accordingly. In the present project, the scale was used as a trait measure. Subjects responded in a five – point scale, ranging from "very slightly" to "not at all". Each point indicated the extent to which each adjective describes respondents' feelings (Appendix XI).

Reliability

Internal consistency for different time frames (ranging from this moment to generally) for both sub-scales exceeded 0.84. Test – retest reliability was 0.68 for the positive affectivity sub-scale and 0.71 for the negative affectivity, when treated as trait measures (Watson et al., 1988 a).

Validity

As shown in Watson et al. (1988), the two sub-scales are independent to each other (r = -.09). Negative affectivity was also found to be positively and significantly related with self – reported stress and health complaints whereas positive affectivity was found to be positively and significantly associated with social activity and physical exercise (Watson et al., 1988 a).

3.5.5.3 Nowicki's – Strickland's Locus of Control Scale for Children (Nowicki and Strickland, 1973).

Nowicki's - Strickland's Locus of control Scale has been designed to assess internal and external locus of control of school aged children. The scale under use consists of 10 items selected from the abbreviated 21 - item scale that is suitable for secondary school children. Some items have been modified linguistically (1,19) for cultural reasons. Pupils respond "Yes" or "No" in each of the items. Each item can account as internal or external locus of control depending on the answer (AppendixXII).

Reliability (of the whole scale)

Internal consistency for secondary school children: .74 - .81.

Test retest reliability (six weeks apart): .66 for secondary first grade and .71 for secondary sixth grade (Nowicki and Strickland, 1973).

Validity (of the whole scale)

The original Nowicki - Srtickland Locus of Control Scale has been found to be highly correlated with the Intellectual Achievement Responsibility Scale ($r = .51<.01$ for secondary first grade), and with Rotter's Locus of Control Scale ($r = .61<.01$; $r = .38<.01$ in College Students) (Nowicki and Strickland, 1973).

3.5.6 Translated in Greek measures used in chapter 6

A number of the aforementioned measures were translated in Greek and used in chapter 6. These included Demographics (Appendix XIV), Quality of School Life Scale (Appendix XV), Student Stress Inventory (Appendix XVI), P.G.I. General Well – being Scale (Appendix XVII), Hare Self – esteem Scale (Appendix XVIII) and Positive and Negative Affect Schedule (Appendix XVIV). A version of the information letter used in Scottish sample, was also accompanied the scales distributed to the Greek sample (Appendix XIII).

3.6 Data analysis

Analysis of data was carried out in SPSS for Windows, version 8. All data in each of the studies were included in the analysis. Missing data were automatically excluded from the analysis in each of the studies. Frequencies of both categorical and continuous variables were obtained to control for normality.

Different hypotheses throughout the studies required different types of analysis. Both univariate and multivariate tests were employed in the studies. Associations between categorical data were obtained through Chi – square analysis. Associations between categorical and continuous variables were tested through independent t – tests and Analysis of Variance (ANOVA). Post hoc comparisons were examined by means of Sheffe tests. The predictive ability of independent variables was assessed with simple Regression analysis. Associations between continuous variables were assessed via Pearson's product moment correlations.

Three multivariate tests were employed across studies. These were General Linear Model, Multiple Regression Analysis and Logistic Regression Analysis. The General Linear Model (GLM) combines ANOVA and Regression Analysis. The choice for this test was based on the need to obtain R^2 for categorical variables in order to specify the percentage of variance explained. One – way ANOVA and One – way GLM produce almost the same statistical coefficients and findings.

The following analysis protocol was employed for the Logistic regression analysis. Firstly, all factors were tested against the dependent variable by means of univariate tests (t – tests, X^2 tests). Secondly, all factors that were found to be significantly associated with the dependent variable were entered in the Logistic regression analysis. Univariate analysis enabled the exclusion of factors that were not significantly associated with the dependent variables. Cutting down on the number of

factors entering the Logistic regression enabled the production of meaningful results (i.e. fewer factors were considered). This approach has been used extensively in previous related research (e.g. Jang et al., 1998; Mentes et al., 1999). In the results chapters of the thesis it was also rather impossible to employ and test specific models of regression analysis, as a clearly defined pattern of association between the independent variables had not emerged from previous research. Generating and testing particular regression models is usually considered when a particular theory of association between independent variables needs to be tested and verified. On the other hand, exclusion of insignificant factors by means of univariate tests is usually employed when open hypotheses are concerned. This is usually the case when the pattern of association between dependent and independent variables is unknown (i.e. original research). All significant factors, as defined by univariate tests, were tested against the dependent variable through individual Logistic regressions, in order to identify whether they were significant predictors. Those that were found to be statistically significant predictors were entered in an overall Logistic regression analysis, in order to determine by use of Exp(β), which of the predictors had the greatest influence on the dependent variable.

According to Tabachnick and Fidell (2000), different tests within Logistic regression are used to evaluate and test different hypotheses. As a consequence, a researcher should start from his specific research question(s) (e.g. classification of cases, importance of predictors, strength of association) and then try to identify which is the appropriate test that would help him / her to tackle this question(s). Tabachnick and Fidell have defined Exp(β) as "the odds of being in one outcome category when the predictor changes for one unit of measurement" and have recommended Exp(β) as a method for the selection of the predictor with the single highest influence on the

dependent variable in a Logistic Regression model. Also, according to Tabachnick and Fidell (2000), the Wald statistic evaluates the statistical contribution of a predictor to a Logistic regression model, therefore it is appropriate to be used when a particular theoretical model is aimed to be tested or when the researcher is interested in the exclusion of variables in the analysis, as it has been used in the related chapters of the thesis. In other words, the Wald statistic could be used for the statistical evaluation of the predictor within the model, as well as the strength of a model, whereas the Exp(β) can be used for comparisons among predictors regarding their influences towards the dependent variable.

In order to use Multivariate tests, data were checked for abnormalities in terms to multicollinearity, linearity, distribution and presence of outliers. Relationships between continuous variables (mutlicollinearity) were investigated by examining Pearson's product moment correlations between pairs of continuous variables. Although there were high interrelations between the variables, no bivariate correlation exceeded .70 (Tabachnick and Fidell, 1996), thus no variables were excluded from the analysis. Linearity of the continuous variables used in the analysis was checked with scatterplots. All relationships proved to be linear apart from the relationship between positive affectivity and negative affectivity. All variables used in Logistic regression and GLM also presented with a normal distribution apart from negative affectivity which presented with a negatively skewed distribution (skew = 1.208 > 1) (Ferguson and Cox, 1993). In order to improve normality of negative affectivity distribution, and linearity of the relationships in which it was involved, transformed data were used: Log10 (k – variable score) where k is a constant equal to the largest score in the variable + 1 (Tabachnick and Fidell, 1996). Finally, very few outliers were present in all the variables used in the analysis thus no further precautions were taken.

Part C – Construction, Components and Correlates of O.S.L. in Scotland and Greece

Chapter 4: Quality of School Life: Development and Preliminary Standardisation of an Instrument Based on Performance Indicators in Scottish Secondary Schools

Abstract

Improvement of the services offered by secondary schools in the UK has been a major concern for the educational authorities. One of the most widely accepted ways to test the quality of school services is the performance indicators' approach. Performance indicators, as they stand, are quite complicated to use. Many of them could be criticised for not considering pupil's views about their school but rather gathering "adult – centred" information, since it is teachers and not pupils who do the assessment. Therefore, a new student scale, based on performance indicators, has been developed and preliminary standardised in a Scottish pupil sample. The new Quality of School Life scale has shown good psychometric properties and it has proven easy to use and administer. It has been shown to reliably and validly measure pupils' views about their quality of school life and school satisfaction. Results are discussed in relation to potential future use of the scale by educationalists.

4.1 Introduction

Schooling in early and mid 90's has predominantly focused on paedagogical aspects such as children's cognitive and intellectual development (Tyack and Cuban, 1995). However, there is an increasing interest in studying aspects of the social purposes of schooling (i.e. achievement) (Baker, 1998). Quality of School Life (Q.S.L.) has been used to emphasise the additional role of "modern school" as a non-intellectual institution, which promotes pupils' welfare and increases educational outcome (Anderson, 1982).

Quality of Life (Q.O.L.) as well as Q.S.L. have appeared as rather abstract and elusive terms across the literature (Romney, 1994). Although it is difficult to define Q.S.L., it could be suggested that it refers to a general sense of student well – being, determined strictly by school - related factors and educational experiences resulting from pupils' involvement in school life and their engagement in school climate. It is worth mentioning that this definition is mainly applicable to secondary school education, because students in higher college or university education might have particular requirements (e.g. living away from home), which are different from the needs at school educational levels (Newcomb et al., 1986).

Adopting a definition of Q.S.L. as the one described above would facilitate the avoidance of applying adult - centred approaches to the study and measurement of Q.S.L. Thus, the present Q.S.L. definition emphasises the perspective of pupils, in specifying procured strengths and / or weaknesses that a certain secondary school or educational system might possess. Such a perspective could also highlight main points for future action to improve specific aspects related to Q.S.L.

Q.S.L. could be thought as having both affective and cognitive components. School satisfaction, which is the core component of the scale presented here, has been

defined as the cognitive appraisal of the quality of school life (Huebner, 1994). School satisfaction is assumed to be a subjective construct, able to account for pupils' individual perceptual differences in relation to school climate (Baker, 1998). Its theoretical construction has been based on general work about pupils' general satisfaction (i.e. Huebner 1991 a, 1991 b), which is considered an aspect of general subjective well – being. Although the construction of the present scale has been based on subjective cognitive Q.S.L. constructs (satisfaction), affective dimensions are also included in the meaning of some of the items of the scale (i.e. support offered by school services) (Roberts and Clifton 1992 a, 1992 b). Such affective dimensions are assessed however in terms of pupil satisfaction / dissatisfaction.

Apart from the cognitive / affective model of Q.S.L., two other theoretical formulations have appeared so far to explain what constitutes Q.S.L. These formulations, which have implications in Q.S.L. measurement in general, are described briefly below. The Multiple Discrepancies Theory (M.D.T) (Michalos 1985, 1991 a, 1991 b, 1993 a, 1993 b) has claimed that Q.O.L. and Q.S.L. result from the discrepancy between what one has and what one aspires to. M.D.T. has predominantly been applied to higher education populations. Elements from Csikszentmihalyis' and Csikszentmihalyis' (1988) "Flow Theory" have also been taken into consideration in the construction of the present scale. "Flow theory" emphasises the role of engagement in different activities in order to produce higher levels of Q.S.L. Activities, both educational and recreational, are central in the school function and culture and constitute a central part of the performance indicators, where the present scale has been based.

At this point an important question would be: "why Q.S.L. should be studied and taken into consideration?" Past research in schools has proposed a substantial number

of reasons that could give rationale to the study of Q.S.L. Firstly, students' involvement in school decision procedure or consideration of their views could facilitate educational work and its goals (Epstein, 1981). Keys and Fernandes (1993), having studied factors associated with positive motivation towards school and learning in England and Wales, found that an interest in school work, liking for teachers, value of school, positive perception of school ethos, positive views towards personal ability and perseverance, good behaviour in school and parental support are factors that contribute positively to learning. These findings give grounds to the belief that effective learning is associated with school climate and school ethos factors, which are of the main components of Q.S.L.

Secondly, students become more and more discerning "consumers". Current research has revealed that although young adults perceive their learning as important, they believe that, their educational needs are not well - met by current educational systems (Flanagan, 1978) and they are rather dissatisfied by the services provided. It has also been suggested that high levels of Q.S.L. could reduce early drop - outs from school (Okun et al., 1986) and that school environment is crucial for pupils' general well – being (Philips, 1979). In addition, Q.S.L. could be very important for improving pupils' learning / performance and socialisation by making the school a positive experience for pupils.

Furthermore, if schools were able to reliably evaluate their performance, they could also provide valuable information to parents about their effectiveness, and have a valid basis on which to establish their reputation, a vast concern for the majority of the schools in the UK. Thus, a Q.S.L. instrument could facilitate the accomplishment of these specified goals.

Finally, school satisfaction has been found positively associated with pupils' acceptance of educational values, motivation and commitment to school (Wehlage et al., 1989; Goodenow and Grady, 1992). School dissatisfaction, on the other hand, has been found to be positively associated with behavioural problems and poor school achievement (Baker, 1992). Poor school satisfaction has also been shown to have negative school consequences, such as school alienation and discontent (Fine, 1986).

Although the area of Q.S.L. is rather neglected, a few instruments have been constructed (Roberts and Clifton, 1992 a; 1992 b; Huebner, 1991; Epstein and McPartland, 1976) but their focus has been on higher education (e.g. university, college). These instruments have also included many factors, which are beyond the specific topic of Q.S.L. (e.g. quality of family life). It is also worth noting that there is no standardised instrument for assessing Q.S.L. in British literature.

An important factor, which needs to be taken into consideration, when instruments of Q.S.L are concerned, is whether or not these are able to significantly contribute to the improvement of a given educational system. Educational authorities in the UK provide certain criteria (performance indicators) and resources to secondary schools in order to evaluate the quality of their work. Performance indicators could be defined as those areas related to the schools' functional aspects and are used to help schools to self - assess the quality of services they offer to pupils (Mc Glynn, 1996). School performance indicators include seven key areas (curriculum, attainment, learning / teaching, support for pupils, ethos, resources, and management / leadership). Each one of these key areas includes several sub-areas.

Performance indicators were introduced in the school evaluation system during the 1980's and since then some lists of performance indicators have been developed (e.g. DES, 1989). Unfortunately, little advice has been given to schools to date on how to

use such information (Gray and Wilcox, 1995) and the development of a scale based on such indicators could be helpful for individual schools. Furthermore, current performance indicators systems have been designed to be used by teachers and head teachers, thereby neglecting standardised assessment of pupils' views about their school. By reviewing certain assessment indicator systems, Gray and Wilcox (1995) suggested that pupil satisfaction, in terms of the education received, is one of the most important quality assurance performance indicators, because of its relationship to school effectiveness.

The scale presented in this paper focuses on those factors that are especially defined by the Ministry of Education for secondary schools, aiming to assess the quality and the effectiveness of their work. Specifically, the Scottish Office - Department of Industry and Education, has distributed the document entitled "How good is our school" (McGlynn, 1996). The above document identifies specific methods, domains and factors (performance indicators) for assessing the quality of school environment but even for teachers, it does not state how these factors should be reliably measured. By transforming such performance indicators as items, for pupil assessment, this may indicate ways to contribute to and improve the Q.S.L. of secondary school pupils in Scotland. Performance indicators have been used as the basis for constructing the items in the present scale and are assessed by pupils in relation to experienced levels of satisfaction / dissatisfaction.

4.2 Method / procedure

The new Q.S.L. scale has been predominantly based on the Scottish Office, Education Department document "How good is our school" (McGlynn, 1996). It consists of 56

items organised in 14 domains (4 items in each domain sub-scale in order to control the variance due to the number of items) (see table 4.1).

Table 4.1 The Q.S.L. scale domains

Domain/ Question No.	Area	Domain/ Question No.	Area
Curriculum		*Ethos / School factors*	
1	Structure	29	Equality / fairness
2	Number of subjects	30	Use of praise
3	Timetable	31	Discipline
4	Class activities	32	Welcoming environment
Attainment		*Ethos / Individual factors*	
5	Coursework	33	Sense of identity
6	Performance	34	Pride
7	Participation in class activities	35	Expectations
8	Respond to national targets	36	Parental involvement
Teaching methods		*Support*	
9	Methods	37	Teacher / other school staff
10	Explanations	38	Friends
11	Dialogue	39	External
12	Homework	40	Parental
Teaching Style		*Career*	
13	Continuity	41	Self awareness
14	Depth – Permeation	42	New skills
15	Integration	43	Future career
16	Timing	44	Preparation for a future job
Learning		*Relationships*	
17	Motivation	45	With teacher
18	Progress in learning	46	With other school staff
19	Critical thinking	47	With other pupils
20	Interaction with others	48	With friends
Personal Needs		*Environmental – Objective factors*	
21	Choice	49	Sport facilities
22	Experiences / Interests	50	Furnishing
23	Personal needs in learning	51	Availability of social areas
24	Out of class of activities	52	Food services
Assessment		*Environmental – Subjective factors*	
25	Methods	53	Decoration
26	Grades	54	Technical equipment
27	Assessment information	55	School distance from home
28	Performance	56	Safety

Each domain represents one performance indicator. A few items, which were not included in the aforementioned document as performance indicators, were added (satisfaction with school safety and school distance from home). These two items have previously been used in higher educational levels (e.g. college, university) but they are relevant to secondary education (Benjamin and Hollings, 1995; Keith and

Schalock, 1994; Huebner, 1991; Epstein and McPartalnd, 1976). All the items of the scale have a positive meaning (no reverse scorings) and subjects respond on a 4 - item, Likert type scale ranging from strongly disagree to strongly agree.

Before the initial administration, the scale was tested in two pilot studies. Firstly, the scale was administered to five pupils from each grade 2, 5, and 7, in order to control for any linguistic or item - meaning problems (Face validity). This attempt resulted in some linguistic changes to the scale. Secondly, the scale was administered to 68 pupils (grades 1, 4, 5) in a secondary school in Stirling area. The sample for this second study was randomly selected from the total student population of the school. One class from each of the above grades was selected to participate. An open question was also added this time at the end of the scale: "what do you think would improve your life at school?" This question was added in order to identify any additional areas not included in the original scale. However, as all the suggestions provided by the pupils were already included, no more items were added. The open question was kept in the initial administration of the scale, in order to give the opportunity to pupils to make suggestions for the improvement of both their school life and the scale.

Prior to administration, written consent from the pupils' parents for participation in the study had been requested by the Head Teacher. During allocated class time individual teachers distributed the scale to pupils, accompanied by four other pupil self – report measures (see below) and an information letter. The information letter contained information about the general scope of the study (i.e. assessing pupils' views about their school) as well as an explanation that participation in the study was entirely voluntary and anonymous. Teachers were requested to answer any questions concerning pupils' difficulties in understanding any items but not to provide any further information about the aims of the study than that given in the information

letter. Feedback from the teachers after the administration indicated that there were no problems both with the timing and the understanding of the items. Completion time was approximately 6 - 8 minutes, with pupils from higher grades tending to require the least and from the lower grades the maximum time.

The main administration of the scale followed the same methodological procedure as the second pilot study.

4.3 Scales

Measures used in this chapter have been described in chapter 3. These include:

Demographic Measures

Student Stress Inventory (SSI - Children's Version) (Alban Metcalfe et al., 1982)

P.G.I. General Well - Being Scale (Verma et al, 1983)

Hare Self - Esteem Scale (HSES) (Hare, 1985)

Positive and Negative Affect Schedule (PANAS) (Watson et al., 1988)

4.4 Sample

The sample used is as described in chapter 3.

4.5 Results

4.5.1 Descriptive analysis of the domains / total of the new Q.S.L. scale

Descriptive analysis of the overall Q.S.L. produced a relatively high mean score of 163.5 (possible minimum score 56 possible maximum score 224), indicating relatively high self – reported Q.S.L. in this school sample. Mean and Sd have also been calculated for each domain of the scale (table 4.2).

Environmental factors both objective and subjective (e.g. facilities, equipment) produced the lowest means (Objective Environmental Factors: Mean = 9.9, Sd = 2.9; Subjective Environmental Factors: Mean = 10.1, Sd = 2.2), in relation to the rest of the domains. Career factors (e.g. preparation for future job) (Mean = 12.8, Sd = 2.4), the Relationships domain (e.g. with other pupils) (Mean = 12.8, Sd = 1.9), and the Support domain (e.g. from teacher) (Mean = 12.5, Sd = 2.4), produced the highest means in relation the other domains.

Table 4.2. Mean and Sd of Q.S.L. domains.

Domain - Sub-scale	Mean	Sd
Curriculum	11.8	1.9
Attainment	12.1	1.8
Teaching Methods	10.9	2.0
Teaching Style	11.2	1.8
Learning	12.2	2.1
Personal Needs	11.1	2.1
Assessment	11.7	2.3
Ethos (School Factors)	11.0	2.5
Ethos (Individual Factors)	12.3	2.2
Support	12.5	2.4
Career	12.8	2.4
Relationships	12.8	1.9
Environmental Factors (objective)	9.9	2.9
Environmental Factors (subjective)	10.1	2.2

4.5.2 Factor analysis on the domains of the scale

A Factor analysis was performed on the scores of Q.S.L. domains as a means of coherence (i.e. construct validity) among the different Q.S.L. domains and not to determine the dimensional structure of the new scale, as such dimensions regarding performance indicators had already been provided in the McGlyn (1996) document. Thus, Factor analysis on the scores of Q.S.L. domains produced one factor solution (Eigenvalue = 6.7 for the first factor and 1.3 for the second), able to explain 48.2% of the Q.S.L. variance. Each of the domains was found to have high loadings (over .57) on this factor, indicating high levels of coherence across the domains. It may also be

important to note that each domain produced very low loadings (below .50) on the second factor, which made the one factor solution more robust.

4.5.3 Internal consistency reliability and split – half reliability of the scale

Item – total correlations were calculated for the scores in the initial administration and are shown in table 4.3. The range of coefficients was .617 to .829. All correlations were significant at the 99.9% level of significance.

It is worth mentioning that each sub-scale of the Q.S.L. scale produces its own score and, for this reason, it could be used independently. However, the scale as a whole is more reliable than sub-scales individually. Reliability coefficients (Cronbach and Guttman Spit - half) of the scale (14 domains) were calculated both for the data derived from the pilot study as well as from the main administration of the scale and are shown in table 4.4. Alpha coefficients were .913 in the initial assessment and .892 in the pilot study. The time interval between the two administrations was two months approximately. Guttman's Split – half reliability coefficients were also found high in both trials. In the initial assessment, Guttman's coefficient was .832 and in the pilot study .884.

Table 4.3. Internal consistency of the scale. Q.S.L. domain / total correlation matrix.

Domain - Sub-scale	r
Curriculum	.688***
Attainment	.628***
Teaching Methods	.700***
Teaching Style	.617***
Learning	.684***
Personal Needs	.743***
Assessment	.678***
Ethos (School Factors)	.829***
Ethos (Individual Factors)	.816***
Support	.677***
Career	.723***
Relationships	.640***
Environmental Factors (objective)	.637***
Environmental Factors (subjective)	.631***

*p < .05, **p < .01, ***p <. 001.

Table 4.4. Reliability of the scale (14 domains)

	Cronbach Alpha	Guttman Split - half
Pilot Study		.884
(n = 68)	.892	Alpha for part 1 = .822
		Alpha for part 2 = .795
Initial		.832
Assessment	.913	Alpha for part 1 = .860
(n = 425)		Alpha for part 2 = .863

4.5.4 Validity of the scale

When it comes to concurrent validity, previous studies have used Self - Concept / Self - Esteem Scales and anxiety measures (e.g. Huebner, 1991a), since alternative children / adolescent general and school well - being scales were not available at the time (Huebner, 1991b). However, in order to test the validity of the present scale, using an external criterion, a general well - being measure was modified and used. Thus, the new Q.S.L. scale produced significant correlations with an amended version of the P.G.I. General Well - Being Scale (Verma et al., 1983). The Q.S.L. total was

found to have a strong and statistically significant correlation with the Well - Being total ($r = .434$, $p < .000$). Each Q.S.L. domain has also been found significantly correlated with the Well - Being total (r coefficients ranged between .191 and .382, all significant at the 99% level of significant, at least).

Validity of the new Q.S.L. scale was also tested through its relationship with school stress, using the Student Stress Inventory (children's version) (Alban Metacalfe et al., 1982). Student Stress Inventory total was found negatively correlated with the Q.S.L. total ($r = -.411$, $p < .000$). The Student Stress Inventory total also came out as significantly and negatively correlated with each and all of the individual Q.S.L. domains (range of r coefficients: $r = -.115$ to $-.410$, $p < .05$ at least, across the different Q.S.L. domains).

The correlation coefficient between the total Q.S.L. scale and the Hare Self - Esteem Scale (Hare, 1985) total was .482 ($p < .000$). The School Self - Esteem sub-scale was also found to have a strong and statistically significant correlation with the Q.S.L. total ($r = .534$, $p < .000$). It is also important to mention that the total of the Hare Self - Esteem Scale was also found to be significantly correlated with each and all of the individual sub-scales of the Q.S.L. scale (range of r coefficients: $r = .111$ to .430, $p< .05$ at least, across the different Q.S.L. domains). Significant positive correlations were also found between the Q.S.L. sub-scales and the School Self - Esteem sub-scale of the Hare Self - Esteem Scale (range of r coefficients: $r = .149$ to .455, $p < .05$ at least, across the Q.S.L. domains).

The new Q.S.L. scale produced high correlations with positive and negative affectivity. Past literature has suggested that affectivity in general is highly associated with Q.O.L. and it is one of its main components (Diener, 1984). A statistically significant correlation between positive affectivity and Q.S.L. total ($r = .497$, $p <$

.001) and a negative correlation between Q.S.L. and negative affectivity were found (r = -.328, p < .001). Positive affectivity was also found to have statistically significant positive correlations with each and all of the Q.S.L. domains (range of r coefficients: r = .195 to .467, p < .001). Negative affectivity, on the other hand, was shown to have statistically significant negative relationships with each and all of the Q.S.L. domains (range of r coefficients: r = -.076 to - .311, p < .001). Correlation coefficients related to the validity of the scale are summarised in table 4.5.

Table 4.5. Concurrent validity of the Q.S.L. scale

Scale	r
Measures of well – being	
P.G.I. General Well - Being Scale	.411***
Student Stress Inventory	-.411***
Personality measures	
Hare Self - Esteem Scale total	.482***
Hare School Self - Esteem sub-scale	.534***
Positive Affectivity	.497***
Negative Affectivity	-.328***

*p < .05, **p < .01, ***p <. 001.

4.6 Discussion

School performance indicators have been widely used in several secondary schools in Scotland, in order to ensure quality of the educational services provided. However, the complexity of current performance indicator systems as well as their adult - centred focus have created the need for a pupil – rated scale for the Q.S.L. assessment. The present study represents an attempt to develop and initially calculate the psychometric properties of a user - friendly Q.S.L. scale based on performance indicators, following a pupil – centred perspective. Nevertheless, it may be important to note that the performance indicators on which the present scale has been based were defined by the Ministry of Education, therefore it could be argued that the

present scale does not follow a pupil – centred approach. The scale presented in this chapter would have a clearer pupil oriented approach, if indicators were selected on the basis of interviews or focus groups with pupils. However, the present scale follows a pupil – oriented perspective considering that it is the pupils and not the teachers who made the assessment regarding Q.S.L. as suggested in the original document of McGlynn (1996).

Overall, it was found that the new Q.S.L. scale is a potentially worthwhile instrument for assessing secondary school pupils' views about school, with good psychometric properties. It has been shown to be a valid and reliable instrument, which could be used by the educational authorities when there is a need for assessing Q.S.L. factors of a specific school or several schools in a given geographical area. It is a relatively short instrument, taking into account the amount of the school key areas assessed in a single scale. It takes approximately only about seven minutes for completion and administration does not require special training.

In order to test the concurrent validity of the Q.S.L. scale, its relationship with other standardised scales was investigated. Similar instruments have been used to test the psychometric properties of related measures in the past (e.g. Huebner, 1991). The Q.S.L. total was found to correlate negatively with stress levels. Several studies till now have presented evidence for the negative consequences of stress in relation to general well - being and it has also been suggested that stress contributes negatively to any positive school experiences (e.g. Johnson, 1979; De Anda et al., 1997). The positive relationship between Q.S.L. and self - esteem was also expected and confirmed. The association between self - esteem and Quality of Life (Q.O.L.) and Q.S.L. have also been reported in previous studies in this area (Bhaghat and Chassie, 1978; Kelfikangas - Jarvinen, 1992). With regard to the association between Q.O.L.

and, as consequence, Q.S.L. with general well – being, it has been suggested that they share a lot of variance (for an overview see Diener, 1984). However, the present Q.S.L. scale produced high correlations with general well - being scores, which provide additional grounds for its validity. Moreover, it suggests that Q.S.L. is associated with out - of - school factors. On the other hand, the high correlations found between Q.S.L and affectivity indicate that Q.S.L. has also affective properties. Whether Q.S.L. is predominantly cognitive or affective should be subject to future research.

Although the new Q.S.L. has proven a valid and reliable instrument, the present study was rather limited in terms of the number of pupils who participated. Specifically, a rather small, although sufficient for valid results, sample was drawn from 6^{th} graders. It is also important to note that the sample was drawn from two schools only, therefore its representativeness of the population of pupils in Scottish or the UK schools in general could be questioned. Furthermore, the scale was administered to the pupils by teachers and it is unknown whether this may have affected the reliability of the scale. Future research using the scale should also consider any effects on reliability due to administration by different administrators (intra-observer reliability). Future research is needed to test the scale in larger samples and more schools and establish further its validity and reliability. In addition, the scale should be tested in samples drawn from other parts of the UK creating normative data for different regions. Such analysis can facilitate comparisons in terms of Q.S.L. levels for different geographical regions. Additionally, the new scale could also be studied in relation to different ethnic sub-groups, taking into account any differences in the levels of school satisfaction / dissatisfaction experienced as a result of cultural variations. Finally, the new Q.S.L. scale could be studied in relation to performance

and school problems such as bullying in order to highlight its effects on school culture and school ethos. This kind of research could provide a clearer picture on how satisfaction with school would influence the development of certain problems in children and young adolescents.

Future research should also focus on the construction of a consistent model of Q.S.L., and particularly on the study of the relationship between Q.S.L., demographics and personality factors, since literature lacks consistent research in this area. This analysis could facilitate not only the understanding of any factors that could increase or decrease the levels of the Q.S.L., but it could also provide valuable data, concerning the predictive validity of the scale.

The present scale may be useful for educational authorities, especially school inspectors in assessing the levels of satisfaction experienced by pupils. Use of the scale in larger scale projects could also facilitate between school comparisons, by identifying any areas of school life that require careful consideration in particular schools. Extended administrations may be helpful for educational policy makers who aim to identify school areas that require improvement, in order to make the most efficient use of educational budget assigned by the government. Such implications of the use of the scale may also appeal to individual schools, which are interested in improving school ethos, making school a more positive experience for pupils and making the most out of their limited school budget. Information derived from between - school comparisons, using the present scale, could prove helpful for defining the areas that need special attention or improvement, in order to ensure school effectiveness and school satisfaction. The scale could also be used by the educational authorities to assess and secure quality assurance in certain secondary schools.

Furthermore, the new Q.S.L. scale could be useful for teaching staff when they wish to evaluate particular areas of their work as this is reflected in their pupils.

As far as educational research is concerned, the present scale may be used to isolate particular areas of school dissatisfaction in order them to be targeted by future intervention. Educational authorities and educational researchers could also use the scale in implementing and assessing the impact of research priorities, in order to provide high quality of educational services in their area of interest.

Chapter 5: The Role of Demographics, Personality Variables and School Stress on Predicting School Satisfaction / Dissatisfaction

Abstract

The importance in studying Quality of School Life (Q.S.L.) lies predominantly on research findings concerning its relationship with educational outcome. Although some studies have focused on factors affecting Q.S.L., no study so far has assessed various factors of Q.S.L. simultaneously, with regard to secondary education, in order to construct a Q.S.L. model and establish its best predictors. The present research has attempted to study correlates of Q.S.L. including demographic, personality variables and school stress, and construct a consistent model of Q.S.L., using data derived from pupils in two Scottish secondary pupils (n = 425). The model constructed was found able to account for 56% of the Q.S.L. variance. Overall results indicated that Q.S.L. is predominantly influenced by personality factors, in particular school self – esteem. Results are discussed in relation to the "trait" character of Q.S.L. and the educational implications of the model.

5.1 Introduction

It has been repeatedly shown in the past that school represents a social arena where adolescents begin to develop personal beliefs, educational and occupational goals (Skinner, 1987). Q.S.L. which has been used as an indicator of pupils' welfare (Anderson, 1982), could be defined as a general sense of student well – being, determined by school related factors and educational experiences, resulting from pupils involvement in school life and their engagement in school environment.

To date few theoretical formulations have been developed for conceptualising Q.S.L. (e.g. The Multiple Discrepancies Theory, Michalos, 1985). The present research follows the school satisfaction approach which is the cognitive appraisal of Q.S.L. (Huebner, 1994a). School satisfaction has been considered as a subjective construct (Baker, 1998) and as an aspect of pupils' general subjective well – being.

Past research has indicated that high levels of school satisfaction are positively associated with acceptance of educational values, commitment to school (Wehlage et al., 1989; Goodenow and Grady, 1992), higher motivation towards learning (Keys and Fernandes, 1993) and decreased levels of school drop - outs (Okun et al., 1986; Ekstrom et al., 1986). Lower levels of school satisfaction have been found to be negatively associated with behavioural problems, poor school achievement (Baker, 1992) and school alienation (Fine, 1986).

The importance of studying Q.S.L. also relates with school effectiveness (Gray and Wilcox, 1995), since the more satisfaction pupils get from school the more school goals (i.e. educational targets) are achieved. At present two main approaches concerning assessment of school effectiveness have been developed. The objective indicators approach assesses school effectiveness through quantitative school factors (i.e. performance in exams). The subjective indicators approach mainly include

factors that have a personal meaning for pupils (i.e. satisfaction). Past attempts to measure school climate have rather neglected the role of subjective indicators (Gray and Wilcox, 1995). Furthermore, assessment of school effectiveness using subjective indicators has lacked consistent measures.

Past research in the area of Q.S.L. and school climate has been criticised in that, it has "failed to take into account anything about the internal life of a school: its attitudes, values, and more, or its qualities as a social organisation..." (Wilson, 1980). Use of inadequate measures, poor models, too few variables, or arbitrarily selected variables, misinterpretation of results, inadequate research designs are some of the methodological weaknesses of past research in the area of school climate (Anderson, 1982). Previous studies on the effects and correlates of Q.S.L. have usually lacked employment of a consistent definition of Q.S.L. and also lacked any consistent focus on secondary education.

Anderson (1982) reported that many studies failed to study adequately school climate, because they focused on finding relationships between variables rather than on the mechanisms that underlie such relationships. The construction of an appropriate model could provide information related to those mechanisms and explain the interrelationships of the correlates of a given dependent variable (Snow, 1973). The organisation of Q.S.L. correlates in a consistent model would also permit the construction of an advanced theoretical formulation able to facilitate the development of action programmes for its improvement, where necessary.

The present paper aims to present the findings of a study on the relationship between subjective Q.S.L. and certain correlates by constructing a mediated model, which includes personality variables (affectivity, locus of control, self - esteem), school stress and basic demographics (school, age and gender). Although, it is generally

accepted that appropriate combinations of factors could effectively predict outcome variables (i.e. Q.S.L.), it is rather difficult to accurately select the correlates of a certain research area (i.e. Q.S.L.). Tagiuri (1968), for instance, has pointed out that "in principle just about everything may make a difference to behaviour". However, the correlates selected to be incorporated in the proposed model have been previously found to be highly related with Q.S.L. or Q.O.L. (Quality of Life). Additionally, in order to avoid some of the weaknesses of past research, we have selected variables that apply to pupils as a whole and not to special subgroups, variables that are amenable to change (Anderson, 1982) and variables which have been repeatedly proven to influence behavioural outcomes.

A brief review of past literature concerning the relationship between Q.S.L. and the variables of interest is presented below. Since rather limited literature exists on Q.S.L., research examples drawn from the area of general Q.O.L., were also included in the following review.

5.1.1 Q.S.L and demographics (school, gender, age / grade)

When Landis (1942) asked people (65 to 98 years) to indicate retrospectively the happiest period of their lives, over 50% rated young adulthood as the happiest period. Gurin et al. (1960) also confirmed these results. Liberman (1970) however, found no significant differences in the levels of life satisfaction between elderly and college students. Later research in the area supported age differences in relation to Q.S.L. or Q.O.L. Bortner and Hultch (1970) for example, found that older subjects tend to report higher levels of life satisfaction than younger subjects. Czaja (1975), in her study about the age effects on life satisfaction in a sample of wide age range (20 - 75), found that life satisfaction increases linearly with age.

Even in a student population, which is relatively homogeneous, there are a lot of inconsistencies in findings. Hong and Giannakopoulos (1994) studying the age effect on life satisfaction in a wide age range of university student and non - student samples (17 – 40 years of age) found that life satisfaction is higher in older subjects (see also Okun et al., 1986). With regard to younger populations, Okun et al. (1990), measuring the effects of school grade on school satisfaction for both primary and secondary schools (n = 431,330 pupils) found statistically significant differences between school grades. The higher the school grade was, the lower the levels of school satisfaction. Okun et al. (1990) explained grade effects in terms of lack of personal attention by teachers and lack of participation in classroom decision making in higher grades. Furthermore, McGuire et al. (1987) have reported that school – related worries increase during the early adolescent period. Such worries could have a negative effect on Q.S.L. However, Huebner (1991), in his study with primary school pupils (grades 5 - 7), found neither grade nor age effects on general life satisfaction.

Past research, though, on the effects of gender on Q.S.L. has been more consistent than research on age effects. There has been consistent evidence suggesting that there are no gender effects on Q.S.L. (Ryff, 1989; Shin and Johnson, 1978; Shmotkin, 1990). Hong and Giannakopoulos (1994) reported also no gender effects on Q.S.L. in their study with university students and non-students. They have attributed their results to similarities between the two genders, in terms of lack of diversity in sex role stereotypes. Huebner (1991) also reported no gender effects on life satisfaction in primary schools. Bulcock et al. (1991) investigated gender differences in relation to Q.S.L, in high school children. He reported no gender differences, even when controlling for other demographics such as age, urban - rural residence and socio-economic status. However, there has been another group of studies mainly in the area

of general subjective well - being (Andrews and Witney, 1976; Cambell, 1976) suggesting that there are differences between adult males and females with regard to perceived levels of Q.O.L. For example, Medley (1980) suggested that younger women tend to perceive higher levels of Q.O.L. than younger men. This effect seems to disappear at the age of 45.

When it comes to between school differences in relation to school satisfaction, Dawson (1985), in a relatively short study (86 maladjusted pupils) drawn from 6 different schools, found that the levels of school satisfaction significantly differed across schools. Between school differences, according to Dawson, might be attributed to different experiences that pupils have from different schools as a result of individual school environment and culture. Ainley et al. (1991) have also added that between school differences in Q.S.L. cannot be explained in relation to background differences of pupils.

Overall, Ainley et al. (1991) commented that demographic factors do not have a strong predictive value on Q.S.L. They found that demographics overall, such as socio-economic status and gender, are able to account for only 2% of the variance in views of school life and only 4% when school membership was included.

5.1.2 School stress

Adolescence is a time of maturation of physical and personality factors, and is associated with stresses as a result of various crises that could be the basis for various behavioural patterns in adulthood (Schuller, 1994). According to Elias (1989) major strains of adolescence include overemphasising of success in schools and lack of support. Wenz - Gross et al. (1997) suggested that the secondary school prerequisites both major changes in academic and social domains. The learning environment in the secondary school becomes more demanding and complex than it was in the primary

school. Expectations for academic achievement also increase (Eccles et al., 1993). In addition, social networks in adolescence become more fluctuating and significant for the definition of the self. Eccles et al. (1993) have also emphasised the incongruent role of student - teacher relationship developed during adolescence, where students seek independence in their lives and teachers require more discipline from them.

With regard to the negative consequences of stress, Johnson (1979) found that 10% to 30% of students experience severe stress to such an extent that this could interfere with their school performance (see also De Anda et al., 1997). Philips (1979) has reported that high school stress is associated with maladaptive behaviour in school. In addition to the above, stress in general, and school stress in particular, have been found to affect of school life negatively. De Anda et al. (1997), for instance, claimed that the experience of stressful life events could have negative consequences on the physical health, mental health, and emotional maladjustment. There is evidence, however, that the development and application of appropriate school policies and procedures could be used to tackle school stress (Sharp and Thompson, 1992).

Although it is quite easy to understand the existence of stress in an educational context via its negative consequences, it is rather difficult to define it accurately. D'Aurora and Fimian (1988) proposed that "several models could explain the phenomena of stress and burnout (in schools)". Schultz (1980), for example, defined stress as a child - perceived threat to his / her security, self - esteem, safety and current way of life. Helms (1985) on the other hand, emphasised the role of interactions within the educational setting and their manifestations in the emotional, behavioural and physiological level. However, when it comes to the assessment of organisational stress, the most important factor is not the perception of stress but the identification of the stressors, which contribute to overall stress levels. It is worth mentioning that

different scales measure and assess different school stressors. Thus, the choice of the appropriate stress measurement scale is an important issue in the research area of school stress.

5.1.3 Q.S.L and personality

5.1.3.1 Self - esteem

Self – esteem is a personality factor describing one's perceived level of self – worth. According to Rogers (1961), it is the by-product of the relationship between self – image and ideal – self. The greater the gap between self – image and ideal – self, the lower the self – esteem levels.

Gurney (1986) has reviewed several reasons for why self - esteem becomes an increasingly interesting factor in studies with children. It has been suggested that high or average self - esteem levels are associated with adjustment, independence, less defensive behaviour, and greater social acceptance from peers. Strassburger et al. (1990) have also claimed that it is the most important variable for explaining school achievement (see also Kunce et al., 1972).

When it comes to the relationship between self - esteem and global life satisfaction, moderate positive correlations have been found (Dew and Huebner, 1994). Huebner (1994), in his study with both primary and secondary school children in USA, found a positive and strong relationship between life satisfaction and self -esteem. The effect of self - esteem on general life satisfaction seems also to be significant in older (university) students as well (Bhaghat and Chassie, 1978). In the area of school satisfaction, Baker (1998) in her study of elementary school pupils ($n = 129$) reported a moderate negative but significant correlation between school satisfaction and self – esteem ($r = -.38$, $p < .001$).

As far as the study of self - esteem is concerned, it is important to note that little is known about different self - esteem sources (i.e. family, school). Instruments developed till now have tended to assess general self - esteem factors, neglecting that levels of self - esteem could vary among different domains of action (e.g. family versus school). Korman (1970) was one of the first researchers who distinguished among different sources of self - esteem (generalised, task - specific, social).

5.1.3.2 Locus of control

Rotter (1954) has defined locus of control as a personality or dispositional variable, which refers to the tendency of perceiving events as being a consequence of own (internal) or outside factors e.g. luck (external). It has been suggested that the assessment of locus of control is more important in younger populations than it is for older populations, as it could be a strong predictor for maladaptive behaviours (e.g. Currie et al., 1977 for addiction) (Strickland, 1977). Previous research has also suggested that high externality is associated with higher levels of Q.O.L. (Diener, 1984), although the direction of the relationship remains unknown.

Bhaghat and Chassie (1978) reported that higher internal locus of control is associated with better performance in University and higher satisfaction with ones' program of studies, compared with higher levels of external locus of control. Dew and Huebner (1994) have also reported a positive relationship between general life satisfaction and internal locus of control. However, there has been no study in previous literature focusing on the relationship between Q.S.L. and locus of control.

5.1.3.3 Affectivity

Affectivity could be described as a rather neglected area of research for younger populations. Affectivity includes two broad mood factors (positive and negative affect) which have been shown to be dominant in self - reported measures of mood

(Watson et al., 1984; Watson and Tellegen, 1985). Negative affect is a factor of general distress and includes several negative mood states such as fear, hostility and disgust. On the contrary, positive affectivity subsumes positive mood states like enthusiasm, higher energy level, interest, joy and determination (Watson et al., 1988 b).

Although there are no studies available in the literature that have examined the relationship between Q.S.L. and affectivity, negative affectivity has been found negatively correlated with measures of general life satisfaction, job satisfaction and happiness (Stokes and Levin, 1990). Secondly, there has been evidence that negative affectivity is associated with aversive emotional states, like stress (e.g. Watson, 1988). Since it has been found that stress affects negatively Q.S.L. and stress is positively associated with negative affectivity (Stokes and Levin, 1990), it would be hypothesised that negative affectivity has an adverse effect on Q.S.L.

5.1.4 General comments / hypotheses

The previous review has indicated that studies concerning the relationship between Q.S.L. and various correlates, with respect to secondary education, are rather limited. The majority of studies presented concern general life satisfaction or overall Q.O.L. The present study attempts to study the correlates of Q.S.L. in secondary schools with respect to school satisfaction.

Taking into account previous research on the relationship between Q.S.L. and other factors, it is hypothesised that Q.S.L. is associated with demographics such as school, grade / age but not by gender. We have also hypothesised that Q.S.L. is negatively related with negative affectivity and school stress and positively related with self - esteem and positive affectivity. It will also be tested whether there are statistically significant demographic effects on Q.S.L. when personality factors and school stress

mediate these effects (Q.S.L. model). Finally, the predictive value of individual factors and group factors (personality, demographics) on Q.S.L. will be explored.

5.2 Method

Method for chapter 5 as is described in chapter 3.

5.3 Scales

Instruments used in chapter 5 have been described in chapter 3. These include:

Demographic Measures

Quality of School Life Scale

Student Stress Inventory (Children's Version) (Alban Metcalfe et al., 1982).

P.G.I. General Well - Being Scale (Verma et al, 1983).

Hare Self - esteem Scale (HSES) (Hare, 1985).

Nowicki's – Strickland's Locus of control Scale for Children (Nowicki and Strickland, 1973).

Positive and Negative Affect Schedule (PANAS) (Watson et al., 1988 a)

5.4 Sample

Subjects are as described in chapter 3.

5.5 Statistical analysis

Effects of demographics on Q.S.L. were investigated using the General Linear Model (GLM), which combines ANOVA and Regression Analysis. The choice was based on the need to obtain R^2 for categorical variables in order to specify the percentage of Q.S.L. variance explained by those variables. One – way ANOVA and One – way

GLM produce almost the same statistical coefficients and findings. GLM was also used to test the significance of the Q.S.L. model (see figure 5.1) which includes demographic and personality variables. GLM analysis allows the study of effects of factors upon a dependent variable, when other variables (mediators) intervene in this association, as well as interactions between sets of factors. Therefore it is suitable for the study of mediating models.

Associations between Q.S.L. and continuous variables were obtained by calculating Pearsons' correlations (table 5.1). Predictive values of continuous variables on Q.S.L. were calculated using Regression analysis. Multiple Regression analysis was used for calculation of predictive values of group variables on Q.S.L.

Table 5.1. Correlation matrix among Q.S.L. and correlates

	1	2	3	4	5
1.Q.S.L.	—				
2.Positive affectivity	.497***	—			
3.Negative affectivity	-.328***	-.233***	—		
4.Stress total	-.412***	-.090	.400***	—	
5.Self – esteem total	.482***	.401***	-.415***	-.305***	—
Mean	163.5	35.0	17.7	38.9	90.3
SD	20.8	6.8	6.2	20.5	10.9

*p < .05, **p < .01, ***p <. 001

5.6 Results

5.6.1 Q.S.L. total and domain descriptives

Descriptive analysis of the Q.S.L. total provided a mean of 163.5 (Sd = 20.8) (Possible Min 56 and Max 224) which appears to be quite high, taking into account the possible minimum and maximum scores. This indicates that secondary school pupils in this sample were quite satisfied with their school life in general. With respect to Q.S.L. domains, high means were found for Learning (e.g. motivation, critical thinking) (Mean = 12.2, Sd = 2.1), Ethos 2 (e.g. school expectations, parental involvement) (Mean = 12.3, Sd = 2.2), Support (e.g. from friends, teacher) (Mean =

12.5, Sd = 2.2), Career (e.g. acquiring skills, helping with career decision making) (Mean = 12.8, Sd = 2.4), and Relationships domains (e.g. with teacher, other pupils) (Mean = 12.8, Sd = 1.9), indicating higher levels of satisfaction with these domains. Teaching methods (e.g. explanations given by teachers, dialogue during classes) presented one of the lowest means (Mean = 10.9, Sd = 1.9), in comparison with the levels of satisfaction in the other domains. Environmental Factors 1 (e.g. sport facilities, social areas) (Mean = 9.9, Sd = 2.9), and Environmental Factors 2 (e.g. distance from home, safety) (Mean = 10.2, Sd = 2.2), presented the lowest means (see table 4.2). Lower means indicate lower levels of pupil satisfaction with these domains.

5.6.2 Demographics and Q.S.L.

Although different demographics have been found to be associated with different Q.S.L. domains, Q.S.L. total was found to be associated with different school grades, schools and gender.

Thus, younger children were found to experience relatively high levels of Q.S.L. (Means: Grade 1 = 171.9 and Grade 2 = 171.2). Children from Grades 3 and 4 reported the lowest levels of Q.S.L. total (Means: 156.2 and 161.1 respectively), in comparison with other grades. It seems that, after completing the third year of the secondary school there is an increase in the levels of Q.S.L. total (Means: Grade 5 = 161.3, Grade 6 = 163.9). These results were also supported by the significant negative relationship between age and Q.S.L. It was found that levels of Q.S.L. decrease linearly with age ($r = -.239$, $p < .000$). However, post – hoc Scheffe's revealed that statistically significant differences between grades lay between 1st and 3rd graders ($p < .05$) and 2nd and 3rd graders ($p < .05$).

Differences in the levels of Q.S.L. were also detected by different schools ($F = 4.9$, $Df = 1$, $p < .000$). Means of Q.S.L. total were 161.0 for school A and 165.9 for school B

respectively. Although, both schools belong in the same geographical area, School A attracts pupils whose families usually belong in upper socio-economic classes, since higher number of both mothers (X^2 = 46.3, Df = 6, p<.000) and fathers (X^2 = 82.7, Df = 6, p<.000) from school A were found to belong in the 1st and 2nd socio-economic classes in comparison with school B. In addition, a significantly higher proportion of fathers (X^2 = 27.2, Df = 1, p<.000) and mothers (X^2 = 19.9, Df = 1, p<.000) in school A attained higher education than in school B. Moreover, It is important to note that levels of Q.S.L. total were not found to be associated with parental socio-economic status and levels of education. Hence, these differences in Q.S.L. levels between the two schools may be attributed to some other aspect of school climate and / or culture.

Gender was also found to be associated with differences in levels of Q.S.L. Girls reported higher levels of Q.S.L. (Mean = 165.6) than boys (Mean = 160.8) (F = 4.7, Df = 1, p < .030). Gender differences were found in all the Q.S.L. domains.

However, table 5.2 highlights that demographic variables have a rather limited individual predictive value in relation to Q.S.L. total. Different grades were found to explain the highest proportion of the Q.S.L. variance (7.3%) followed by different schools (1.4%) and gender (1%).

Table 5.2. Demographics as predictors of Q.S.L.

Variable	F	Df	p <	R^2
Grades	5.6	5	.000***	.073
Schools	4.9	1	.000***	.014
Gender	4.7	1	.030*	.010

*p < .05, **p < .01, ***p <. 001

5.6.3 Q.S.L. and personality Factors

Self - esteem total appeared strongly associated with Q.S.L. total (r = .482, p < .000). However, the self - esteem domain found to be the most highly related with Q.S.L.

total is the school self - esteem ($r = .534$, $p < .000$). These results indicate that area specific self - esteem could be a better predictor for certain attitudes and that there are differences in the self - esteem scores obtained from different sources. Regression analysis confirmed these results, since school self - esteem was found to explain 28.6% of the total Q.S.L. variance. Self - esteem total explained 23.2% of the Q.S.L. variance (see table 5.3 for regression coefficients). Home self – esteem found to explain a relatively lower percentage of Q.S.L. variance (12.9%) in comparison with school self – esteem. Finally, peer self – esteem was found the least powerful predictor of Q.S.L., in comparison to other self – esteem sources, since it was found to explain 14.8% of the Q.S.L. variance.

Neither internal nor external locus of control appeared significantly correlated with Q.S.L. (internal locus of control and Q.S.L. $r = -.007$, $p<.898$, external locus of control and Q.S.L. $r = .007$, $p<.898$). Internal locus of control though had a negative relationship with Q.S.L. and external a positive one.

Affectivity, on the other hand, was found to hold a strong relationship with Q.S.L. total. Positive affectivity appeared to have a significant positive relationship with Q.S.L. total and negative affectivity a negative one. Correlation analysis also suggested that positive affectivity bears a stronger relationship with Q.S.L. total ($r = .497$, $p < .000$) than negative affectivity ($r = -.328$, $p < .000$). The above pattern of associations between Q.S.L. and affectivity was also detected in all the different Q.S.L domains. (Only Objective Environmental Factors domain was not found significantly correlated with Negative affectivity, $r = -.075$, $p<.138$). Regression analysis has revealed that positive affectivity is a better individual predictor of Q.S.L. (could explain 24.7% of the Q.S.L. variance) than negative affectivity (could explain 10.8% of the Q.S.L. variance) (see table 5.3).

Overall personality factors (self – esteem total, positive and negative affectivity) were a very good Q.S.L. predictor, explaining 37.7% of its variance.

Table 5.3. Regression analysis - Q.S.L. and personality (self – esteem and affectivity)

	BETA	R^2	F(1)	p <
Self - esteem				
School Self - esteem	.534	.285	120.4	.000***
Home Self - esteem	.359	.129	45.6	.000***
Peer self - esteem	.148	.022	7.1	.008**
Self - esteem Total	.482	.232	90.3	.000***
Affectivity				
Positive affectivity	.497	.247	110.6	.000***
Negative affectivity	-.328	.107	39.7	.000***
Personality Overall[1]		.377	55.8 (3)	.000***
- Self – esteem total	.495			
- Positive affectivity	1.150			
- Negative affectivity	-.497			

*p < .05, **p < .01, ***p <. 001
[1]Multiple regression analysis on Q.S.L. total from positive and negative affectivity and self – esteem total.

5.6.4 Q.S.L. and school stress

Just like negative affectivity, stress was also found negatively associated with Q.S.L. ($r = -.411$, $p < .000$). This statistically significant negative relationship was detected in all Q.S.L. domains. Regression analysis revealed that school stress could explain 16.9% of the Q.S.L. variance (see table 5.4).

Table 5.4. Regression analysis - Q.S.L. and student stress

	BETA	R^2	F(1)	p <
Student Stress	-.411	.169	62.1	.000***

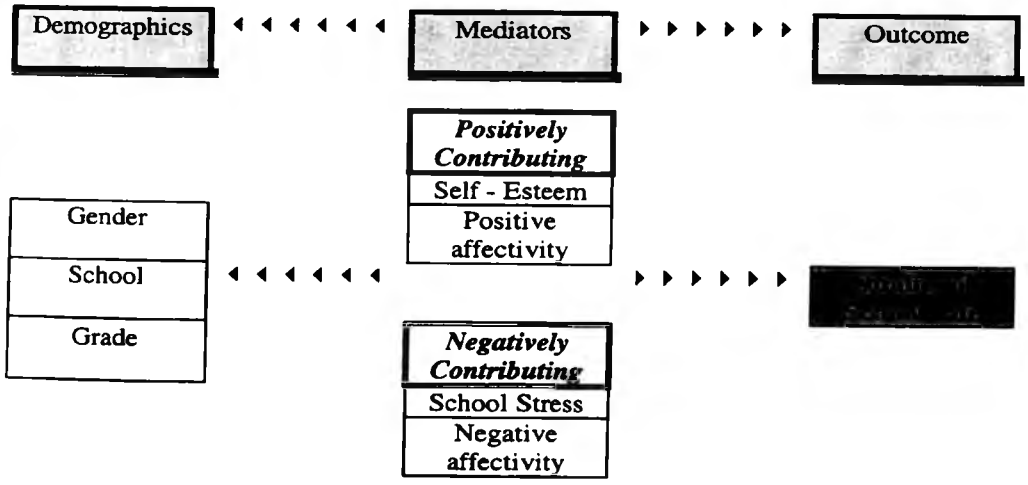
*p < .05, **p < .01, ***p <. 001

5.6.5 Model explaining Q.S.L.

In order to test a consistent model of Q.S.L. (see Figure 5.1) a GLM ANOVA analysis was performed (see table 5.5). All variables that were found to be significantly related with Q.S.L. or have a significant effect on Q.S.L. were entered into the model.

The analysis presented in table 5.5 corresponds to the figure 5.1. GLM analysis was employed to test the effects of demographics on Q.S.L. when personality and self – esteem mediate this relationship. Such analysis enabled the study of simultaneous effects of various factors on Q.S.L. In the GLM analysis, demographics (school, gender, and school grade) were entered as main effects. Personality correlates (self - esteem total, positive, negative affectivity), as well as school stress total, were entered as covariates.

Figure 5.1. ***Model of the factors affecting Q.S.L.***



All individual variables entered the model produced statistically significant effects to Q.S.L., apart from negative affectivity ($F = 3.0$, $p < .084$). GLM analysis also showed that the model was statistically significant ($F = 14.2$, $p < .000$) and able to explain 56% of the Q.S.L. variance. No statistically significant interaction was found between the demographics entered in the model ($F = .5$, $p < .597$) (see table 5.6).

In order to determine the percentages of variance explained by demographics and covariates independently to the overall model effects, separate GLM analysis was performed and results are shown in table 5.6. Such analysis revealed that both demographics and covariates were able to significantly predict Q.S.L. levels, although covariates (able to explain 47% of its variance) were found stronger predictors for Q.S.L. than demographics (able to explain 19.8% of its variance).

Table 5.5. GLM – General Linear Model analysis on Q.S.L. including demographic, personality factors and school stress

	F	Df	p <	R^2
Model	14.2	21	.000***	.560
Between Subjects Factors (Main Effects)	(4.9)[1]	(17)	(.000***)	(.198)
Year	5.7	5	.000***	
Gender	5.1	1	.024*	
School	13.3	1	.000***	
Year x Gender x School	.5	2	.597	
Within Subjects Factors (Covariates)	(55.7)[2]	(4)	(.000***)	(.470)
Stress Total	16.2	1	.000***	
Self – esteem Total	22.5	1	.000***	
Positive affectivity	50.9	1	.000***	
Negative affectivity	3.0	1	.084	

*p < .05, **p < .01, ***p <. 001
[1]GLM tests of between subjects factors independent to within subjects factors / [2]GLM tests of within subjects factors independent to between subjects factors

5.7 Discussion

It has been found that pupils in Scottish secondary schools experience high levels of Q.S.L. overall and in the majority of the individual domains, taking into account the possible highest and lowest scores. However, the present findings indicated lower Q.S.L. levels in some of the domains, in particular the environmental factors and teaching methods. As far as teaching methods are concerned, further research is needed to identify areas in teaching that pupils do not particularly enjoy, while simultaneously maintaining teaching objectives and standards. Increased levels of

satisfaction with teaching methods and procedures might have strong implications for the educational outcome (i.e. learning), since it is directly associated with the communication and distribution of knowledge in the class. When it comes to environmental factors, it could be suggested that improvement of school facilities (i.e. sport, social areas, food services) as well as safety procedures and regulations would also improve satisfaction levels related with this domain.

It was shown in the present study that different schools, grades and gender have a relatively low effect in the levels of school satisfaction experienced. The strongest predictor of all these demographics was age / school grade. It explained 7.3% of the Q.S.L. variance. In the present study younger pupils appeared to report higher levels of Q.S.L. than older ones (e.g. Medley, 1980), although post-hoc comparisons revealed significant differences between the first and second with the third grade only. These findings imply that third grade might be the age point where Q.S.L. starts decreasing significantly as pupils move to upper grades. Previous research has attributed lower levels of Q.S.L. in higher grades to lack of personal attention by teachers (Okun et al., 1990) and increased school – related worries (McGuire et al., 1987). Demands for performance are also increased in higher grades, since career choice becomes a close prospect.

When it comes to between school differences in relation to Q.S.L., it is commonly known that some schools do better than others in terms of pupils' performance in exams. This kind of approach of assessing school effectiveness through objective (i.e. exams) measures has been regarded as the "objective indicators approach". The present study found differences between the two schools in terms of subjective indicators (i.e. pupil satisfaction) evident. Although, the relationship between objective (grades) and subjective indicators (satisfaction) of Q.S.L. should be subject

to future research, at this point it would be hypothesised that between school differences in exam performance might be associated with school satisfaction. Such research would highlight whether performance is subject to individual abilities and / or school factors.

The present study also revealed gender differences in relation to Q.S.L., with girls reporting significantly higher levels of Q.S.L. than boys. Although researchers, like Hong and Giannakopoulos (1994), believed that there is currently not much diversity between genders in terms of sex role stereotypes, the present results indicate that males might be subject to higher societal and, as a consequence, more school demands and strains than females. Taking into account the present findings, future research should focus in more detail on the individual factors that are responsible for higher levels of Q.S.L. in girls and younger pupils.

Overall, previous research on general well – being proposed that, although demographics such as gender, are significant predictors, they account for little of its variance (e.g. Haring et al., 1984; DeNeve and Cooper, 1998).

As expected, school stress, was found negatively related with general Q.S.L. These findings which are consistent with previous research (DeAnda et al., 1997), are due to the negative consequences of stress on school life, as previous literature suggested (i.e. Johnson, 1979; Philips, 1979). In the present study, school stress appeared a strong negative predictor of Q.S.L. and account for 16.9% of its variance.

Personality variables (self - esteem and affectivity) were also related with Q.S.L., although the relationship between Q.S.L. and locus of control was neither strong nor significant. It seems that, although locus of control could be associated with general measures of subjective well – being (i.e. for Q.O.L, Diener, 1984), it is not associated with area - specific subjective well – being measures (i.e. Q.S.L.). However, a meta –

analytic study on general subjective well – being conducted by DeNeve and Cooper (1998) has supported our findings.

The positive relationship between self - esteem and Q.S.L. is consistent with past research in the area (Dew and Huebner, 1994; Huebner, 1994b; Bhaghat and Chassie, 1978). Positive affectivity was positively related with Q.S.L., whereas negative affectivity negatively related with Q.S.L. From all the personality measures used in the present study school self – esteem appeared to hold the best predictive value for Q.S.L. since it explained 28.5% of its variance, followed by positive affectivity (24.7%). Any future attempts to increase levels of school satisfaction, in order to improve pupil's performance and abilities, should carefully consider these two personality factors. Enhancement of school self – esteem could be obtained by means of a positive attitude of teachers towards pupils, with respect to their individual needs and use of positive teaching practices which include praise and enhancement of positive self - growth. Involvement in appropriate school activities could also increase positive affectivity, which was found an important predictor of Q.S.L. What is important with school self – esteem and positive affectivity is that both factors may be amenable to change / improvement following an appropriate course of action.

In the present study it was found that personality factors are highly important in predicting Q.S.L. These results could be thought, as giving grounds for describing Q.S.L. as a trait rather than a state. If this is the case, Q.S.L. may be associated with the general way that pupils have been raised and the manner in which they have acquired specific attitudes towards school as a result of their upbringing. However, this hypothesis was not verified from the finding of lack of effect of parental socio-economic and educational status on Q.S.L. It would be expected that highly educated parents and parents of high socio-economic status would value education more and, as

a consequence, they would transfer a positive attitude towards school on their children. Moreover, if Q.S.L. functioned predominantly as a trait, it would be more stable over time, and less subject to change. Studies on Q.S.L. using longitudinal designs would bring far more interesting findings in relation to the function of Q.S.L. as a state or trait.

However, several reasons could account for the strong effects of personality on Q.S.L. Firstly, personality colours the whole range of our perceptions leading to a more positive or negative perception of Q.S.L. (DeNeve and Cooper, 1998). Secondly, Q.S.L. has been measured as a rather long-term condition in the present study. As a consequence, any other momentary mood / emotional or situational effects may have been ignored, and the effects of personality on Q.S.L. have been accented. In addition, personality traits may have predicted strongly Q.S.L. since school populations are usually considered to share many similarities in relation to some demographic characteristics (e.g. parental socio-economic class). Therefore, any personality effects might have become stronger, due to small effects of other population characteristics (Diener, 1996). This explanation could also account for the weak effects of demographic factors on Q.S.L., previously discussed.

The present study has also established successfully a model of Q.S.L. including demographic, personality factors and school stress. This model, which has been found statistically significant (Model $F = 14.2$, $p < .000$), implied that individual school factors, girls instead of boys and pupils from lower school grades will experience higher levels of school satisfaction, when increased levels of self - esteem and positive affectivity and reduced levels of school stress and negative affectivity mediate. The combination of all these factors was found to explain a large proportion

of Q.S.L. variance (56%) and provide a strong theoretical framework for future research.

The present findings have certain implications for educational policy makers, school psychologists and individual schools. In order to improve Q.S.L. educationalists should consider the use and application of certain methods, which enhance positive affectivity and self – esteem, since it is rather impossible to manipulate demographic factors. On the other hand the application of specific stress management programmes in school may enhance levels of Q.S.L.

It is important to emphasise some methodological weaknesses of the present study. Twenty-five sixth year pupils, for example, were included in the present sample. Although this proportion is enough to provide statistical analysis, is rather small in comparison with the number of pupils form other grades who participated in the study. Sample was also drawn from two schools only, therefore it could not be representative of the population of pupils in Scottish schools. In addition, although a significant number of variables have been included in the present model of Q.S.L., the effects of others, such as family, have been rather neglected. Even though the present study attempted to study school satisfaction as a school only related phenomenon, its significant relationship with family factors (i.e. family self – esteem) indicated that family might have played an important role on pupil's school perception and attitudes. Finally, the use of self – report data could have influenced the interpretation of the results. For example, higher rates of school satisfaction, found in the present study, might be due to social desirable biases in pupils' responses, affected by the presence of teachers during data collection (Diener et al., 1989).

Finally, it might be worth studying the effects of Q.S.L. on other behavioural variables, related to school, such as bullying. Such research would consider

behavioural variables as outcome variables and Q.S.L. as a process variable. Additionally, since Q.S.L. was found to be associated with out of school factors (home self – esteem), it would be also interesting to study its relationship with other problems that adolescents experience, for example substance use and abuse, which could be associated with school (e.g. peers) and out of school factors (e.g. family).

Chapter 6: Quality of School Life: Correlates and Predictors

A Cross - Cultural Study between Greek and Scottish Secondary School Pupils.

Abstract

The aim of the present research was twofold. Firstly, to compare levels of School satisfaction between Scotland and Greece, in secondary school - aged pupils from grades 4 to 6. Secondly, to determine the best correlates of school satisfaction (Quality of School Life - Q.S.L.) for Scotland and Greece, in order to investigate factors associated with school satisfaction across the two countries. It was found that levels of Q.S.L. were higher in Scottish pupils than in Greek pupils. However, the best correlate and predictor of Q.S.L. was personality (i.e. positive affectivity), regardless of nationality. Cross-cultural differences regarding Q.S.L. levels between Scottish and Greeks pupils could be attributed to the different ways that pupils view their school life in their country of origin. Such views could result from actual differences in the educational system (i.e. traditional vs. modern systems) between the two countries, as well as from methodological (e.g. design of Q.S.L. scale used) and cultural biases (e.g. importance of Q.S.L. across cultures) of the present research. However, the role of personality, and affectivity in particular, on Q.S.L., is discussed.

6.1 Introduction

6.1.1 Defining Q.S.L.

Quality of School Life (Q.S.L.), which has been used as an indicator of pupils' welfare (Anderson, 1982), could be defined as a general sense of student well – being, determined by school related factors and educational experiences, resulting from pupils involvement in school life and their engagement in school environment.

To date, a few theoretical formulations have been developed for conceptualising Q.S.L. (e.g. The Multiple Discrepancies Theory, Michalos, 1985). The present research follows the School satisfaction approach, in relation to the construction of the scale used. School satisfaction / dissatisfaction is the cognitive appraisal of Q.S.L. (Huebner, 1994a) and it is considered a subjective construct (Baker, 1998) and also an aspect of pupils' general subjective well – being.

6.1.2 The importance of studying Q.S.L.

Past research has provided strong evidence that high levels of school satisfaction are positively associated with acceptance of educational values, commitment to school (Wehlage et al., 1989; Goodenow and Grady, 1992), higher motivation towards learning (Keys and Fernandes, 1993), and levels of learning as well, since satisfaction with school makes pupils more receptive to knowledge (Samdal, 1998). High school satisfaction has also been associated with decreased levels of school drop - outs (Okun et al., 1986; Ekstrom et al., 1986) and higher achievement according to own ability level (Voekl, 1995). Pupils who have positive perceptions towards their school are also less likely to engage in health compromising behaviours and to experience less health problems in general (Jessor, 1991; Nutbeam and Aaro, 1991).

Lower levels of school satisfaction have been found to be positively associated with behavioural problems, poor school achievement (Baker, 1998), school alienation

(Fine, 1986) and development of unhealthy behaviours (Samdal et al., 1998), since pupils with low school satisfaction tend to rebel against the school authority and may turn to "marginalised" peer groups, who experiment with behaviours like smoking and drinking (Perry et al., 1993).

6.1.3 Why compare Scotland and Greece in relation to Q.S.L.

Although both Scotland and Greece are members of E.U., they differ in terms of life style and culture. Scotland contains a Westernised culture whereas Greece a culture, which is a mixture of Westernised and Eastern attitudes and beliefs, resulted predominately from its geographical position (in the middle of West and East). General attitudes in Greece are collectivistic in their nature (i.e. emphasis on the group rather than the individual), because of its Eastern influences, whereas Scotland posses individualistic ones (i.e. emphasis on the individual rather than in the group). It is well accepted, for example, that there is a higher emphasis on family life in Greece (Cameron et al., 1983) than in Scotland. Thus, it is assumed that norms of self – presentation, expression and responding may differ between the two countries. Furthermore, Scotland has a well - established educational system especially in secondary education, whereas in Greece there have been recent major reformations in the educational system (i.e. entrance system to higher education). In recent years there has been a lot of protests by Greek pupils and teachers expressing dissatisfaction with the educational system in relation to secondary and higher education. As noted in Cameron et al. (1983), the educational system in Greece has followed the traditional educational model (e.g. classical studies, moral education), which does not satisfy the needs of pupils and their parents as well as the needs of modern living (e.g. advancement in science). These traditional views are expressed in the aims of secondary education in Greece, that predominantly focus on the acquisition of

knowledge. On the other hand, the educational system in Scotland is a modern one. The aims of secondary education in Scotland, apart from the acquisition of knowledge and skills, also include social and cultural competence and self – development (The Scottish Office, 1992). Therefore, it would be of interest to compare levels of school satisfaction between a country with a well-established modern educational system and a country with a more traditional educational system.

Cross – cultural comparisons on Q.S.L. levels among European countries may also facilitate the convergence of different educational systems, which is one of the main purposes of the E.U. These comparisons may provide authorities with research evidence about any areas of school dissatisfaction that need to be improved, and as a consequence, this evidence will enable the focus of policy makers to narrow in relation to areas that need careful attention, in particular countries. However, by comparing different educational systems, this would offer evidence about which policies work best for pupils, although as we will see later on, any differences in the levels of Q.S.L. may also be due to cultural, methodological and response biases.

6.1.4 Previous cross – cultural research on Q.S.L.

Previous cross – cultural research regarding general Quality of Life (Q.O.L.) as well as Q.S.L. has mentioned significant differences across nations (e.g. Diener et al., 1995). However, some of the literature that presented below, does not correspond with population and countries of interest, predominately due to lack of research on Q.S.L. in secondary school pupils in Greece and Scotland.

Veenhoven (1995) in a comparative study of university students that included 38 nations and of general population in 28 nations, found that differences exist between Britain (North western Europe) and Greece (Southern Europe) in relation to happiness and life satisfaction for both, university students and general population. On a scale of

1 – 7, ratings of happiness and satisfaction with ones own live were higher for British University students than for Greek University students (5.22 and 5.20 respectively, and 4.42 and 4.83 respectively). In the general population, British appeared again more happy and satisfied with their life than Greeks (5.68 and 5.45 respectively and 4.37 and 4.54 respectively). Unfortunately, it is unknown whether these differences were statistically significant in either case.

Samdal et al. (1998), in a study about student satisfaction in Finland, Latvia, Norway and Slovakia among 11, 13 and 15 year olds, found that students from Latvia and Norway were more satisfied with their school than students from Finland and Slovakia, although high levels of student satisfaction were reported in all countries. However, in all countries older students tended to be more satisfied with their school than younger students. In addition, the proportion of girls who were satisfied outweighed boys in all countries examined. Samdal et al. (1998) attributed their cross – cultural findings to differences regarding educational systems and recent reformation in educational systems for some countries (i.e. Latvia). On the other hand, they attributed gender differences to school expectations from pupils. These expectations included being quite, attentive, adult – oriented and articulate in using verbal skills in expressing knowledge, which mostly favour girls.

However, it may be important to note that there is no cross – cultural study regarding Q.S.L. in secondary schools between Scotland and Greece.

6.1.5 Explaining Q.S.L. cross – cultural differences

One of the theories developed to explain cross – cultural differences in relation to general happiness is the Folklore theory (Veenhoven, 1995). According to the Folklore theory, life satisfaction is the reflection of a body of nationally held notions about life. These notions are mostly dependent on tradition and culture rather than on

the current circumstances of the country. According to this theory, if there was hardship in a specific domain (i.e. education) in an earlier generation, these negative attitudes would persist over next generations, despite change of situation. An example provided by Inglehart (1990) has supported these ideas. He suggested that France, Italy and USA could be characterised as cultures of "happiness" (i.e. appear with high levels of general satisfaction) despite disadvantaged living conditions for a relatively large part of the population.

Thus, differences in culture and political systems could also account for cross-cultural differences regarding students' perception of school (Hirch, 1994). Such differences in European educational systems is evident. For example Eastern European schools have predominately focused on knowledge acquisition in a rather authoritarian setting (traditional views). Westernised educational settings, on the other hand, are more concerned with individual development of students (Hirch, 1994). In such westernised settings there is student involvement in teaching practices, which has been found to be associated with higher satisfaction (Voekl, 1995). One might therefore expect lower school satisfaction in Eastern Europe, despite recent political changes, than in Northern or Western Europe (Samdal et al., 1998). However, it might be important to note that there have also been studies, which have not found any differences in relation to school satisfaction between countries with different educational and political systems. Entwistle et al. (1989), in a comparative study in Hungarian (n = 602) and British (n = 516) 12 – 15 year old students, found that pupils perceived their schools very similarly, despite contrasting educational and social systems.

Diener et al. (1995) have also discussed many reasons, why cross – cultural differences regarding general well – being may occur. Firstly, some collectivist cultures, as opposed to individualistic ones, may devalue individual expression and

dictate conformity to group ideas. Thus, even if someone is highly satisfied with his / her life at school may report lower levels due to conformity to the group. Secondly, response style in some cultures may permit more intense expression of attitudes than in others, hence some cultures may appear more satisfied in some domains than others. Thirdly, some cultures may perceive positive responses as more desirable and, as a consequence, they are more inclined to express positivistic views in comparison with others. Fourthly, the frequency that people have thought about a particular domain of life may influence their responses. Some cultures for example value satisfaction in a particular domain more than others do. Also, when people do not think frequently of a particular life domain this would lead to responses, near to mid group point of the scales. Social desirability could also influence people's responses in relation to a particular life domain, indicating that there are differences across cultures in relation to how much, they believe that saying they are satisfied, is socially desirable. In collectivist cultures, as opposed to individualistic cultures, people tend to respond more positively in scales, in order to be seen in a desirable way by researchers. Finally, differences in levels of satisfaction across cultures may be due to objective conditions related to a particular life domain. However, when there are high aspirations and expectations in a particular society, about a particular domain, this may be associated with lower levels of satisfaction with this life domain.

Individual school culture may also be responsible for cross – cultural differences. Dawson (1985), in a relatively small scale study (86 maladjusted pupils) drawn from 6 different schools, found that the levels of school satisfaction were significantly different across schools. Between school differences, according to Dawson, might be attributed to different experiences that pupils have from different schools as a result of individual school environment and culture. Ainley et al. (1991) have also added that

between school differences in Q.S.L. cannot be explained in relation to background differences of pupils.

Below we present some of the previous research regarding the association between Q.S.L. and the variables of interest. Due to the relative lack of research regarding Q.S.L. and secondary school pupils, literature is presented that also covers other populations (e.g. university students) in the area of general Quality of Life (Q.O.L.).

6.1.6 Q.S.L. and demographics (grade, gender)

Previous research regarding the association between demographics such as school grade and gender and Q.S.L. remains more or less inconclusive. With regard to school grade Okun et al. (1990) in a large scale study of both primary and secondary school pupils, found that the higher the school grade the lower the levels of school satisfaction. However, Huebner (1991a) in a study with primary school pupils found no grade effects on general life satisfaction. With regard to gender differences in relation to school satisfaction there has been consistent evidence that there are no gender effects on Q.S.L. (Shmotkin, 1990; Huebner, 1991; Bulcock et al., 1991; Hong and Giannakopoulos, 1994) with a few exceptions, mainly from the area of general Q.O.L. (e.g. Andrews and Witney, 1976).

6.1.7 Q.S.L. and school stress

Although there are no studies assessing the relationship between Q.S.L. and school stress, school could be a stressful environment affecting negatively school satisfaction. Elias (1989), for instance, suggested that major strains of adolescence include overemphasising success and lack of support in schools. Major changes in academic and social domains also characterise adolescence (Wenz - Gross et al., 1997), as well as increased expectations for academic achievement (Eccles et al., 1993). This is so because the learning environment in the secondary school becomes

more demanding and complex than it was in the primary school. Eccles et al. (1993) also suggest that the student - teacher relationship is incongruent during adolescence, because students seek independence in their lives and teachers require more discipline from them.

6.1.8 Q.S.L. and well – being

With regard to the association between Q.O.L. and, as a consequence Q.S.L., with general well – being, it has been suggested that they share a lot of variance (for an overview see Diener, 1984). Their high association indicates that Q.S.L. is associated with out - of - school factors as well, and it could influence out of school factors (i.e. health).

6.1.9 Q.S.L and personality

6.1.9.1 Self - esteem

The relationship between self - esteem and global life satisfaction, has produced, in general, moderate positive correlations (Dew and Huebner, 1994). Huebner (1994b), in his study with both primary and secondary school children in USA, found a positive and strong relationship between life satisfaction and self -esteem. Baker (1998) in her study of elementary school pupils (n = 129) also reported a moderate negative but significant correlation between school satisfaction and self – esteem ($r = -.38$, $p < .001$).

6.1.9.2 Affectivity

There have been no studies available that examined the relationship between Q.S.L. and affectivity so far. However, negative affectivity has been found negatively correlated with measures of general life satisfaction, job satisfaction and happiness (Stokes and Levin, 1990). In addition, there has been evidence that negative

affectivity is associated with stress (e.g. Watson, 1988), thus it would be hypothesised that negative affectivity may have an adverse effect on Q.S.L.

6.1.10 The present research

In the present study, firstly, we have tested whether there are any differences in the levels of Q.S.L. between Scottish and Greek pupils. Due to non-existent previous cross – cultural research we were unable to comment about any cross – cultural differences between Greece and Scotland regarding Q.S.L.

Taking into account previous research on the relationship between Q.S.L. and other factors, we have hypothesised that Q.S.L. is negatively related with negative affectivity and school stress and positively related with well – being, self - esteem and positive affectivity, across cultures. Finally, the predictive value of individual factors on Q.S.L. was explored in order to investigate whether Q.S.L. levels are predicted by the same factors across cultures. It might be worth noting that the area of Q.S.L. has lacked research employing regression analysis in order to study the predictive value of specific factors towards Q.S.L., especially cross – culturally.

It might be also worth noting that the variables selected to be studied in relation to Q.S.L., in the present research, have been previously shown as highly related with Q.S.L. or Q.O.L. (Quality of Life). We have also selected variables that apply to pupils as a whole and not to special subgroups, variables that are amenable to change (Anderson, 1982) and variables which have been repeatedly shown to influence behavioural outcomes.

6.2 Method

For the purposes of the study a set of self – report scales was administered to a sample of secondary school pupils, from grades 4, 5, and 6 from one school in the Stirling

area, Scotland and one school from Agrinio region in Greece. Both Stirling and Agrinio areas are considered to be rural in a large extend and both schools are considered of medium size in terms of student population. Teachers distributed the scales to pupils, during class time, accompanied by an information letter. The letter contained brief information about the general scope of the study. Participation in the study was entirely voluntary and anonymous.

The two samples were matched for gender and number of pupils per grade (table I). Greek and Scottish samples were not matched for parental educational and socio-economic status. However, Q.S.L. was affected by neither of those variables, across cultures. Some missing data also existed but not to the point of interfering with the analysis.

6.3 Scales

Most instruments used in the present chapter have been described in detail in chapter 3, with a few amendments to some of them, which are described below. Such alterations enabled use of identical measures across Greek and Scottish samples. Pupils in Greece completed translated versions of the scales used in the Scottish sample. Instruments used in this chapter include:

Quality of School Life Scale

Demographic Measures

Student Stress Inventory (Children's Version) (Alban Metcalfe et al., 1982)

SSI is a standardised scale, which has been designed to assess pupil's stress in school. It consisted originally of 40 items – stressors, but seven items were excluded from the original scale since they were irrelevant to the Greek educational system. Therefore, both samples were compared on the 33 item version of the instrument.

P.G.I. General Well - Being Scale (Verma et al, 1983)

Hare Self - esteem Scale (HSES) (Hare, 1985)

Positive and Negative Affect Schedule (PANAS) (Watson et al., 1988 a)

6.4 Sample

The sample comprised of 359 pupils drawn from one secondary school in Scotland (n = 174) and one school in Greece (n = 185). The Scottish sample in this study is a subsample of the sample used in results chapters 4, 5, 7, 8, 9, 10. Only the sample from one school (4^{th}, 5^{th}, 6^{th} grades) was selected to be included in the present cross – cultural study, in order to have similar number of participants across cultures and pupils from the same grades. The selection between the two Scottish schools was based on the characteristics of this particular school (e.g. number of pupils in total) as well as pupils' demographics (e.g. socio-economic status) that were similar to the Greek school and pupils. Approximately one third of the student population was sampled from each school. Response rate was almost 100%.

The questionnaires were administered in two classes, each selected randomly from grades 4 to 6, in both schools. The Greek sub-sample consisted of 75 (20.9%) fourth graders, 77 (21.4%) fifth graders and 34 (9.5%) sixth graders and the Scottish sub-sample of 55 (15.3%) fourth graders, 93 (25.9%) fifth graders and 25 (7.0%) sixth graders ($X^2 = 4.5$, $Df = 2$, $p < .064$). Apart from grade, the two sub-samples were also matched for gender. The Greek sub – sample consisted of 87 males and 98 females and the Scottish from 76 males and 95 females ($X^2 = .2$, $Df = 1$, $p < .625$).

The majority of fathers (70%) and mothers (71%) of participants, in both samples, had not attained higher education. Socio-economic status of the parents of participants was between 2^{nd} and 3^{rd} socio-economic classes (intermediate, skilled, partly skilled)

for the majority of both fathers (78%) and mothers (44%), whereas a percentage of 46% of mother's was economically inactive, in both samples. Differences regarding parental educational and socio-economic status were statistically significant within and between cultures.

Although there were not statistically significant differences between the two groups regarding the number of pupils per school grade, mean age of Greek pupils (16.1 years) was significantly higher than of Scottish pupils (15.2 years) ($t = -9.5$, $Df = 356$, $p < .000$) (see table 6.1).

Table 6.1. Demographic characteristics by nationality

Variable	Greek No (%)	Scottish No (%)	Comparison
Gender			
Males	87 (24.4)	76 (21.3)	
Females	98 (27.5)	95 (26.7)	$X^2 = .2$, $Df = 1$, $p < .625$
Grade			
4th	75 (20.9)	55 (15.3)	
5th	77 (21.4)	93 (25.9)	$X^2 = 4.5$, $Df = 2$, $p < .064$
6th	33 (9.5)	25 (7.0)	
Age (Sd)	16.1 (.9)	15.2 (.8)	$t = -9.5$, $Df = 356$, $p < .000$***

Key : * p<0.05, ** p<0.01, *** p<0.001;

6.5 Results

6.5.1 Reliability of the scales used

Table 6.2 indicates that high reliability coefficients were obtained for Q.S.L. total for both Greek (.907) and Scottish (.899). When it comes to Q.S.L. domains moderate to high reliability coefficients were obtained for Greeks (.512 - .832) and Scottish (.439 -

.766). Standardised scales also obtained high reliability coefficients for both Greeks (.643 - .872) and Scottish (.548 - .904), across measures.

Table 6.2. Reliability coefficients of the scales used

Variable	No of items	Greek (n=186)	Scottish (n=173)	Total (n=359)
Q.S.L. total	14 (domains)	.907	.899	.922
Q.S.L. domains				
Curriculum	4	.582	.570	.706
Attainment	4	.551	.538	.679
Teaching Methods	4	.655	.591	.564
Teaching Style	4	.666	.588	.737
Learning	4	.636	.755	.704
Personal Needs	4	.661	.596	.691
Assessment	4	.522	.606	.636
Ethos (School Factors)	4	.707	.764	.749
Ethos (Individual Factors)	4	.651	.624	.660
Support	4	.520	.647	.602
Career	4	.832	.766	.838
Relationships	4	.660	.621	.649
Environmental Factors (objective)	4	.655	.668	.639
Environmental Factors (subjective)	4	.512	.439	.518
School stress	33	.872	.904	.923
Well – being total	20	.864	.868	.877
Positive affectivity	10	.800	.830	.813
Negative affectivity	10	.788	.803	.853
Self – esteem total	3 (domains)	.643	.548	.607

6.5.2 Differences between Greeks and Scottish regarding Q.S.L. total and domains

Table 6.3 indicates that a substantially and significantly higher school satisfaction (Q.S.L.) mean was obtained by Scottish pupils (162.7) in comparison to Greek pupils (138.3) ($t= 9.5$, $Df = 285$, $p < .000$). Significantly higher scores were also obtained by Scottish in comparison to Greek pupils in all separate domains ($p < .000$) apart from Objective Environmental factors (sport facilities, furnishment, availability of social areas, food services), where Greeks obtained a significantly higher mean (10.5) in comparison to Scottish (9.8) pupils ($t = -2.4$, $Df = 344$, $p < .016$).

For the Greek sample higher school satisfaction was obtained in the Relationships (relationships with teachers, other pupils and friends at school) (11.3), Learning (motivation, progress in learning, critical thinking, interaction with others) (11.0) and Support (from teachers, friends, other pupils at school) (10.9) domains. The lowest means for the Greek pupils were found in Subjective Environmental factors (decoration, technical equipment, distance from home, safety) (8.3), Teaching Style (continuity, depth, integration, timing) (8.5), Personal Needs (activities, interests, personal needs in learning) (8.6) and Curriculum (structure, number of subjects, timetable, class activities) (8.7).

For Scottish pupils higher means were obtained at Career (preparation for job, new skills, self – awareness) (12.8), Relationships (12.7), Support (12.5) and Learning (12.3) and the lowest in Objective (9.8) and Subjective (10.0) Environmental factors (see table 6.3).

Table 6.3. Q.S.L. total and domain scores by nationality

Variable	Greeks Mean (Sd)	Scottish Mean (Sd)	Comparison
Q.S.L. total	138.3 (23.6)	162.7 (19.6)	t = 9.5, Df = 285, p < .000***
Q.S.L. domains			
Curriculum	8.7 (2.1)	11.6 (1.8)	t = 13.6, Df = 348, p < .000***
Attainment	9.8 (2.2)	12.3 (1.5)	t = 12.1, Df = 350, p < .000***
Teaching Methods	10.1 (2.3)	11.1 (1.9)	t = 4.4, Df = 350, p < .000***
Teaching Style	8.5 (2.5)	11.2 (1.8)	t = 11.5, Df = 349, p < .000***
Learning	11.0 (2.6)	12.3 (2.2)	t = 5.1, Df = 355, p < .000***
Personal Needs	8.6 (2.6)	11.0 (2.1)	t = 9.3, Df = 351, p < .000***
Assessment	9.4 (2.3)	11.6 (2.3)	t = 8.7, Df = 351, p < .000***
Ethos (School Factors)	9.5 (2.8)	10.9 (2.5)	t = 5.4, Df = 353, p < .000***
Ethos (Individual Factors)	10.7 (2.7)	12.1 (2.0)	t = 5.4, Df = 349, p < .000***
Support	10.9 (2.4)	12.5 (2.5)	t = 5.9, Df = 347, p < .000***
Career	10.4 (3.3)	12.8 (2.2)	t = 7.9, Df = 352, p < .000***
Relationships	11.3 (2.3)	12.7 (2.0)	t = 5.9, Df = 347, p < .000***
Environmental Factors (objective)	10.5 (2.7)	9.8 (2.6)	t = -2.4, Df = 344, p < .016*
Environmental Factors (subjective)	8.3 (2.3)	10.0 (2.1)	t = 6.9, Df = 342, p < .000***

Key : * p<0.05, ** p<0.01, *** p<0.001;

6.5.3 *The association between gender / grade and Q.S.L.*

For both Greek and Scottish samples, females produced significantly ($p < .05$) higher total scores than male pupils in Q.S.L. Scottish males (158.7) and females (165.4) also presented significantly ($p < .000$) higher Q.S.L. total means in comparison with Greek male (133.0) and female (142.1) pupils respectively (see table 6.4).

Additionally, for both Greek and Scottish samples, separately, Q.S.L. total means were not found to significantly differ across 4th, 5th, and 6th grades. For Greeks the higher Q.S.L. rates were found in 6th grade (140.5) followed by 4th (139.1) and 5th (136.2). A similar pattern of Q.S.L. means was found for Scottish pupils as well, as 6th and 4th graders scored the highest mean (163.9) followed by 5th graders (161.3). Cross – cultural comparisons across grades have also revealed that Scottish pupils scored significantly ($p < .000$) higher than Greek pupils across all the different grades in relation to Q.S.L. total (see table 6.4).

Table 6.4. Association between demographics and Q.S.L. total by nationality

Variable	Greek Q.S.L. mean (Sd)	Scottish Q.S.L. mean (Sd)	Comparisons
Gender			*Greeks (males vs. females)*
Males	133.0	158.7	t = -2.3, Df = 143, p < .020*
	(25.9)	(21.7)	*Scottish (males vs. females)*
Females	142.1	165.4	t = -2.0, Df = 137, p < .048*
	(20.8)	(17.9)	*Greeks vs. Scottish (males)*
			t = 5.9, Df = 119, p < .000***
			Greeks vs. Scottish (females)
			t = 7.7, Df = 161, p < .000***
Grade			*Greeks (4^{th} vs. 5^{th} vs. 6^{th})*
4^{th}	139.1	163.9	F = .4, Df = 2,143, p < .686, n.s.
	(26.6)	(20.4)	*Scottish (4^{th} vs. 5^{th} vs. 6^{th})*
5^{th}	136.2	161.3	F = .3, Df = 2,138, p < .751, n.s.
	(23.2)	(16.6)	*Greeks vs. Scottish (4^{th})*
6^{th}	140.5	163.9	t = 5.3, Df = 108, p < .000***
	(16.2)	(25.9)	*Greeks vs. Scottish (5^{th})*
			t = 7.1, Df = 123, p < .000***
			Greeks vs. Scottish (6^{th})
			t = 4.0, Df = 50, p < .000***

Key : * p<0.05, ** p<0.01, *** p<0.001

6.5.4 Cross – cultural differences between Greek and Scottish pupils in relation to school stress, well – being, self – esteem and affectivity. Associations between Q.S.L. total and school stress, well – being, self – esteem and affectivity

Table 6.5 indicates that Greek pupils scored significantly higher on school stress (t = -11.9, Df = 294, p<.000) and negative affectivity (t = -13.9, Df = 331, p < .000) in

comparison to Scottish pupils. However, Scottish pupils scored significantly higher in well – being total ($t = 5.9$, $Df = 318$, $p < .000$), self – esteem total ($t = 5.6$, $Df = 334$, $p < .000$), school self – esteem ($t = 9.3$, $Df = 341$, $p < .000$) and home self – esteem ($t = 3.4$, $Df = 348$, $p < .001$) in comparison to Greek pupils. The two samples were not found to significantly differ in relation to levels of positive affectivity and peer self – esteem.

Peer self – esteem was not found to be associated with Q.S.L. total for neither Greek nor Scottish pupils. On the other hand school stress was not found to be significantly associated with Q.S.L. for Greek pupils only. However well – being and other personality measures presented moderate to high correlations for Scottish and low to moderate correlations for Greeks. In addition, peer self – esteem was not found to be associated with Q.S.L. total for both samples. As shown in table 6.5, for Greek pupils, the highest positive correlations were found between positive affectivity and Q.S.L. total ($r = .400$), followed by Q.S.L. associations with home self – esteem ($r = .266$), self – esteem total ($r = 228$), well – being total ($r = .221$) and school self – esteem ($r = .223$). A quite high negative correlation was also produced between Q.S.L. total and negative affectivity for Greeks ($r = -.303$).

Just like Greek pupils, for Scottish pupils the highest correlation was produced between positive affectivity and Q.S.L. total (.495), followed by the associations between Q.S.L. total and school self – esteem ($r = 476$), self – esteem total ($r = .368$), well – being total ($r = .355$) and home self – esteem ($r = .334$). Moderate negative correlations were produced between Q.S.L. and negative affectivity for Scottish ($r = -.372$), followed by the association between Q.S.L. total and school stress ($r = -.318$) (see table 6.5).

Table 6.5. School stress, well – being, affectivity and self – esteem by nationality. Associations between Q.S.L. total and school stress, well – being, affectivity and self – esteem by nationality

Variable	*Means (Sd)*		Comparison	*Correlations with Q.S.L. total*	
	Greeks	**Scottish**		**Greeks r**	**Scottish r**
School stress	56.4 (14.2)	35.0 (16.6)	t = -11.9, Df = 294, p < .000***	-.014	-.318***
Well – being total	55.4 (9.8)	61.3 (7.7)	t = 5.9, Df = 318, p < .000***	.221*	.355**
Positive affectivity	34.0 (6.5)	34.9 (7.1)	t = 1.2, Df = 342, p < .233	.400***	.495***
Negative affectivity	27.8 (7.4)	17.3 (6.2)	t = -13.9, Df = 331, p < .000***	-.303***	-.372***
Self – esteem total	84.1 (9.9)	90.3 (10.3)	t = 5.6, Df = 334, p < .000***	.228**	.368***
Self – esteem domains					
School self – esteem	25.4 (3.7)	29.3 (4.2)	t = 9.3, Df = 341, p < .000***	.223**	.476***
Peer self – esteem	28.0 (4.2)	28.5 (4.6)	t = 1.0, Df = 345, p < .307	.103	.005
Home self - esteem	30.5 (5.1)	32.4 (5.3)	t = 3.4, Df = 348, p < .001***	.266***	.334***

Key : * p<0.05, ** p<0.01, *** p<0.001

6.5.5 Predictors of Q.S.L. for Greek and Scottish pupils

As illustrated in table 6.6 positive affectivity was the most powerful predictor of Q.S.L. total for both Greeks and Scottish, although for the Scottish sample positive affectivity explained a higher percentage of Q.S.L. variance (24.5%) than for the Greek sample (16.0%). School self – esteem was the second best predictor for Q.S.L. for the Scottish pupils (22.7% of the variance explained), whereas for the Greek pupils it was negative affectivity (9.2% of the variance explained). However, it might be worth emphasising that all correlates analysed in the present study were able to predict Q.S.L. more strongly for Scottish than for Greek pupils.

Table 6.6. Predicting Q.S.L. total from school stress, well – being, affectivity and self – esteem by nationality

Variable	Nationality	BETA	F(1)	p <	R^2
School stress	Greek	140.0	.02	.88	.000
	Scottish	176.1	14.2	.000***	.101
Well – being total	Greek	109.0	6.7	.01**	.049
	Scottish	124.0	8.8	.004**	.065
Positive affectivity	Greek	87.2	27.1	.000***	.160
	Scottish	113.2	42.4	.000***	.245
Negative affectivity	Greek	165.9	14.1	.000***	.092
	Scottish	184.2	19.9	.000***	.138
Self – esteem total	Greek	93.7	7.3	.008**	.052
	Scottish	98.6	21.0	.000***	.135
Self – esteem domains					
School self – esteem	Greek	103.6	7.1	.009**	.050
	Scottish	94.3	39.9	.000***	.227
Peer self – esteem	Greek	122.1	1.5	.221	.011
	Scottish	162.2	.0	.951	.000
Home self - esteem	Greek	99.5	10.6	.001***	.071
	Scottish	124.0	17.2	.000***	.112

Key : * $p<0.05$, ** $p<0.01$, *** $p<0.001$

6.6 Discussion

The scales used in the present study appeared highly reliable in both cultures, indicating that they could be used safely in future research. This is especially the case for Greece, where there is a lack of standardised measures. The new Q.S.L. scale could be used by educational authorities and individual schools in Greece in order to test satisfaction / dissatisfaction with school. However, additional data are needed, in order to further establish reliability and produce norms for all scales, including Q.S.L. It may also be preferable to use the scale as a whole rather than by individual domains, at this stage, since higher reliability coefficients were produced for the total, across cultures. When it comes to its validity, the high associations produced between Q.S.L. total and other standardised measures provided a positive indication for its concurrent validity.

Q.S.L. total and domain totals were found significantly higher in the Scottish pupil sample in comparison to the Greek one. Unfortunately there is no previous cross – cultural study between Greek and Scottish pupils regarding Q.S.L., to compare the present findings. However, in a recent study by Veenhoven (1995), higher mean ratings of general satisfaction and happiness in a general population sample and University student sample were reported, for British in comparison to Greeks.

Several reasons could explain cross – cultural differences between Greece and Scotland in relation to Q.S.L. Firstly, it might be important to mention that the present Q.S.L. scale was designed with school / educational quality criteria set by the Scottish educational authorities and not by the Greek. As a consequence, Greek authorities may value different Q.S.L. domains, not examined in the present scale, hence Greek pupils have reported lower Q.S.L. levels on the current measure. We could also attribute those cross – cultural differences to the individual culture of each country

and their unique views about current educational systems (Veenhoven, 1995). Thus, Greek pupils may be less satisfied with their school life because of their general negative views about the educational system. In addition, we could attribute these findings to actual differences across the systems. To be more specific, there is still a traditional educational system in Greece whereas in Scotland a modern one, which promotes pupils involvement in teaching practices (e.g. Voekl, 1995). Traditional educational practices may have led to dissatisfaction with the educational system by parents and pupils in Greece (Cameron, 1983). Individual school culture may also be responsible for these differences (Dawson, 1985), considering that only two schools were included in the present study. In order to control for school effects, more schools should have been included from both advantaged and disadvantaged regions. As far as future research is concerned, it might be highly important to conduct studies that includes other EU member states as well. Such research would probably provide a clearer picture of Q.S.L. levels across different countries and systems.

For the Greeks, highest school satisfaction was obtained in the Relationships (relationships with teachers, other pupils and friends at school), Learning (motivation, progress in learning, critical thinking, interaction with others) and Support (from teachers, friends, other pupils at school) domains and the lowest were found in Subjective Environmental factors (decoration, technical equipment, distance from home, safety), Teaching Style (continuity, depth, integration, timing), Personal Needs (activities, interests, personal needs in learning) and Curriculum (structure, number of subjects, timetable, class activities). For the Scottish pupils higher means were obtained in Career (preparation for job, new skills, self – awareness), Relationships, Support and Learning and the lowest found in Objective (sport facilities, furnishment, availability of social areas, food services) and Subjective Environmental domains. It

could be concluded that both cultures perceive Learning, Support and Relationships as highly satisfying domains in their school. However, apart from Subjective Environmental factors, different domains with lower ratings were identified, across the two cultures, indicating that educational authorities in each country should consider different school factors for improvement. Nutbeam et al. (1998) have pointed out that by increasing pupil's participation in decision making at school, levels of Q.S.L. may increase as well.

Females scored higher in Q.S.L. total across cultures than males and Scottish males and females also scored higher on Q.S.L. total than Greek males and females respectively. As it was noted in the introduction previous research regarding gender and Q.S.L. was in favour of no differences across the sexes (e.g. Huebner, 1991; Bulcock et al., 1991), although research in the area of general Q.O.L. has confirmed this finding (e.g. Andrews and Witney, 1976). Similar to previous research (e.g. Okun et al., 1990), sixth graders were among the most satisfied with their school life, although for Scots there were not differences in the means between 4^{th} and 6^{th} graders. For both Greek and Scottish pupils it was found that positive affectivity is the best correlate and predictor for increasing Q.S.L. Several reasons, however, would account for the strong effects of personality factors (such as affectivity) on Q.S.L. Firstly, personality and especially affectivity, colour the whole range of our perceptions leading to a more positive or negative perception of Q.S.L. (DeNeve and Cooper, 1998). Secondly, Q.S.L. has been measured as a rather long-term condition in the present study and consequently, any other situational effects might have been ignored, and the effects of personality on Q.S.L. might have been accented (Diener, 1996).

A weakness of the present research was that Greek and Scottish samples were not matched for parental educational and socio-economic status, although there is some

evidence that such factors can influence Q.S.L. total (e.g. Bulcock et al., 1991). Thus, further research, with more controlled samples between and within cultures, is required, to verify the findings of the present study. However, Q.S.L. total was not affected by father's and mother's educational level (comparisons were made between those who attended higher education and not) and father's and mother's socio-economic status for both Scottish and Greeks (comparisons were made between six different socio-economic classes including professional, intermediate, skilled, partly skilled, unskilled and economically inactive). In addition, further research is required with samples drawn from more schools in both cultures to verify the findings of this study, as in the present study the sample was derived from one school in Greece and one school in Scotland, therefore they could not be representative of the student population in both cultures.

A general conclusion that could be drawn from the present research is that the two cultures differ in the levels of Q.S.L. and they score high and low in different domains. However, we are unable to conclude whether these differences are due to cultural variations or any other methodological biases of the present research. Secondly, regardless of any cultural differences between Scotland and Greece, Q.S.L. was better predicted by personality factors (i.e. positive affectivity). Thus, determinants of Q.S.L. may be the same for different cultures, although such hypothesis should be tested further in studies with more countries as participants.

Part D – School Factors and their Relationship with Q.S.L.

Comparing Q.S.L. and other School, Well – being and Personality Factors Regarding their Association with School Factors

Chapter 7: Factors Associated with Higher Self – rated Performance Across Different School Subjects and Overall

Abstract

School grades are widely used by schools as a criterion for assessing acquired learning and school achievement. Because of common use of grades and their implications for pupils' career planning, a study concerning the factors that influence and predict high / low secondary school performance in specific subjects and overall, as measured by grades, is well - justified. For the purposes of the present research, a set of scales (demographics, school - related measures, well – being, and personality measures) was administered in a sample of secondary school pupils (n = 425) in Scotland, in order to determine their predictive value towards self - rated performance, in specific subjects and overall. Results indicated that gender was the best predictor of self – rated performance in English and Arts with females more likely to report higher level grades in these subjects. High levels of well – being were found the best predictor of high level self – rated performance in maths and science. Although well - being was found a good predictor of self – rated performance in modern studies, school was its best predictor. None of the factors examined in the present study survived the criteria stated, to test its predictive value regarding self – rated performance in geography. Finally, overall high self – rated performance was predicted at best by lower levels of negative affectivity and higher levels of school self – esteem. Educational implications of the findings are discussed.

7.1 Introduction

Providing a working definition of assessment, and especially educational assessment, is a matter of controversy in educational research. Dictionaries tend to define assessment in terms of an object's value. However, educational assessment also includes what teachers think about pupils' abilities and performance. Assessment usually results from the interaction between pupils and teachers, in order to obtain information about pupils' acquired knowledge and understanding of the material taught (Rowntree, 1987).

Because it is rather difficult to provide a consistent working definition of assessment, previous literature has suggested that it would be more feasible to focus on specific dimensions of assessment rather than on definitions. These dimensions correspond to different key activities in the process of assessment and included "why to assess" (what effects assessment is expected to produce), "what to assess" (what one is looking for), "how to assess" (what kind of means), "how to interpret" (explaining and attaching meaning to assessment) and "how to respond" (ways of expressing the response of whatever has been assessed). (Rowntree, 1987)

Historically, formal assessment methods started to be used in Britain in the early 19th century. The medical profession firstly introduced qualifying exams in 1815, in order to determine competence and access to professional membership (Broadfoot, 1979). Before the 19th century social status and patronage, rather than academic achievement, was the criterion for embarking into a specific occupation. After 19th century, the need for new criteria became well - justified, due to the increasing demands for trained middle class workers. While assessment systems were being established in different professions, Universities started to introduce their own selective exams at 1850. In order to establish standards for university entry, the School Certificate was introduced

in secondary education, increasing the needs for developing assessment methods (Gips, 1990).

Pupils' school assessment may take various forms (i.e. tests, exams, oral exam). American literature (i.e. Scriven, 1967) has also distinguished among different types of assessment, serving different purposes of evaluation. For example, formal assessment, which refers to the teachers' evaluation of pupils performance on specific tasks, versus informal assessment where teachers evaluate performance on regular activities that are being carried out anyway as part of the class (e.g. Webb et al., 1969).

Till now, several educational assessment systems have been developed. Their basic characteristics have been their quantitative nature, their indirect form (measurement by inference rather than objective scales) and their relative format (no units of achievement are present). They are also characterised by errors in measurement, common in any field of measurement (Noll and Scannell, 1972).

Assessment in education could serve a variety of purposes. It could be used for selection purposes, for educational opportunities or career, for maintaining the educational standards, and for giving students' motivation and feedback to continue their work. Assessment could also provide the teacher with some feedback to evaluate his / her work (Rowntree, 1990).

Assessment of performance in secondary education is based on various indices of student competence, such as grades, performance on qualifying examinations or small projects. However, grades in general have been used more than any other criterion for assessing school success (Hartnett and Willingham, 1980). One of the main reasons for undertaking valid and worthwhile research on school success lies on the fact that it is associated with learning, on the grounds that school success / failure, as measured

by grades, is an indicator of the quantity and the quality of learning that one gains at school.

Grades as an indicator of school performance possess many positive qualities. They represent readily available criteria, which are common in the majority of institutions (Wilson, 1978). They could be used as a common criterion for assessment in a variety of subjects, facilitating comparisons in performance (Boldt, 1970), and they have consistency over time for the same pupil for the same school subject (Harnett and Willingham, 1980). However, grades as a criterion for school assessment possess many weaknesses as well. A narrow range of units of measurement, in many instances, which usually fails to capture the variations in student accomplishment, is one of them. Differences in grading systems among different institutions also make any performance comparisons difficult, as far as cross – sectional research designs, related to between schools differences in performance, are concerned. Finally, grades may be assigned arbitrarily, facilitating differences among different markers (Harnett and Willingham, 1980).

Literature till now has provided evidence that school achievement or school failure are subject to various factors including family, especially at the early stages of education, personality and school factors. Family factors include parenting practices (parenting and quality of interactions) (Steinberg, 1990; Baumrind, 1991), parental involvement in children's educational activities (Hess and Holloway, 1984), parental provision of educational opportunities and resources (Hess and Holloway, 1984; Stevenson and Lee, 1990). However, it is important to emphasise that past research has suggested that the relationship between school success and family / parenting factors is mediated by various personality (e.g. self - esteem) and school factors (e.g. family - school linkages) (Wentzel, 1994).

As children proceed to higher educational stages, personality, school and demographic factors become more evident in school achievement (Whyte, 1988). Kaplan (1986) has suggested that school achievement is subject to school itself, where some schools are more successful than others, teacher's expectations, socio-economic status (occupational, educational, ethnicity, size of family, educational resources), gender, intelligence, personality (locus of control, extroversion / introversion, neuroticism) and other school factors such as attitudes towards school, motivation, cognitive style of the learner. Al - Methen and Wilkinson (1995) also proposed that in studies assessing factors, which contribute to unsuccessful learning, although personality and demographic factors are widely used, contextual problems related to school and classroom (e.g. classroom conditions, curricular inadequacies, relationship with teachers) have been usually ignored. However, there has been some evidence that school factors can influence school failure or success (Rutter and Madge, 1976; Rutter et al., 1979).

7.1.1 Demographics and secondary school performance

Before we start presenting research findings concerning the effects of demographics on school performance, it is worth mentioning that according to past research both pupils' and teachers' demographic background are important factors in influencing teachers' assessment of performance. Farkas et al. (1990) conducted a study in 22 middle schools in USA (n = 486 pupils) and found that among other factors, students' and teachers' background characteristics could influence rewards (grades) given by teachers in music and arts. They also provided evidence that pupils' socio-economic status could influence teachers' rewards, implying that pupils of higher socio-economic status are being given higher grades by teachers. However, these effects

were small and dependent on pupils' other demographic characteristics, such as age and gender.

Relatively recent research concerning the association between gender and school achievement has mostly favoured girls (Bulcock et al, 1991). Earlier research though has shown that boys perform better in numerical, spatial and mathematical skills and girls perform better in verbal and linguistic tests (Tyler, 1956; Anastasi, 1958; Maccoby, 1966). Meta - analytical studies conducted by Hyde (1981), Feingold (1988) and Marsh (1989) on gender differences in relation to performance in mathematics have shown that the differences in achievement which have favoured girls were very small. Moreover Ethington (1990) analysing data from mathematics performance of grades 7 and 8 in eight countries found no gender differences overall. Even when such differences were present, they were in favour of girls. Linn and Hyde (1989) conducted a meta - analytical study on gender differences in science but they did not find any statistical effects of gender. They concluded that girls were equally capable as boys of doing well in physics, chemistry, biology and mathematics.

Although previous results concerning gender differences in performance appear controversial, several studies have attributed gender differences in performance to one's motivational style. Simon and Feather (1973) suggested that women tend to attribute exam success to external causes more than men do, reducing the credit that could take for them. Dweck et al. (1980) found that women were more likely to attribute any failures to lack of specific abilities, thus they were more likely to anticipate any future failures (see also Rogers et al., 1989). Motivational patterns in classrooms are usually a combination of personal (expectations and values) and situational factors (impact of teacher) (Elliot and Dweck, 1988; Dweck and Leggett, 1989). Farmer et al. (1991) proposed that individuals were more motivated to achieve

in particular contexts than others. In a study of 6 Illinois high schools (n = 1164 of 9th and 12th graders), they found that girls preferred the school achievement context and boys sport achievement contexts.

Age effects on school performance has been a long – standing issue in the educational agenda, since it is associated with the arguments concerning the age of formal school entry (Hauck and Finch, 1993). Previous research has suggested that the youngest members of a class achieve less than older pupils, even when the age difference is a few months (Sweetland and De Simone, 1987; Cameron and Wilson, 1990). Hauck and Finch (1993), who studied the effect of age on achievement in maths and reading in middle schools in USA (n = 993 pupils from grades 6, 7 and 8), did not find statistically significant age effects on reading performance. However, there were differences among different age groups in maths with 6th graders to report higher grades than younger pupils. Moreover, they found that pupils who had repeated one or more grades were also the youngest in their class. Hauck and Finch concluded that the effect of age on achievement is present in lower grades but it tends to diminish in higher grades. Finally, DeMeis and Stearns (1992) examined the relationship of school entry age and school performance in a set of studies, in various grades, mainly from secondary schools, including subjects with emotional problems (unspecified) and talented students. They supported the idea that children, who are younger when they enter school, experience more academic difficulties than those who enter school at an older age. In addition, Finlay (1981), found that 57% of the honour students at the University of Florida (Academic Year 1978 - 1979) were 1st born compared to 38% of non-honour students.

When it comes to the relationship between socio-economic background and performance, Gibson and Asthana (1998) have investigated the effect of socio-

economic background on pupils' performance in the General Certificate of Secondary Education (GCSE) in 259 schools, in 12 local educational authorities (LEA's) in Britain. They concluded that "individuals can do well whatever their circumstances", indicating that there is no socio-economic effect on performance in the above exams.

7.1.2 School factors and school performance

Although there is no previous research assessing the relationship between Quality of School Life (Q.S.L.) (i.e. school satisfaction) and school performance, school factors have been found to play a crucial role in school achievement. School and classroom contextual variables (e.g. unsuccessful learning, teacher qualities) have been found to relate significantly with school success or failure (Whitmore, 1980; Al - Methen and Wilkinson, 1995). Previous research has also suggested that school factors (e.g. quality of teaching) could interact with other factors (e.g. demographics) influencing levels of success or failure in school. Evidence concerning the relationship between Q.S.L. and performance can also be found in literature concerning general attitudes towards school. Attitudes towards school, in general, have been associated with performance (Youngman, 1988). Poor attitudes towards school may lead to decreased levels of academic performance (e.g. Golicz, 1982; Richards et al., 1984).

Typically, research on stress in relation to school performance has focused on test or exam stress (Fimian et al., 1989). Although severe exam and test stress could be found in many students in schools (e.g. Sharp and Thompson, 1992) this was not the only source of stress that pupils experience at school. Overall, it has also been suggested that there is a negative relationship between general stress and school performance (Heinrich and Spielberger, 1982; Cole and Sapp, 1988). This is mainly due to the effects of stress on general and school functioning. Stress could result to avoidance behaviour / study delays (King et al., 1992) and it could also interrelate

negatively with personality factors, such as self - esteem (Strassberg, 1973; King et al., 1992; Williams, 1993). In the case of test anxiety, there is no de facto evidence suggesting that performance is negatively related with levels of arousal and there have been referred some instances, where performance was stimulated by stress (Alpert and Haber, 1960; Dusenbury and Albee, 1988; Covington and Omelich, 1988). Becker (1982) suggested that the negative relationship between test performance and stress levels holds at certain points in the achievement circle, meaning that other factors (e.g. situational) might mediate this relationship. Finally, Newbegin and Owens (1996), assessing the effects of various measures of anxiety on performance in maths and English in 276 pupils from two male secondary colleges in Melbourne, Australia (Grades 7 - 12), found that test anxiety could influence significantly and negatively performance, especially in maths. Study anxiety, on the other hand, was found to influence significantly and positively the performance in English only.

7.1.3 Well - Being and school performance

Although general well - being is an important aspect of human life and has many emotional and behavioural implications, previous research concerning well - being and school performance is rather limited. Mechanic and Hansell (1987), assessing the relationship between school competence and physical health / participation in school activities (i.e. sports) in 1057 adolescents from 19 schools, in grades 7^{th}, 9^{th} and 11^{th} in USA, found that those adolescents, who had the least participation in school activities, also reported lower achievement. Moreover, Pietila and Jarvelin (1995) by examining the relationship between school performance and physical health in a sample of 2000 adults in Finland after finishing school, concluded that physical and social well – being (self - assessed) were associated with successful school performance.

7.1.4 Personality and school performance

Previous research has claimed that personality factors could be a good estimator of school performance, although results, especially from earlier research, remain inconsistent (Banks and Finlayson, 1973).

Fong and Resnick (1986) have suggested that self - esteem could play an important role in children's ability to do well at school (see also Leonardson, 1986; Robinson - Awana et al., 1986). Past literature has also claimed that self - esteem could predict performance and account for grades' variance (e.g. Strassburger et al. 1990). In some studies self – esteem also appeared as the best indicator when compared with other variables (e.g. Youngblood, et al., 1976 for family environment and socio-economic status). Apart from the studies, which have supported a strong and significant relationship between self - esteem and school performance (e.g. Coopersmith, 1967; Purkey, 1970; Rosenberg and Simmons, 1972; McCormick and Williams, 1974; Bhaghat and Chassie, 1978; Zeeman, 1982; Wanat, 1983), another bulk of previous research has ended in the opposite findings (Kunce et al., 1972; Abadzi, 1984; Byrne, 1986; Demo and Parker, 1987; Alsaker, 1989). Other studies claimed that there is a relationship between school performance and self - esteem only for specific subjects (Mboya, 1986; Richardson and Lee, 1986), or there is a relationship between self - esteem and school achievement, when other variables intervene (e.g. Alpert - Gillis and Connell, 1989; Skaalvik, 1990 for gender; Rubin et al., 1977 for socio-economic status and ability). In addition, there have been studies which found that higher grades could help the enhancement of self - esteem in pupils, indicating that the relationship between performance and self – esteem may be reciprocal (Faunce, 1984). Due to such diversity in findings, current research has mainly focused on the study of school self - esteem in relation to performance (Eshel and Kurman, 1991; Rosenberg et al.,

1995). In secondary school children, Newbegin and Owens (1986) (n = 276 from two secondary colleges in Melbourne, Australia) found that academic self - esteem is positively related to academic achievement in mathematics and English. Keltikangas - Jarvinen (1992) has also confirmed the hypothesis that self - esteem, as measured with Coopersmiths' Self - esteem Inventory, is a good predictor of school achievement (n = 1253 randomly selected adolescents in Finland). She also found that general self - esteem and home self - esteem were significantly related with future performance.

In contrast to the findings about the relationship between self - esteem and school achievement, results concerning the relationship between locus of control and school performance are in general more consistent and robust (Uguroglov and Walberg, 1979). It has been claimed that there is a positive relationship between academic achievement and internal locus of control (Finch et al., 1957; Nowicki and Strickland, 1973; Bhaghat and Chassie, 1978; Findley and Cooper, 1983), although the effect might diminish when other variables are controlled (i.e. IQ, Ollendick and Ollendick, 1976 or socio-economic level, Shaw and Uhl, 1971). Bar - Tal and Bar - Zohar (1977) reported that in 31 out of 36 studies reviewed, internal locus of control was associated with school achievement. Findley and Cooper (1983) explained the positive relationship between internal locus of control and achievement in terms of the effort that high internally motivated students might make. Moreover, past literature has also indicated that internal locus of control is associated with specific behaviours that increase the probability for success. For example, Ducette and Wolk (1972) showed that externals tend to exhibit less persistence in tasks. However, there have also been those studies that have reported no relationship between locus of control and school performance (e.g. Stipek and Weisz, 1981; Ferrari and Parker, 1992). With respect to secondary education, Boss and Taylor (1989) by studying the relationship between

locus of control and academic achievement (n = 267 9th graders in USA) confirmed the hypothesis that internals had higher academic achievement than externals.

When it comes to the relationship between affectivity and performance, there has been some evidence in the previous literature that dispositional mood could influence affective outcomes and as a consequence performance (Humphreys and Revelle, 1984; Economou and Angelopoulos, 1989; George, 1992). Carson and Carson (1993) studying the effects of negative affectivity on performance, across different goal levels, in a sample consisted of 63 undergraduate students, claimed that high levels of negative affectivity do not affect performance quantity but it would affect performance quality, with high negative affectivity students maintaining higher quality performance as the goal settings increased. They attributed these differences between high and low performers on their focus on performance quality vs. quantity. Low negative affectivity students tended to focus on performance quantity whereas high negative affectivity students focused predominantly on performance quality.

7.1.5 The present research

The importance of studying school performance lies in the fact that it will most likely affect the future occupational professional career of pupils, since it is grades that are predominantly used as criteria for University / College entry and access to professional qualifications.

The present research aimed to study the relationship between and the predictive value of demographic, school, non – school and personality factors on self – rated performance in different secondary school subjects and overall. It was aimed to determine whether self – rated performance in different subjects and overall was due to the same or different factors. Previous research has failed to answer whether the same factors are responsible for actual or self - rated performance in different school

subjects, since such research has predominantly focused on the study of specific subjects and specific factors only. On the other hand, the present research attempted to determine which of the factors, studied in the present research, was of the greatest importance in predicting self – rated performance in different subjects and overall. Therefore, the effects and predictive value of factors and clusters of factors were equally studied across different school subjects. In addition, a wide range of factors has been included in the present study (i.e. demographic, school, well – being, personality), thus the selection of the factor with the highest predictive has been done from a wide spectrum of factors.

However, it might be worth emphasising that the correlates of self – rated performance rather than of actual performance were studied in the present study. No study has been found on self – rated school performance or addressing the concordance between self – rated and actual performance, therefore this issue may need to be addressed in future research. In the present study, we chose to study self – rated performance as opposed to actual performance in order to collect anonymous data regarding a wide range of factors, also acknowledging time constraints, as well as additional ethical considerations that apply when access to school files is concerned. On the other hand, the use of self – rated performance data provided the opportunity to check whether there was any discrepancy in the results between the present study that used self – rated data and other studies that incorporated actual performance data. Nevertheless, there is always the risk that pupils have not reported their actual grades obtained across subjects, despite reassurances about the anonymity and confidentiality of the responses. However, such a research issue may concern all the studies that have used self – rated data. Another methodological weakness of the present self – rated data concerns the scale used by pupils to record their grades.

Although the actual scaling currently used by schools is A, B, C etc., pupils, in the present study, were asked to report their grades in terms of "lower", "middle" and "upper" level. One might argue that pupils may have different representation of whether a B grade was an upper or middle level grade. Thus, the present results should be treated with caution and probably as an indication of "attitudes to performance" rather than of "self – rated performance".

Statistical methods used by previous studies on school performance have predominantly included correlational designs, or simply detection of any differences between high and low performers. Use of regression analysis and especially the use of Logistic regression for determining those factors that would predict performance in a given subject or overall performance, has been rather neglected in the past. The present study has used regression models (i.e. Logistic, Simple, Multiple) for the study of self – rated performance in different subjects and overall.

7.2 Method

Method for the present chapter is as described in chapter 3.

7.3 Scales

Instruments used in the present chapter are as described in chapter 3. These include:

Performance Scale

Demographics

Quality of School Life Scale

Student Stress Inventory (Children's Version) (Alban Metcalfe et al., 1982)

P.G.I. General Well - Being Scale (Verma et al, 1983)

Hare Self - esteem Scale (HSES) (Hare, 1985)

Nowicki's – Strickland's Locus of control Scale for Children (Nowicki and Strickland, 1973). Each item of this scale could account as Internal or External Locus of Control depending on the answer given (yes or no). Since the overall possible score for the whole scale is 10, for all participants, the same quantitative effects could be produced between each of the subscale and the dependent variable. However, these effects could be either positive or negative, thus facilitating a discussion on which of the two subscales has a positive or a negative association with the dependent variable.

Positive and Negative Affect Schedule (PANAS) (Watson et al., 1988)

7.4 Statistical analysis

In order to control for any differences between high and moderate / low performers in self – rated performance two groups have been formulated accordingly, according to grades reported, for each subject separately. The low performers group consisted of those who reported they had achieved lower and middle – level grades, whereas the high performers group of those who reported they had achieved only upper level grades. However, overall self – rated performance was also studied. Overall self – rated performance was calculated by the sum of grades reported (low level = 1, middle level = 2, upper level = 3) across all the subjects. The sub – sample for this analysis consisted only of those pupils who reported their grades in all subjects.

Differences in relation to demographic, school, non - school and personality measures were analysed between high and low performers, using t – test and X^2 analysis. Analysis of variance and correlation analysis was used to study the relationship between performance total and different factors.

Logistic Regression was used for predicting group membership for high and low performers across subjects. All factors that were not found to be significantly

associated with performance on a particular subject in univariate tests, were excluded from the Logistic regression analysis. At the next stage, all the remaining variables were organised into clusters of factors (e.g. personality) and Logistic regression analysis was performed on these clusters. At the third stage, which appears at table 7.5, all the variables that were found to significantly predict self – rated performance of this particular subject [p (Wald) > .05] were entered, and a new Logistic regression was performed. Results from this final stage are shown in table 7.5. These steps helped us to reduce the number of factors entering the final Logistic regression analysis, in order to produce meaningful and interpretable findings and determine which of all these factors was the most important factor in predicting performance across subjects.

GLM analysis was also performed to obtain the percentage of self – rated overall performance variance (R^2) explained from various demographics.

7.5 Results

Table 7.1 indicates that the majority of pupils reported high level grades across the majority of subjects. In English, 45% reported lower level grades and 55% higher level grades. In maths, 44% reported lower level grades and 56% higher level grades. In science, a proportion of 43% reported lower level grades and 57% higher level grades. In geography, 45% reported lower level grades and 55% higher level grades. In modern studies, 43% reported lower level grades and 57% higher level. In arts, 42% reported lower level grades and 58% higher level grades.

Table 7.1. Number and (%) of pupils, having reported low and high performance across subjects

English (n = 416)		Maths (n = 416)		Science (n = 367)	
Low	High	Low	High	Low	High
187 (45)	229 (55)	181 (44)	235 (56)	157 (43)	210 (57)
Geography (n = 335)		**Modern Studies (n = 242)**		**Art (n = 327)**	
Low	High	Low	Low	High	Low
151 (45)	184 (55)	104 (43)	151 (45)	184 (55)	104 (43)

7.5.1 Factors associated with and factors predicting self – reported performance in English

Differences between high and low performers in English in relation to different school grades (X^2 = 12.3, Df = 5, p < .031), gender (X^2 = 14.0, Df = 1, p < .000), father's educational level (X^2 = 4.5, Df = 1, p < .033) and mother's socio-economic status (X^2 = 11.9, Df = 1, p < .037) were detected (see table 7.4). It was found that higher level grades were reported predominantly by 4th and 5th graders, females, by those whose father had attended higher education, and those whose mother belonged to the 2nd or 3rd socio-economic classes (see table 7.2).

School factors and well – being were not found to be significantly associated with self - rated performance in English. However, those who reported higher level grades also reported significantly higher levels of self – esteem total (t = -3.7, Df = 345, p < .000), peer self – esteem (t = -2.6, Df = 363, p < .009), school self - esteem (t = -4.8, Df = 352, p <.000), and external locus of control (t = -3.1, Df = 340, p < .002), and lower levels of internal locus of control (t = 3.1, Df = 340, p < .002) and negative affectivity (t = 2.6, Df = 376, p < .000) (see tables 7.3 and 7.4).

Gender, well – being total and self – esteem total were the factors that entered Logistic regression, due to their retention of significant Wald values when clusters of factors (i.e. personality etc.) were tested through separate Logistic regressions. It was

found that the above factors were able to predict significantly ($p < .000$) and accurately self – rated performance in English with 66.34% of the pupils being correctly classified as high and low performers. However, gender had the greatest influence on self – rated performance in English ($\exp(\beta) = .502$) (see table 7.5).

7.5.2 Factors associated with and factors predicting self – reported performance in maths

Self – rated performance in maths was associated with mother's socio-economic status ($X^2 = 16.0$, Df = 5, $p < .007$). High performers had a mother who predominantly belonged in the 2nd or 3rd socio-economic classes (see tables 7.2 and 7.4). Other demographics were not found to be associated with self – rated performance in maths. School factors did not appear to be associated with self – rated performance in maths. However, high maths performers reported significantly higher levels of well – being ($t = -2.7$, Df = 313, $p < .007$), positive affectivity ($t = -2.3$, Df = 389, $p < .024$), self – esteem total ($t = -3.8$, Df = 347, $p < .000$) and school self – esteem ($t = -6.0$, Df = 353, $p < .000$) and lower levels of school stress ($t = 2.1$, Df = 342, $p < .033$) and negative affectivity ($t = 2.5$, Df = 377, $p < .012$) (see tables 7.3 and 7.4).

Mother's socio-economic status, school stress, well being and school self – esteem were the factors that entered Logistic regression, due to their retention of significant Wald values when clusters of factors (i.e. personality etc.) were tested through separate Logistic regressions. It was found that these factors were able to predict self – rated performance in maths significantly ($p < .000$) and accurately, with 69.74% of pupils being correctly classified as low or high performers. However, from all these three factors, it was well - being that had the greatest influence on gaining higher grades in maths ($\exp(\beta) = .983$) (see table 7.5).

7.5.3 Factors associated with and factors predicting self – reported performance in science

Statistical significant differences for low and high performance in science were found by grade ($X^2 = 20.1$, Df = 5, $p < .001$), father's socio-economic status ($X^2 = 10.6$, Df = 4, $p < .031$) and mother's socio-economic status ($X^2 = 11.5$, Df = 5, $p < .042$) (see table 7.4). Thus, higher level grades were reported by those in fourth and fifth grade. With regard to father's socio-economic status, higher level grades were reported among those pupils whose father belonged in the second socio-economic class. Higher level grades were also more likely to be reported by those whose mother belonged in the second and third socio-economic classes (see table 7.2).

Those who reported higher level grades, also reported higher levels of Q.S.L. ($t = -2.2$, Df = 308, $p < .029$), well – being ($t = -2.8$, Df = 285, $p < .005$), self – esteem total ($t = -4.7$, Df = 311, $p < .000$), school self – esteem ($t = -6.7$, Df = 318, $p < .000$) and home self – esteem ($t = -3.2$, Df = 320, $p < .001$) and external locus of control ($t = 2.8$, Df = 310, $p < .005$) and lower levels of negative affectivity ($t = 3.7$, Df = 334, $p < .000$) and internal locus of control ($t = -2.8$, Df = 310, $p < .005$) (see tables 7.3 and 7.4).

Grade, father's socio-economic status, Q.S.L., well- being and school self – esteem were the factors that entered Logistic regression, due to their retention of significant Wald values when clusters of factors (i.e. personality etc.) were tested through separate Logistic regressions. It was found that all the aforementioned factors were able to predict self – rated performance in science significantly ($p < .000$) and accurately, with 72.68% of the sample being correctly classified as high or low performers. However, it was shown that high levels of well - being had the greatest influence on having reported high grades in science ($\exp(\beta) = .890$) (see table 7.5).

7.5.4 Factors associated with and factors predicting self – reported performance in Geography

For geography, statistical significant differences between high and low performers were found by father's educational level (X^2 = 6.5, Df = 1, p < .011), mother's educational level (X^2 = 4.8, Df = 1, p < .029), and mother's socio-economic status (X^2 = 12.3, Df = 5, p < .031) (see table 7.4). Thus, it was shown that pupils were more likely to have reported higher level grades in geography when their mother and father had attended higher education and when their mother belonged in the second or the third socio-economic class (see table 7.2).

No statistical significant differences between high and low performers in geography were detected by school factors and well – being. However, those who reported higher level grades in Geography also reported higher levels of self – esteem total (t = -2.5, Df = 278, p < .013), peer self – esteem (t = -2.2, Df = 292, p < .027) and home self – esteem (t = -2.5, Df = 283, p < .011) (see tables 7.3 and 7.4).

None of the factors entered Logistic regression, due to their insignificant Wald values, when clusters of factors (i.e. personality etc.) were tested by use of separate Logistic regressions.

7.5.5 Factors associated with and factors predicting self – rated performance in modern studies

School, grade and gender were found to be associated with self – rated performance in modern studies. Pupils were more likely to report higher grades in modern studies, when they were from school B (X^2 = 12.7, Df = 1, p < .000), the fourth or fifth grade (X^2 = 19.0, p < .002) and when being females (X^2 = 5.5, Df = 1, p < .019) (see tables 7.2 and 7.4).

No statistical significant differences between high and low performers in geography were detected by school factors. However, those who reported higher level grades in modern studies, also reported higher levels of well – being total ($t = -2.2$, $Df = 178$, $p < .027$), positive affectivity ($t = -2.7$, $Df = 226$, $p < .008$), self – esteem total ($t = -2.9$, $Df = 203$, $p < .004$), peer self – esteem ($t = -2.8$, $Df = 214$, $p < .006$) and school self – esteem ($t = -3.4$, $Df = 205$, $p < .001$) and lower levels of negative affectivity ($t = 3.6$, $Df = 218$, $p < .000$) (see tables 7.3 and 7.4).

School and well - being were the only factors that entered Logistic regression, due to their retention of significant Wald values, when clusters of factors (i.e. personality etc.) were tested through separate Logistic regressions. The two factors were found to predict self – rated performance in modern studies significantly ($p < .028$) and accurately with 62.22% of pupils being correctly classified as high or low performers. However, school was found to have the greatest influence on performance in modern studies ($\exp(\beta) = .626$) (see table 7.5).

7.5.6 Factors associated with and factors predicting self – rated performance in arts

School and gender were the only demographic factors found to be associated with self – rated performance in arts. It was found that pupils were more likely to have reported higher level grades in arts, if they had been from school B ($X^2 = 6.5$, $Df = 1$, $p < .011$) and being females ($X^2 = 7.0$, $Df = 1$, $p < .008$) (see tables 7.2 and 7.4).

No statistical significant differences were detected between high and low performers in geography by school factors and well – being total. However, those who reported higher level grades in arts presented with higher levels of positive affectivity ($t = -2.0$, $Df = 306$, $p < .048$) and school self – esteem ($t = -2.1$, $Df = 272$, $p < .037$) (see tables 7.3 and 7.4).

School and gender were the only factors that entered Logistic regression, due to their retention of significant Wald values when clusters of factors (i.e. personality etc.) were tested through separate Logistic regressions. Both factors predicted self – rated performance in arts significantly ($p < .000$) and accurately, with 61.92% of the pupils being correctly classified as high and low performers. However, gender was found to have the greatest influence on performance in Arts ($\exp(\beta) = .538$) (see table 7.5).

Table 7.2. Number and (%) of pupils, having reported low and high performance, across subjects by demographic categories.

	English		Maths		Science		Geography		Modern Studies		Art	
ble	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High
l												
A	92 (49)	100 (44)	87 (48)	107 (45)	78 (50)	88 (42)	78 (52)	86 (47)	67 (64)	57 (41)	80 (59)	85 (44)
B	95 (51)	129 (56)	94 (52)	128 (55)	79 (50)	122 (58)	73 (48)	98 (53)	35 (36)	81 (59)	56 (41)	106 (56)
	33 (18)	22 (10)	25 (14)	30 (13)	19 (12)	8 (4)	25 (17)	14 (8)	18 (17)	10 (8)	21 (15)	28 (15)
d	36 (19)	29 (13)	35 (19)	32 (14)	36 (23)	31 (15)	35 (23)	30 (16)	36 (35)	25 (18)	29 (21)	38 (20)
	33 (18)	40 (18)	30 (17)	43 (18)	29 (19)	43 (20)	25 (17)	43 (23)	19 (18)	41 (30)	34 (25)	29 (15)
	41 (22)	65 (28)	43 (24)	63 (27)	32 (21)	62 (30)	32 (21)	44 (24)	18 (17)	33 (24)	30 (22)	39 (21)
	34 (18)	58 (25)	37 (20)	54 (23)	38 (24)	52 (25)	28 (18)	44 (24)	10 (10)	25 (18)	20 (15)	47 (25)
	9 (5)	14 (6)	10 (6)	12 (5)	2 (1)	13 (6)	6 (4)	8 (5)	3 (3)	3 (2)	2 (2)	8 (4)
her												
	100 (54)	81 (36)	81 (45)	101 (43)	71 (46)	84 (54)	71 (47)	80 (44)	50 (48)	46 (34)	71 (53)	72 (38)
tes	85 (46)	146 (64)	97 (55)	133 (57)	89 (43)	119 (57)	79 (53)	103 (56)	53 (52)	91 (66)	63 (47)	117 (62)
r's vel												
ded												
	54 (41)	99 (53)	55 (42)	77 (58)	49 (43)	93 (53)	45 (40)	81 (56)	40 (54)	58 (54)	49 (49)	76 (51)
ted	79 (59)	89 (47)	99 (52)	92 (48)	64 (57)	82 (47)	68 (60)	64 (44)	34 (46)	50 (46)	51 (51)	74 (49)
her's Level												
ded												
	60 (45)	105 (55)	58 (45)	71 (55)	58 (50)	59 (50)	50 (42)	80 (56)	44 (56)	65 (60)	57 (55)	75 (51)
ded	72 (55)	87 (45)	107 (54)	90 (46)	94 (54)	79 (46)	68 (58)	63 (44)	34 (44)	44 (40)	47 (45)	73 (49)
r's												
-ec.	*(1st = professional, 2nd = intermediate, 3rd = skilled, 4th = partly skilled, 5th = unskilled and 6th = economically inactive)											
*s**												
	23 (14)	30 (14)	21 (13)	32 (15)	17 (12)	26 (14)	14 (11)	26 (15)	19 (21)	14 (11)	18 (15)	31 (18)
nd	38 (23)	73 (35)	39 (25)	71 (33)	30 (22)	68 (36)	38 (29)	52 (31)	26 (29)	41 (34)	40 (34)	44 (25)
rd	67 (41)	64 (31)	64 (40)	66 (31)	54 (39)	57 (30)	52 (40)	57 (34)	34 (37)	39 (32)	42 (36)	66 (37)
rth	17 (10)	25 (12)	17 (11)	25 (12)	18 (13)	23 (12)	12 (9)	19 (11)	8 (9)	17 (14)	11 (9)	19 (11)
	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
h	20 (12)	17 (8)	17 (11)	20 (9)	20 (14)	15 (8)	15 (11)	16 (9)	4 (4)	11 (9)	7 (6)	16 (9)
her's												
-ec.	*(1st = professional, 2nd = intermediate, 3rd = skilled, 4th = partly skilled, 5th = unskilled and 6th = economically inactive)											
*s**												
	6 (3)	13 (6)	8 (5)	12 (5)	9 (6)	11 (6)	2 (1)	13 (7)	6 (6)	7 (5)	5 (4)	11 (6)
nd	47 (27)	65 (30)	40 (23)	71 (32)	39 (26)	58 (29)	37 (26)	52 (30)	30 (31)	35 (27)	37 (28)	53 (30)
rd	41 (24)	63 (28)	37 (21)	67 (30)	27 (18)	61 (31)	33 (23)	49 (28)	19 (20)	46 (35)	36 (27)	43 (24)
rth	28 (16)	34 (15)	31 (18)	30 (13)	24 (16)	27 (13)	29 (20)	20 (11)	16 (17)	15 (12)	19 (15)	29 (16)
	18 (10)	6 (3)	17 (10)	7 (3)	12 (8)	11 (6)	10 (7)	10 (6)	8 (8)	4 (3)	9 (7)	8 (4)
h	35 (20)	40 (18)	37 (23)	37 (17)	38 (26)	30 (15)	32 (23)	31 (18)	17 (18)	24 (18)	25 (19)	35 (20)

Table 7.3. Means (and Sd) of school, non – school and personality factors, by low and high performers, across subjects

	English		Maths		Science		Geography		Modern Studies		Art	
School factors	**Low**	**High**	**Low**	**High**	**Low**	**High**	**Low**	**High**	**Low**	**High**	**Low**	**High**
Q.S.L	163.4 (21.0)	163.8 (19.9)	161.3 (21.8)	165.3 (19.3)	160.4 (20.9)	165.6 (20.6)	163.4 (20.0)	163.7 (21.0)	161.1 (21.0)	166.1 (21.0)	162.3 (19.9)	165.0 (19.7)
School stress	39.9 (20.6)	38.5 (20.0)	41.8 (19.6)	37.0 (20.5)	41.0 (20.4)	38.3 (19.8)	38.0 (20.9)	39.0 (19.5)	40.3 (22.0)	37.9 (20.0)	39.9 (20.2)	38.0 (20.7)
Non – school factors												
Well - being	59.8 (7.8)	61.7 (7.8)	59.6 (7.7)	62.0 (7.9)	59.4 (7.9)	62.0 (7.8)	60.5 (8.3)	61.3 (7.8)	59.5 (7.7)	62.1 (7.4)	60.5 (8.3)	61.7 (8.1)
Personality factors												
Positive affectivity	34.7 (6.6)	35.4 (6.7)	34.3 (6.6)	35.8 (6.7)	34.7 (6.6)	35.8 (6.7)	34.7 (6.3)	35.5 (7.1)	34.1 (6.6)	36.6 (7.0)	34.6 (7.0)	36.1 (6.2)
Negative affectivity	18.6 (6.0)	17.0 (6.1)	18.6 (6.8)	17.0 (5.4)	19.3 (6.9)	16.7 (5.6)	18.3 (5.6)	17.3 (6.0)	19.9 (7.0)	16.7 (6.0)	18.3 (6.2)	17.3 (6.3)
Self – esteem total	87.6 (10.7)	92.0 10.7)	87.6 (10.5)	92.1 (10.9)	86.8 (10.4)	92.6 (10.8)	88.5 (11.0)	91.8 (10.9)	87.7 (10.6)	92.4 (11.4)	88.9 (11.6)	91.3 (11.6)
Peer self - esteem	27.8 (4.4)	29.0 (4.3)	28.1 (4.5)	28.9 (4.3)	28.2 (4.3)	28.7 (4.6)	27.8 (4.4)	29.9 (4.5)	27.9 (4.3)	29.6 (4.5)	28.2 (4.2)	29.2 (4.3)
School self – esteem	27.9 (4.6)	30.3 (4.5)	27.7 (4.4)	30.6 (4.5)	27.3 (4.5)	30.7 (4.5)	28.5 (4.8)	30.0 (4.6)	28.1 (4.6)	30.5 (4.9)	28.5 (4.9)	29.7 (4.7)
Home self – esteem	31.5 (5.2)	32.6 (5.4)	31.5 (5.5)	32.6 (5.3)	30.9 (5.6)	33.0 (5.0)	31.9 (5.0)	32.8 (5.2)	31.4 (5.2)	32.2 (5.9)	31.9 (5.2)	32.2 (5.9)
Internal Locus of control	4.5 (1.9)	3.9 (1.8)	4.4 (1.8)	4.0 (1.8)	4.5 (2.0)	3.9 (1.8)	4.4 (2.0)	4.0 (1.9)	4.5 (1.9)	4.1 (2.0)	4.3 (1.9)	4.1 (1.8)
External Locus of control	5.5 (1.9)	6.0 (1.8)	5.6 (1.8)	6.0 (1.9)	5.4 (2.0)	6.0 (1.8)	5.6 (2.0)	5.9 (1.9)	5.5 (1.9)	5.9 (2.0)	5.7 (1.9)	5.9 (1.8)

Table 7.4. Associations between demographics, school, non – school and personality factors and performance (low versus high) across subjects.

	English	Maths	Science	Geography	Modern Studies	Art
Demographics						
School	X^2 (1) = 1.3 p < .260	X^2 (1) = 0.3 p < .607	X^2 (1) = 2.2 p < .139	X^2 (1) = 0.8 p < .370	X^2 (1) = 12.7 p < .000***	X^2 (1) = 6.5 p < .011*
Grade	X^2 (5) = 12.3 p < .031*	X^2 (5) = 3.0 p < .693	X^2 (5) = 20.1 p < .001***	X^2 (5) = 11.0 p < .051	X^2 (5) = 19.0 p < .002**	X^2 (5) = 9.9 p < .079
Gender	X^2 (1) = 14.0 p < .000***	X^2 (1) = 0.2 p < .635	X^2 (1) = 0.3 p < 567	X^2 (1) = 0.4 p < .509	X^2 (1) = 5.5 p < .019*	X^2 (1) = 7.0 p < .008**
Father's educational level	X^2 (1) = 4.5 p < .033*	X^2 (1) = 3.2 p < .072	X^2 (1) = 2.6 p < .105	X^2 (1) = 6.5 p < .011*	X^2 (1) = 0.0 p < .963	X^2 (1) = 0.1 p < .796
Mother's educational level	X^2 (1) = 2.7 p < .102	X^2 (1) = 2.7 p < .099	X^2 (1) = 0.6 p < .426	X^2 (1) = 4.8 p < .029*	X^2 (1) = 0.2 p < .659	X^2 (1) = 0.4 p < .518
Father's socio-economic status	X^2 (4) = 8.7 p < .068	X^2 (4) = 5.1 p < .280	X^2 (4) = 10.6 p < .031*	X^2 (4) = 2.6 p < .625	X^2 (4) = 6.6 p < .159	X^2 (4) = 3.3 p < .507
Mother's socio-economic status	X^2 (5) = 11.9 p < .037*	X^2 (5) = 15.8 p < .007**	X^2 (5) = 11.5 p < .042*	X^2 (5) = 12.3 p < .031*	X^2 (5) = 9.1 p < .107	X^2 (5) = 2.1 p < .829
School factors						
Q.S.L.	t (351) = -1.2 p < .854	t (349) = -1.8 p < .070	t (308) = -2.2 p < .029*	t (280) = -.1 p < .908	t (210) = -1.7 p < .086	t (282) = -1.1 p < .254
School stress	t (341) = 0.7 p < .506	t (342) = 2.1 p < .033*	t (308) = 1.2 p < .247	t (278) = -.4 p < .664	t (202) = 0.8 p < .424	t (269) = 0.7 p < .472
Non – school factors						
Well - being	t (312) = -2.0 p < .043*	t (313) = -2.7 p < .007**	t (285) = -2.8 p < .005**	t (250) = -0.8 p < .418	t (178) = -2.2 p < .027*	t (239) = -1.1 p < .271
Personality						
Positive affectivity	t (388) = -1.0 p < .328	t (389) = -2.3 p < .024*	t (344) = -1.5 p < .146	t (313) = -0.9 p < .352	t (226) = -2.7 p < .008**	t (306) = -2.0 p < .048*
Negative affectivity	t (376) = 2.6 p < .009**	t (377) = 2.5 p < .012*	t (334) = 3.7 p < .000***	t (306) = 1.4 p < .169	t (218) = 3.6 p < .000***	t (296) = 1.4 p < .168
Self – esteem total	t (345) = -3.7 p < .000**	t (347) = -3.8 p < .000**	t (311) = -4.7 p < .000***	t (278) = -2.5 p < .013*	t (203) = -2.9 p < .004**	t (267) = -1.7 p < .095
Peer self - esteem	t (363) = -2.6 p < .009**	t (365) = -1.5 p < .134	t (324) = -1.1 p < .285	t (292) = -2.2 p < .027*	t (214) = -2.8 p < .006**	t (285) = -1.9 p < .057
School self – esteem	t (352) = -4.8 p < .000***	t (353) = -6.0 p < .000***	t (318) = -6.7 p < .000***	t (288) = -1.4 p < .152	t (205) = -3.4 p < .001**	t (272) = -2.1 p < .037*
Home self – esteem	t (358) = -1.9 p < .053	t (359) = -1.9 p < .055	t (320) = -3.4 p < .001***	t (283) = -2.5 p < .011*	t (196) = 1.3 p < .211	t (278) = -0.6 p < .570
Internal Locus of control	t (340) = 3.1 p < .002**	t (341) = 1.8 p < .067	t (310) = 2.8 p < .005**	t (271) = 1.5 p < .131	t (196) = 1.3 p < .211	t (260) = 0.8 p < .442
External Locus of control	t (340) = -3.1 p < .002**	t (341) = -1.8 p < .067	t (310) = -2.8 p < .005**	t (271) = -1.5 p < .131	t (196) = -1.3 p < .211	t (260) = -0.8 p < .442

*p<.05, **p<.01, ***p <. 001

Table 7.5. Predicting self – rated performance from demographic, school, non – school and personality factors across subjects.

Subject	B	S.E.	Exp (B)	Model X^2	Model Df	Model p <	Negelkerke R^2	% Overall correctly classified
English				25.753	3	.000***	.108	66.34
Gender	-.688	.243	.502					
Well – being	-.006	.019	.994					
School self - esteem	.113	.034	1.120					

Note: After Performing Logistic Regressions on individual clusters of factors (e.g. demographics) containing variables that have been found to affect performance at English in univariate tests, the following variables were excluded due to insignificant Wald values (p >.05): Year, Father's educational level, Mother's socio-economic status, Peer self – esteem, Internal and External locus of control.

Subject	B	S.E.	Exp (B)	Model X^2	Model Df	Model p <	Negelkerke R^2	% Overall correctly classified
Maths				42.857	8	.000***	19.9	69.74
Mother's soc-ec. Status[1]								
School stress	-.008	.007	.991					
Well – being	-.017	.021	.983					
School self - esteem	.147	.040	1.159					

Note: After Performing Logistic Regressions on individual clusters of factors (e.g. demographics) containing variables that have been found to affect performance at Maths in univariate tests, the following variables were excluded due to insignificant Wald values (p > .05): Positive affectivity and Negative affectivity. [1]Regression coefficients for individual sub-categories are not presented for the sake of brevity.

Subject	B	S.E.	Exp (B)	Model X^2	Model Df	Model p <	Negelkerke R^2	% Overall correctly classified
Science				44.386	11	.000***	26.9	72.68
Grade[1]								
Father's soc-ec. Status[1]								
Q.S.L.	-.013	.011	.986					
Well – being	-.015	.027	.985					
School self– esteem	.239	.053	1.270					

Note: After Performing Logistic Regressions on individual clusters of factors containing variables that have been found to affect performance on Science in univariate tests, the following variables were excluded due to insignificant Wald values (p >.05): Mother's socio-economic status, Negative affectivity, Internal and External locus of control. [1]Regression coefficients for individual sub-categories are not presented for the sake of brevity.

*p<.05, **p<.01, ***p <. 001.

Table continued.

Subject	B	S.E.	Exp (B)	Model X^2	Model Df	Model p <	Negelkerke R^2	% Overall correctly classified
Geography				-	-	-	-	-
None	-	-	-					

Note: After Performing Logistic Regressions on individual clusters of factors containing variables that have been found to affect performance on English in univariate tests, all variables were excluded due to insignificant Wald values (p >.05).

Subject	B	S.E.	Exp (B)	Model X^2	Model Df	Model p <	Negelkerke R^2	% Overall correctly classified
Modern Studies				7.094	2	.028	.053	62.22
School	-.467	.320	.626					
Well – being	.041	.021	1.042					

Note: After Performing Logistic Regressions on individual clusters of factors containing variables that have been found to affect performance on English in univariate tests, the following variables were excluded due to insignificant Wald values (p >.05): Year, Gender, Positive affectivity, Negative affectivity, School self – esteem and Peer self - esteem.

Subject	B	S.E.	Exp (B)	Model X^2	Model Df	Model p <	Negelkerke R^2	% Overall correctly classified
Art				14.051	2	.000***	.057	61.92
School	-.608	.231	.543					
Gender	-.619	.231	.538					

Note: After Performing Logistic Regressions on individual clusters of factors containing variables that have been found to affect performance on English in univariate tests, the following variables were excluded due to insignificant Wald values (p >.05): Positive affectivity and School self – esteem.

*p<.05, **p<.01, ***p <. 001.

7.5.7 Factors associated with and factors predicting overall self – rated performance

Overall self – rated performance was found to be associated with school (F = 4.6, Df = 1, p < .033), grade (F = 2.7, Df = 4, p < .033) and gender (F = 4.1, Df = 1, p < .044). Thus, higher level grades were reported by pupils in school B, from fifth grade and females. From these three factors, grade was found to explain the highest percentage of grades variance (12%) followed by school (2.8%) and gender (2.5%). Overall self – rated performance were not found to be associated with parental socio-economic and educational status (see table 7.6).

Self – rated performance overall did not present significant correlations with the school factors Q.S.L. and stress total. However, it produced moderate positive

correlations with well – being total ($r = .324$, $p < .000$), positive affect ($r = .169$, $p < .037$), self – esteem total ($r = .286$, $p < .001$) and external locus of control ($r = .197$, $p < .029$) and moderate negative correlations with negative affect ($-.382$, $p < .000$) and internal locus of control ($r = .197$, $p < .029$) (see table 7.7).

Individual regression analysis on grades total by significant factors described above has shown that the highest predictors of grades total, indicated by R^2, were negative affectivity (14.6% of the variance explained) followed by school self – esteem (11.5% of its variance explained) and well – being total (10.5% of its variance explained) (see table 7.8).

However, when all significant predictors (well – being total, positive affectivity, negative affectivity, school self – esteem, peer self – esteem, home self – esteem, internal and external locus of control) ($p(t)<.05$) were entered in a multiple regression analysis, only negative affectivity ($t = -4.0$, $p < .000$) and school self – esteem ($t = 2.8$, $p < .007$) were found able to contribute significantly to the regression (see table 7.8). However, this group of factors explained a higher percentage of self – rated performance variance (31.9%), significantly ($F(7) = 6.2$, $p<.000$), than did individually.

Table 7.6. Demographics and self – rated performance total

Variable	Mean (Sd)	F	Df	p <	Post hoc Scheffe	R^2
School		4.6	1,162	.033*	n / a	.028
School A	14.4 (3.0)					
School B	15.4 (2.5)					
Grade		2.7	4,158	.033*	none	.120
First	14.3 (2.6)					
Second	14.2 (2.9)					
Third	15.3 (2.6)					
Fourth	15.5 (2.5)					
Fifth	16.4 (2.0)					
Sixth	-					
Gender		4.1	1,162	.044*	n / a	.025
Males	14.3 (2.9)					
Females	15.2 (2.7)					
Father's ed. level		0.1	1,115	.814	n / a	.000
Attended higher educ.	15.2 (3.0)					
Not attended higher educ.	15.0 (2.6)					
Mother's ed. Level		2.2	1,118	.145	n / a	.018
Attended higher educ.	15.4 (2.6)					
Not attended higher educ.	14.7 (2.7)					
Father's socio-ec. status		1.3	4,158	.254	none	.008
First	14.9 (2.8)					
Second	13.7 (1.8)					
Third	14.0 (4.2)					
Fourth	18.0 (0.0)					
Fifth	14.1 (2.8)					
Sixth	-					
Mother's socio-ec. status		0.6	4,158	.665	none	.072
First	14.8 (2.8)					
Second	14.7 (2.8)					
Third	15.1 (3.1)					
Fourth	15.5 (2.4)					
Fifth	13.0 (3.4)					
Sixth	-					

*p < .05, **p < .01, ***p <. 001

Table 7.7. Relations between self – rated performance total, school, non - school and personality factors.

Variable	r with Grades total	Mean	Sd
Grades total	-	14.8	2.8
Q.S.L.	.125	165.5	21.9
Stress total	-.149	37.5	20.7
Well – being total	.324***	61.5	7.8
Positive affectivity	.169*	36.2	6.8
Negative affectivity	-.382***	18.3	6.4
Peer self -esteem	.246**	28.9	4.5
Home self -esteem	.173*	32.3	5.4
School self – esteem	.339***	29.7	5.2
Self – esteem total	.286***	91.2	11.6
Internal locus of control	-.197*	4.3	2.1
External locus of control	.197*	5.6	2.1

*p < .05, **p < .01, ***p <. 001

Table 7.8. Simple and multiple regression of school, non - school and personality factors on self – rated performance total

	Simple Regression			
Variable	**β**	**t**	**p <**	**R^2**
Well – being total	.324	3.6	.000***	.105
Positive affectivity	.169	2.1	.037*	.029
Negative affectivity	-.382	-5.0	.000***	.146
Peer self -esteem	.246	3.0	.003**	.060
Home self -esteem	.173	2.0	.046*	.030
School self - esteem	.339	4.1	.000***	.115
Self – esteem total	.286	3.4	.001*	.082
Internal locus of control	-.197	-2.2	.029*	.039
External locus of control	.197	2.2	.029*	.039
	Multiple Regression			
Well – being total	-.043	-0.3	.732	
Positive affectivity	-.047	-0.5	.646	
Negative affectivity	-.419	-4.0	.000***	
School self – esteem	.349	2.8	.007**	
Peer self – esteem	-.017	-0.1	.863	
Home self – esteem	-.190	-1.9	.066	
Internal locus of control	(Removed)	-	-	
External locus of control	.033	0.4	.702	
	F	**Df**	**p <**	
	6.222	7	.000***	.319

*p < .05, **p < .01, ***p <. 001

7.6 Discussion

One of the main criticisms concerning the present data could be their self – rated nature. This is especially the case for the performance data. It could be argued that pupils have not reported their actual grades in different subjects (i.e. reported higher grades), for reasons of social desirability. Although reliability of the data used in the present research might have improved by collecting performance - related information directly from school files (i.e. Gibson and Asthana, 1998), such a methodological decision might have imposed restrictions on the anonymity of data collection for a wide range of factors that have been studied in relation to school performance. Since anonymity and confidentiality of responses was ensured, it was assumed that pupils have reported information concerning their grades as accurately as possible. In addition, the present sample was derived from two schools only, therefore it would be

inappropriate to generalise the present results to the student population in Scotland or the UK in general.

In general terms, the present study has shown that school self – rated performance is associated with various factors including demographic, personality and school factors. From the demographics, school grade, gender, parental socio-economic status and parental educational status were shown to be significantly associated with school self – rated performance in different subjects. School was found to be associated with self – rated performance in modern studies and art. This may indicate that there are differences in the number of pupils who have achieved high and low performance, as assessed by different teachers. School grade was found to be associated with school self – rated performance in favour of 4th graders in English and science. For modern studies higher level grades were found in the 3rd year. Previous research findings on the effects of age / school grade have been rather inconsistent (e.g. Hauck and Finch, 1993; Sweetland and DeSimone, 1987). Nevertheless, the present findings also support previous research (e.g. Cameron and Wilson, 1990).

Statistically significant gender differences that favour girls (Bulcock et al., 1991), were found in self – rated performance in English, arts and modern studies. The superiority in performance of girls over boys in linguistics (English) was mainly supported by earlier research in the area (e.g. Maccoby, 1966) rather than more recent findings (e.g. Ethington, 1990). More recent research has rather suggested that no gender differences exist among different subjects.

Parental educational level was also found to be associated with self – rated performance, particularly father's educational level, which was found to be associated with self – rated performance in English and geography. It was shown that higher educational level is associated with higher grades in the specified subjects. Mother's

educational level was found to be associated with self – rated performance in geography in the same way as father's educational level. It was also found that second father's socio-economic class was associated with higher grades in science. Mother's socio-economic class was found to be associated with an even higher number of school subjects. Mother's second and third socio-economic classes were found to be mostly associated with higher self – rated performance in English, maths, science and geography. Although previous research (e.g. Kaplan, 1986) has claimed that socio-economic status could affect school performance, there are also those studies, which have concluded that there is no association between school performance and parental socio-economic / educational status (e.g. Gibson and Asthana, 1998). Thus, it could be concluded that parental socio-economic / educational status can affect pupil's performance in specific subjects only. In the present study it was shown that socio-economic status of both parents could be significantly associated with self – rated performance in science only.

School factors were also claimed to be significantly associated with school self – rated performance. Q.S.L. total was found to be associated with performance in science, indicating that the higher the levels of Q.S.L., the higher the grades in this subject. Although there are no previous studies in the area, previous literature has claimed that school factors are associated with school performance (e.g. Whitmore, 1982; Al - Methen and Wilkinson, 1995). These results may indicate that satisfaction with school is associated with the learning / performance procedure, since Q.S.L. would stimulate pupils to study more and, as a consequence, to gain higher grades in science. Similarly to findings of previous research (Heinrich and Spielberger, 1982; Cole and Sapp, 1988), school stress was shown to be associated with performance in

maths only. It was found that higher levels of school stress are associated with lower level grades in maths.

Well - being was associated with performance in maths, science and modern studies. Higher levels of well - being were found to be associated with higher grades in these subjects (see also Mechanic and Hansell, 1987; Pietila and Jarvelin, 1995).

Just like demographic and school factors, personality factors were also shown to be associated with school performance across subjects. Analytically speaking, positive affectivity was found to be positively associated with self – rated performance in maths, modern studies and art. The higher the levels of positive affectivity were the higher the grades in the subjects specified. On the other hand, according to present results, negative affectivity associated with performance in English, maths, science and modern studies negatively (e.g. Carson and Carson, 1993).

It was also found that self – esteem, both area specific (home, school, peers) as well as self - esteem total, were associated with self - rated performance across different subjects. Self – esteem total was associated with higher performance in English, maths, science, geography and modern studies. A number of previous studies have suggested that self - esteem is positively related to school performance (e.g. Newbegin and Owens, 1986; Keltikangas - Jarvinen, 1992), but other studies have come to the opposite results (e.g. Demo and Parker, 1987; Alsaker, 1989). The present findings though strongly supported the positive effects of self - esteem on school performance.

Inconsistently with the findings of previous research (e.g. Bar - Tal and Bar - Zohar, 1977; Boss and Taylor, 1989), the present study revealed that not internal but external locus of control may be associated with school performance. More specifically, higher levels of external locus of control and lower levels of internal locus of control could

be related with significantly higher level grades in English and science. However, such inconsistency may suggest that the relationship between performance and locus of control should be investigated further. On the other hand, although it was suggested that externals may exhibit less persistence in tasks affecting negatively their performance (Ducette and Wolk, 1972), they may also have higher participation in class activities increasing the probability for getting higher grades. In addition, although past literature has predominantly associated internal locus of control with higher performance, Findley and Cooper (1983) have suggested that the magnitude of this relationship range from small to medium.

Self - rated performance total was found to be associated with school, school year and gender. It was found that significantly higher level grades were reported by pupils in school B, fifth graders and females. Grades total was also found to be positively and significantly associated with well – being total, positive affectivity, self – esteem both total and area specific and external locus of control and negatively related with negative affectivity and internal locus of control. It is important, however, to emphasise that the strongest correlation found was between performance total and negative affectivity.

Although, different factors were shown to affect different subjects, Logistic regression analysis revealed that gender was the best predictor of self – rated performance in English and arts, well – being total in maths and science and school in modern studies. None of the factors examined in relation to geography were survived the criteria stated, so they were not examined further.

Differences between males and females regarding performance could be explained in relation to various factors. Past literature has indicated that in and out of school differences between the two sexes, attitudinal differences or differences in relation to

expected social roles would account for the superiority of females in performance (Bleach et al., 1996). Other factors may include the nature of the subject itself. For example, male pupils may feel awkward about expressing and participating in artistic interests as these are attributed in female roles. This may explain the superiority of females in grades in arts.

The finding concerning the strong predictive value of school in relation to self – rated performance in modern studies may be an indication of the subjectivity of grades, since different schools have different teachers who assign the grades. Previous research (e.g. Pietila and Jarvelin, 1995) has also indicated that good school performance is associated with a good health and social index, providing an indication of the significance of well – being in predicting performance in maths and science.

Although, self – rated performance across different subjects could predicted at best by gender, school and well – being, performance total was found to be predicted at best by grade, school self – esteem and negative affectivity. However, before we proceed to a discussion about the predictors of overall performance, it may be important to raise briefly the finding that the pattern of prediction in self – rated performance differs across subject areas, as different factors have been found to be associated at best with different syllabus subjects. There has been no study on the association between different syllabus subjects and various factors, in a single project, thus it is rather impossible to discuss the present findings in conjunction with previous research. Nevertheless, it could be suggested that the unique nature of each syllabus subject could create some differences in the prediction pattern of self-rated performance across different subjects. The fact that different teachers are involved in different subjects could also account for any differences between the pattern of prediction of self – rated performance across syllabus subjects.

The strong association between age / grade and performance was also supported by previous research (e.g. Sweetland and DeSimone, 1987; Cameron and Wilson, 1990). For the relationship between self – esteem and performance, Bandura (1982) has explained that higher self - esteem is associated with higher performance, since it increases self – confidence about the attainment of certain performance tasks. People with low self – esteem tend to use ineffective mechanisms to cope with demands and consequently they generate high emotional arousal. They also become preoccupied with perceived deficiencies and any potential difficulties become harder than actually are. According to Bandura (1982) and the Self – efficacy theory, low self – esteem individuals tend to exhibit less effort to attain their goals, or they are easily giving up their efforts increasing their chances for failure or poorer performance.

Schooling has also been described as "a major arena for achievement among adolescents" (Rosenberg et al., 1989). School marks represent a socially constructed indicator of personal worth and success, which are valued from society. Thus, higher grades are associated with more positive appraisals from significant others (e.g. Mead, 1934), positive social comparisons (Festinger, 1954) and positive self – attributions (i.e. performance outcome due to own efforts). All these may be drastically motivating factors for pupils that increase the probability for attaining higher school grades (Rosenberg et al., 1989). Low self – esteem could also be responsible for feelings of helplessness that causally links with performance (Abramson et al., 1978). School self – esteem would be one of those variables that when manipulated appropriately would facilitate increase of school grades and performance. Ways for increasing self – esteem in the school setting may include that teachers should interact equally with high and low performers and praise pupils for their achievements. Sufficient background information about pupils provided to teachers has also been

shown to be associated with higher acceptance of pupils by the teachers and potentially improved self – esteem. Additionally, involving parents in school decisions and the learning process (e.g. planning activities that parents could also participate) have been found to maintain high self – esteem levels (Gurney, 1987).

On the other hand, high negative affectivity pupils tend to be viewed negatively by their teachers, due to their increased negative reactivity towards their school environment (Parkes, 1990). This might increase the likelihood to be judged negatively by their teachers in terms of their performance as well. High negative affectivity pupils also tend to create a less secure and more distressing environment for themselves, and consequently they increase the probability of self – fulfilling prophecies, in relation to lower school performance and grades (McCrae and Costa, 1991). They also tend to show low need for social approval, thus they might not really care about their grades, which is a standard of social comparison (Graziano et al., 1980). Performance expectations are also less reasonable for high negative affectivity pupils, because they describe themselves as non-conforming, rebellious and distrustful (Watson and Clark, 1984). As a consequence, they may put less effort on their studies and they may get lower grades as a result.

Chapter 8: Psychological Predictors of School Punishment / Misbehaviour: The Role of Gender

Abstract

Since the problem of pupil misbehaviour is apparently rising, identifying the factors that contribute to the problem becomes important. It is assumed that identification of the factors that would increase the likelihood of / or would predict misbehaviour may lead to the development of effective methods to tackle the problem. The present study aimed firstly to identify the most common methods of punishment that pupils experience at school. Secondly, to study the association and the predictive value of demographic, school, well – being and personality factors on pupil school misbehaviour that are associated with the experience of punishment in school. Sample consisted of 425 pupils selected from grades 1 - 6 from two secondary schools in Scotland. Participants responded to a set of eight questionnaires, including previous experience of punishment (as a result of school misbehaviour), demographics, school factors, well – being and personality factors. It was found that although the two schools exercised slightly different punishment methods, "telling – off" was the most popular punishment method that pupils experience in both schools. Gender was the best predictor of pupil misbehaviour, with boys more likely to misbehave in class and, as a consequence, to experience punishment. Gender differences in relation to school misbehaviour, with boys more likely than girls to misbehave, could be attributed to social factors (i.e. parental tolerance towards boys' misbehaviour). Such a hypothesis, which attributes responsibilities to those involved in the school setting, may require all interested parties (i.e. girls and teachers), rather than

boys only, to be equally involved in policies regarding how to tackle the problem effectively. However, such hypothesis needs to be tested further.

8.1 Introduction

The problem of misbehaviour in schools has been continuously rising. Parsons and Howlett (1996), after reviewing the figures of permanent exclusions in English schools, found that numbers have risen from 2.910 in the academic year 1990 - 1991 to 12.458 in the academic year 1994 - 1995.

School misbehaviour is usually tackled with discipline methods exercised by teachers. Overall, discipline is a widely used term by teachers and practitioners in the educational sector. However, whether there is a shared common interpretation of the meaning of the term "discipline" remains unclear (Zieglerant and Smith, 1984), since the types of misbehaviour that require discipline cover a wide spectrum of behaviours (Blandford, 1998).

Definitions of discipline have been divided into two main categories, the traditional and the humanistic views. Traditional views have emphasised the role and use of strict rules, which should be continuously enforced, in order to achieve firm classroom control (Kohut and Range, 1979). Humanistic views, on the other hand, have included the definitions and views of Webster (1968) and Perkins (1969). Webster viewed discipline as *"the development within individuals of the necessary personal controls to allow them to be effective, contributing members of a democratic society and of the human community at large"*. Perkins (1969), on the other hand, has defined discipline as *"the task of helping students to utilise their abilities, energies, and talents in ways that promote their development and learning"*. Thus, traditional views emphasise the role of strict rules set up by the school authorities or the teacher. Humanistic approaches, in contrary, have focused on the utilisation of personal control that pupils build up

gradually. More current trends in school discipline have emphasised the usefulness of both trends. There are also those educators who argue that discipline is synonymous to classroom management, which is obtained through well - organised interaction and activity (Kohut and Range, 1979).

Lack of discipline and misbehaviour in the classroom is usually confronted with a form of punishment. Punishment has been defined "as the presentation of an environmental event, contingent on a behaviour, which decreases the strength of that behaviour" (Deistz and Hummel, 1978).

The use of punishment in schools has both its advantages and disadvantages. Its effectiveness in reducing certain kinds of school misbehaviour and the elimination of antisocial behaviours are classified among its advantages. Punishment could also reduce any misbehaviours of those individuals who see someone else being punished, a phenomenon called "vicarious punishment" (Bandura, 1969). Finally, if punishment is implemented appropriately, it will accomplish the elimination of misbehaviour faster than any other method of behaviour control (Deitz and Hummel, 1978). Although punishment is considered to be an effective method of behavioural control, in general, it also possesses many disadvantages. It has been negatively criticised for suppressing rather than eliminating the undesirable behaviour. It might also have negative emotional effects on those to whom it is applied (e.g. anger). People (i.e. teachers) and places (i.e. school) associated with the punishment may also become aversive to those been punished (Deitz and Hummel, 1978). In addition to the above, ethical implications for the use of punishment have been expressed (LaVigna and Dannelan, 1986). These include the difficulty to give an accurate definition of what is desirable / undesirable, acceptable /

unacceptable, appropriate / inappropriate pupil behaviour. The use of corporal punishment has also raised many ethical issues and arguments over many decades (Bauer et al., 1993).

There are several reasons why research on punishment and discipline is worthwhile. It has been claimed that classroom discipline has important implications in instruction and knowledge acquisition (Kohut and Range, 1979). McNeil (1978) also emphasised that control of pupil behaviour by the teacher in the classroom is essential for learning. Furthermore, Lindgren (1972) reported that discipline is a major source of stress for teachers, especially for those who have just entered the profession.

Previous research and literature on discipline and punishment has focused on teachers' efficacy in classroom management (e.g. Emmener and Hickman, 1991), physical punishment (e.g. Whipple and Richey, 1997), pupils' and teachers' attitudes to discipline (e.g. Cullingford, 1988; Caffyn, 1989), effectiveness of disciplinary methods (e.g. Miller et al., 1998; Houghton et al, 1990), pupils' perception of permissiveness (e.g. King et al., 1990), popular methods of punishment (e.g. Chiu, 1975), effects of punishment on pupils (e.g. Malouf, 1983) and alternatives to punishment (e.g. Pepper and Roberson, 1982).

Although school punishment and disciplinary issues have been studied to a considerable extent, a number of research questions have remained unanswered. For example, there are relatively few studies regarding the association between school misbehaviour / punishment and demographic, personality and school factors, which are the focus of the present study. Some of previous research concerning pupil misbehaviour and punishment and their association with the variables of interest is outlined below.

Rutter et al. (1979) and Mortimore et al. (1988) have pointed out that secondary schools differ remarkably in terms of pupils' behaviour. These differences could be attributed to various school factors. First of all, the school setting could encourage the development of anti - social sub - cultures by engaging pupils in official failure, when it is believed that some of the pupils will be unsuccessful in their academic career (Lacey, 1970; 1974). Galloway (1980), Lawrence et al. (1984) and Davies (1990) have also pointed out that disruptive behaviour is associated with learning difficulties, since it might be difficult for pupils with learning difficulties to cope with curriculum demands. Corgan (1979) has also added that feelings of boredom with the curriculum could also reinforce misbehaviour. Bird et al. (1981) found that schools having problems with disruptive behaviour are usually short staffed, a factor that could affect timetable negatively. Another important school factor that could influence pupils' misbehaviour is the punishment system that a given school adopts. Grunsell (1980) suggested that high suspension rates in school might be linked with teachers' irrational expectations from pupils. Nevertheless, creating a lot of school rules may increase the number of rule breakers (Furtwengler and Kennert, 1982). Sometimes, it might be better to overlook some disruptive behaviour, in order to keep the order of the whole class (Johnstone and Munn, 1987).

Merrett and Man Tang (1994) assessed the attitudes of primary schoolchildren (n = 1779) towards praise and punishment in Britain and found that children in general believed that they get the "right" praise and blame in school for good work and behaviour. They also found that more boys than girls were looking for praise when they demonstrated good behaviour and work. For punishment both sexes preferred quiet and personal reprimands

rather than in public. In a study of pupils' attitudes (n = 180) towards teachers' behaviour in Britain, O'Hagan and Edmunds (1982) found that boys recognised and declared that they had misbehaved in school more than girls did. Jules and Kutnick (1997) have also reported that boys tend to have more concerns for teachers' use of punishment than girls. Finally, Kniveton (1989) found that working class male infants tended to copy constructive peer models, whereas middle class male infants tended to copy the disruptive behaviour models, although infants from both classes could have copied both models regardless of socio-economic background. These findings might have implications for copying misbehaviour models from peers later in life.

When it comes to the relationship between stress and misbehaviour / punishment, previous literature has mainly focused on the stress that pupils' misbehaviour causes for the teachers or the stress effects of corporal punishment on pupils. Hart et al. (1995) for example found that, although school misbehaviour could be predicted from teacher's self - esteem, teacher's stress could not be reduced by elimination of student's misbehaviour. Turner and Finkelhor (1996) by assessing the effects of the use of corporal punishment in children from USA (n = 2.000, aged 10 - 16 years old) concluded that corporal punishment could be a major stressor for young children, even when the use of corporal punishment was moderate. No study has been investigated the relationship between school misbehaviour and Quality of School Life (Q.S.L.) (i.e. school satisfaction / dissatisfaction).

Furthermore, previous literature has suggested that there is a strong association between punishment and general well - being. Turner and Finkelhor (1996) reported that corporal punishment could elicit symptoms of depression in children. White and Broweder (1987),

in a study concerning the characteristics of discipline problems, in secondary school pupils (n = 90 7^{th} and 8^{th} graders in USA) found that students with discipline problems were described by other students, teachers and school counsellors as less energetic and as less able to concentrate. Overall, there is no previous adequate evidence regarding the association between levels of well – being and misbehaviour.

In addition, research concerning the association between personality and school misbehaviour remains rather limited. Farrell (1997), for example, by studying the effects of punishment on school performance in mathematics (n = 82 boys in 14^{th} year) in England, found that the use of rewards or punishment was not related to performance for both introverts and extroverts. Halpin et al. (1980) examined the effects of parental use of praise or punishment in locus of control and self - esteem in a mixed sample of American Indian and white children in USA (n = 200 aged 12 to 18 years old). According to their findings, parental praise and reward were positively contributing to self - esteem. In contrary, parental punishment was not related with either, self - esteem or locus of control.

Punishment experience has also been shown to involve affective reactions. Mikula (1986) claimed that injustive treatment could elicit negative emotional states like anger, range and indignation. Usually, individuals who score highly on negative affectivity focus more on negative aspects of themselves (Watson and Clark, 1984; Watson and Pennebaker. 1989), thus, they could merely focus on the negative aspects of a punishment incidence as well (Ball et al., 1993). Ball et al. (1993), found that negative affectivity could influence adversely the perceptions of the disciplinary events of employees (n = 79). Thus, high

levels of negative affectivity could inhibit the desired outcome of punishment (i.e. behavioural control).

8.2 Method

Method for this chapter is as described in chapter 3.

8.3 Scales

Instruments used in this chapter are as described in chapter 3. These include:

School punishment and misbehaviour scale.

Demographics

Quality of School Life scale

Student Stress Inventory (Children's Version) (Alban Metcalfe et al., 1982)

P.G.I. General Well - Being Scale (Verma et al, 1983.

Hare Self - Esteem Scale (HSES) (Hare, 1985)

Nowicki's – Strickland's Locus of Control Scale for Children (Nowicki and Strickland, 1973).

8.4 Sample

Subjects are as described in chapter 3.

8.5 Statistical analysis

Differences in relation to demographic, school, non - school and personality measures were analysed between those who had or not experienced punishment / misbehaved in

class using t – test analysis. Chi squared analysis was used to detect any statistical differences between categorical variables. Such analysis enabled the study of the association between punishment / misbehaviour and the variables of interest.

Logistic regression was used for predicting group membership for those who misbehaved or not and had experienced punishment as a result of such behaviour. Firstly, Logistic regression was performed on individual factors (those found from univariate tests to affect significantly school misbehaviour) in order to detect whether they were significant predictors of school misbehaviour. At the second stage, all factors that were defined as significant (Model $X^2p < .05$) from the first stage, entered a new Logistic regression simultaneously, in order to identify which of these factors is the most important in predicting school misbehaviour.

8.6 Results

The experience of punishment was found quite common in both schools, since the majority (53.4%) of the participating pupils had experienced at least one type of punishment. A proportion of 46.4% reported that they had not experienced any form of punishment whereas 0.2% did not answer the question.

Although the two schools appeared to use quite similar forms of punishment, some differences were also detected. Pupils in both schools reported to have experienced the forbidding of certain activities, detention, exclusion and "telling - off". In addition to the above, school A was found to use extra work, lines and "yellow slip" (method of recording incidents of misbehaviour and forms of punishment and informing the parents about those incidents). School B was found to use referrals to the Head teacher and

informing parents directly about the incident of misbehaviour in addition to the common to both schools methods.

The most common form of punishment experienced by pupils in school A was "telling - off" (44.7%) followed by lines (27.9%), extra work (27.4%), yellow slip (21.8%), detention (8.6%), forbidding of certain activities (6.1%) and exclusion from school (2.5%) (see table 8.1).

Table 8.1. Types of punishment and % experienced in school A

Type of punishment	Not Experienced (%)*	Experienced (%)*
Forbidding of activities	56.3	6.1
Detention	53.8	8.6
Exclusion	59.9	2.5
Extra work	35.0	27.4
Lines	34.5	27.9
Slip	40.6	21.8
Telling off	17.8	44.7

*ratings are concerning the whole sample. 36.5% of the sample reported that have not experienced any form of punishment and 1% did not answer the question.

In school B the most common form of punishment was again "telling - off" (36.8%), followed by referral to head teacher (14.5%), informing parents (11.4%), detention (9.2%), forbidding of certain activities (3.5%) and exclusion from school (1.8%) (see table 8.2).

Table 8.2. Types of punishment and % experienced in school B

Type of punishment	Not Experienced (%)*	Experienced (%)*
Detention	35.5	9.2
Exclusion	43.0	1.8
Forbidding of activities	41.2	3.5
Informing parents	33.3	11.4
Referral	30.3	14.5
Telling off	7.9	36.8

*ratings are concerning the whole sample. 55.3% of the sample reported that have not experienced any form of punishment.

8.6.1 Demographics and school misbehaviour

Three demographics were found to be significantly associated with school disruptive behaviour. Firstly, school was found to be associated with school disruptive behaviour, since pupils from school A tended to have experienced more incidents of punishment than pupils from school B ($X^2 = 13.9$, Df = 1, $p < .000$) (see table 8.3). Moreover, there were differences in the number of pupils experienced punishment across school grades. In particular, more 3rd and 4th graders experienced punishment in comparison to pupils from other grades ($X^2 = 42.3$, Df = 5, $p < .000$) (see table 8.3). Boys also were more likely to have experienced punishment than girls ($X^2 = 22.8$, Df = 1, $p < .000$) (see table 8.3). Neither parental socio-economic status nor parental educational level were associated with the experience of punishment.

Table 8.3. Number and % and statistical differences between those who misbehaved and not across subjects.

Variable	Misbehaved	Not misbehaved	X^2	Df	p <
School					
School A	124 (54.6)	72 (36.5)			
School B	103 (45.4)	125 (63.5)	13.9	1	.000***
Grade					
First	37 (16.4)	19 (9.6)			
Second	44 (19.6)	24 (12.2)			
Third	52 (23.1)	22 (11.2)			
Fourth	57 (25.3)	49 (24.9)			
Fifth	32 (14.2)	61 (31.0)			
Sixth	3 (1.3)	22 (11.2)	46.3	5	.000***
Gender					
Males	124 (55.4)	63 (32.1)			
Females	100 (44.6)	133 (67.9)	22.8	1	.000***
Father's ed. level					
Attended higher educ.	85 (50.6)	70 (44.0)			
Not attended higher educ.	83 (49.4)	89 (56.0)	1.4	1	.234
Mother's ed. Level					
Attended higher educ.	93 (55.7)	75 (46)			
Not attended higher educ.	74 (44.3)	88 (54.0)	3.1	1	.079
Father's socio-econ. Class*	*(1st = professional, 2nd = intermediate, 3rd = skilled, 4th = partly skilled, 5th = unskilled and 6th = economically inactive)				
First	29 (14.6)	24 (13.3)			
Second	56 (28.3)	56 (31.1)			
Third	78 (39.4)	56 (31.1)			
Fourth	20 (10.1)	22 (12.2)			
Fifth	0 (0)	0 (0)			
Sixth	15 (7.6)	22 (12.2)	4.65	5	.324

Table III continued.

*Mother's socio-econ. Class**	*(1st = professional, 2nd = intermediate, 3rd = skilled, 4th = partly skilled, 5th = unskilled and 6th = economically inactive)				
First	11 (5.2)	9 (4.7)			
Second	63 (29.7)	49 (25.7)			
Third	52 (24.5)	54 (28.3)			
Fourth	38 (17.9)	25 (13.1)			
Fifth	16 (7.5)	8 (4.2)			
Sixth	32 (15.1)	46 (24.1)	8.77	5	.118

*p<.05, **p<.01, ***p <.001.

8.6.2 School factors and disruptive behaviour

Q.S.L. was found to be associated with the experience of punishment since those pupils who had experienced punishment had also statistically significant lower levels of Q.S.L. overall (t = -2.0, Df = 357, p < .000). Pupils who had misbehaved versus those who had not, did not differ in relation to school stress levels (see table 8.4).

8.6.3 General well – being and misbehaviour

Statistically lower levels of well - being total were detected among those who had misbehaved than those who had not (t = -3.3, Df = 318, p < .001) (see table 8.4).

8.6.4 Personality factors and school disruptive behaviour

Pupils who had misbehaved versus those who had not did not differ in relation to levels of positive affectivity but they were found to differ significantly in the levels of negative affectivity. Significantly higher levels of negative affectivity were detected among those who had experienced punishment and, as a consequence, had misbehaved in class (t = 2.1, Df = 384, p < .040) (see table 8.4), than those who had not.

Home and school self - esteem and self – esteem total, were also found to be associated with misbehaviour and experience of punishment. Thus, lower levels of self – esteem total (t = -2.0, Df = 353, p < .047), home self – esteem (t = -2.7, Df = 366, p < .008) and

school self – esteem (t = -2.0, Df = 353, p < .047) were found in those pupils who reported that they had experienced punishment (see table 8.4).

Neither internal nor external locus of control were found to be associated with the experience of punishment and class misbehaviour in comparison to those who had not (see table 8.4).

Table 8.4. Statistical differences between those who misbehaved and not across school, well- being and personality factors

School Factors	Misbehaved (Mean)	Not misbehaved (Mean)	t	Df	p <
Q.S.L. total	161.4	165.9	-2.0	357	.045*
School stress	40.25	37.50	1.3	348	.211
Non – school factors					
Well – being total	59.6	62.5	-3.3	318	.001***
Personality Factor					
Positive affectivity	34.6	35.6	-1.5	396	.146
Negative affectivity	18.3	17.1	2.1	384	.040*
Self – esteem total	89.2	91.5	-2.0	353	.047*
Peer self – esteem	28.9	28.3	1.1	371	.258
Home self – esteem	31.4	32.9	-2.7	366	.008**
School self – esteem	28.7	30.1	-2.9	360	.004**
External Loc	4.3	4.0	1.4	348	.175
Internal Loc	5.7	6.0	-1.4	348	.175

*p<.05, **p<.01, ***p <.001

8.6.5 Predicting school misbehaviour

All significant factors, defined by univariate tests, apart from negative affectivity (Model X^2 = 1.071, Df = 1, p < .300), were found to be significant predictors of misbehaviour,

when separate Logistic regressions were performed to these factors (Model X^2 $p < .000$ to .045). Predictions for separate factors were also quite accurate with 53.11% to 64.69% of the sample having been correctly classified as pupils who had misbehaved or not, across variables (see table 8.5).

When all significant predictors however entered a new Logistic regression, it was found that gender had the greatest influence on whether someone would misbehave in the class (exp (β) = .337) and as a consequence to experience a form of punishment. In this new Logistic regression, it was shown that the combination of factors can predict significantly ($p < .000$) and accurately school misbehaviour with 69.81% of the sample having been correctly classified as pupils who had misbehaved or not (see table 8.5).

Table 8.5. Predicting misbehaviour from demographic, school, well – being and personality factors

Variable	B	S.E.	Exp (B)	Model X^2	Model Df	Model p <	Negelkerke R^2	% Overall correctly classified
Demographic factor								
School	-.737	.199	.478	13.964	1	.000***	.043	58.73
Grade[1]				48.631	5	.000***	.145	64.69
Gender	-.962	.203	.382	23.089	1	.000***	.071	61.19
School factors								
Q.S.L. total	.010	.005	1.010	4.054	1	.044*	.015	56.55
Non – school factors								
Well – being total	.047	.014	1.049	10.932	1	.000***	.045	53.44
Personality factors								
Negative Affectivity	.753	.748	2.125	1.071	1	.300	.004	53.11
Self esteem total	.019	.009	1.019	3.988	1	.045*	.015	53.80
Overall								
Overall factors[2]				61.356	10	.000***	27.6	69.81
- School	.303	357	1.354					
- Grade[1]								
- Gender	-.920	.294	.337					
- Q.S.L. total	.015	.009	1.015					
- Well – being total	.056	.025	1.057					
- Self - esteem total	-.015	.018	.984					

[1]Individual regression coefficients are not presented for the sake of brevity. [2]Negative affectivity was excluded from the overall analysis because of insignificant Model X^2 ($p > .05$). *p<.05, **p<.01, ***p <. 001.

8.7 Discussion

Although, the experience and application of punishment is a quite popular topic of discussion among educationalists, the area has lacked extended research in relation to the factors that might contribute to and increase the likelihood of classroom misbehaviour and, as consequence, the experience of punishment. Since the problem of school misbehaviour is rising (Parsons and Howelett, 1986), there has been a need to identify those factors that affect and predict school misbehaviour. Such an approach might facilitate the development of more effective methods for tackling the problem.

It is quite important to note that there were differences in punishment methods (i.e. number and form) in the two schools participating in the study. School A was found to have used only behavioural methods. On the other hand, School B was found to have used a combination of different strategies, including referrals (i.e. to head teacher), which usually provide the option to both school and pupils to discuss the incident further. These differences across the schools might have affected differently the number of pupils that had misbehaved / punished in the two schools. In School B a higher number of pupils had not experienced any form of punishment (55.3%) than in school A (36.5%). A higher number of official punishment methods was also found to have been used in School A than school B. The difference between schools was only one additional method (School A: 7 methods and School B: 6 methods). Thus, in School B a letter of the reprimands that were officially used from the school had distributed to pupils and their parents. Thus, fewer pupils may have experienced punishment in school B than in school A, because pupils in school B were expected to have been more aware, than pupils in school A, of the consequences of their misbehaviour, as a result of being informed about the potential

consequences of their misbehaviour. If this is the case, schools should communicate clearly to pupils what is acceptable and what is unacceptable behaviour and how misbehaviour is punished. Since communication of consequences of behaviour may be associated with misbehaviour, educational authorities need to specify guidelines for punishment, the same for all schools, in order to help them coping with misbehaviour and avoid malpractice. Furthermore, educational authorities should consider the possibility of establishing guidelines for rewards. It has been previously emphasised that people respond more positively to rewards than to punishments (Blandford, 1998).

The present study has revealed that school misbehaviour is associated with various factors including demographic, personality and school factors. Consistently with previous research (O'Hagan and Edmunds, 1982), boys were found more likely to experience punishment than girls, indicating higher levels of school misbehaviour. Lower levels of Q.S.L. were also detected among those who had experienced punishment in comparison to those who had not. These results indicate that overall satisfaction with school is associated with misbehaviour problems. Personality factors were also shown as a key factor of school misbehaviour. Firstly, the experience of punishment was associated with higher levels of negative affectivity (see also Ball et al., 1993). Previous literature has suggested that the experience of punishment could cause negative affective states, such as anger, guilt, shame (Mikula, 1986). Self - esteem was another factor associated with school disruptive behaviour / punishment (see also White and Browder, 1987). Not only self - esteem total but also home self - esteem and school self - esteem appeared to be lower in those who had experienced punishment. These findings suggest that school misbehaviour is not only subject to school factors. The way that pupils feel about

themselves within their family may be also associated with misbehaviour problems in school. Hence, it becomes important for school and family to develop tight links with each other in order to tackle misbehaviour. The association between school self – esteem and misbehaviour indicates that pupils' behaviour at school is associated with the way they feel about themselves in the school setting. Such perceptions about one's self might be formulated by peers and teachers through everyday interaction within the school setting, indicating that teachers' behaviour towards pupils is a significant factor for their behaviour.

Finally, lower levels of well – being were found in those who had misbehaved in comparison to those who had not. The present results may imply that, when teachers have to address a misbehaviour problem, they should always consider that particular behaviours might be associated with well – being difficulties, which could make the pupil feeling uncomfortable.

Although several factors were found to be associated with school misbehaviour / punishment, gender was the most important factor in predicting punishment and misbehaviour. However, the present results should be treated with caution, as the sample consisted of two schools only, thus they could not be generalised to the population of pupils in Scotland. Nevertheless, previous studies have also noted a discrepancy in the numbers of males and females that engage in misbehaviour. McFadden et al. (1992) for example, by analysing 4.391 discipline files in a south Florida school district, within a year, found that males represented over ¾ of all discipline referrals. However, since such differences could be attributed to social factors (e.g. higher parental tolerance towards behaviour of boys; Bleach, 1996), interventions regarding school misbehaviour should

target pupils irrespectively to their gender. Glynn (1992) has stressed the need for constructing policies for behaviour management in schools that involve all interested parties. Such approaches should include general agreement between head teachers and other teaching staff about what is acceptable and what is unacceptable behaviour. Inclusion in the curriculum of social and interpersonal skills (e.g. negotiating, resolving conflict) and establishment of a co-operative relationship between school and parents could have positive results on tackling school misbehaviour. Effective classroom management skills held by teachers could also contribute to a reduction of related problems.

Teachers could also create a class environment where misbehaviour is less likely to occur by applying specific class management skills. Such skills may include establishment of a more personalised relationship with pupils (i.e. knowing their names or interests), planning in advance the structure of lessons but also being flexible when required, scanning frequently the class regarding potential problems, praising positive behaviour and good work, providing clear rules and expectations for behaviour as well as using punishments consistently (Hastings, 1992).

Chapter 9: Bullying and Victimisation in Scottish Secondary Schools: The Role of Demographics, Personality, School and Non – school Factors on Predicting Involvement in Bullying and / or Victimisation

Abstract

Previous research has suggested that bullying is an increasingly severe problem in schools. Such research has approached the phenomenon from two different angles. Earlier research has treated bullying and victimisation as separate entities. However, current research suggests that bullies and victims engage in a special dynamic and interactive relationship, thereby providing the need for studying any similarities and differences between bullies and victims in relation to various factors.

The present research has approached bullying and victimisation in both ways. Firstly we have studied differences between bullies, victims and those not – involved in relation to various demographic, school, well - being and personality factors, in order to identify factors that separate these three groups. In addition, we have studied differences between those involved in bullying / victimisation (one group) and those never involved, in relation to the same aforementioned factors in order to highlight aspects of the development of their special relationship (i.e. common factors). Prevalence rates and types of bullying / victimisation that experienced / expressed in Scottish schools were also investigated.

It was found that bullying and victimisation, when treated as separate entities differed in relation to peer self – esteem, with bullies reporting higher levels of peer self – esteem than victims. When bullies and victims treated as one group (involved), they were found to differ from the non – involved group in relation to various factors, including school, well- being and personality factors. The involved group was found to be disadvantaged in relation to all measures used. However, overall results

indicated that from all these factors the best predictor of overall involvement as bully, victim or bully - victim was Quality of School Life (Q.S.L.) and school stress.

The present results support the notion that bullying and victimisation, could be treated, by future research as both, separate and / or interactive entities. This is so, because bullying and victimisation were found to differ in relation to one personality factor that is peer self – esteem. However, Q.S.L. and school stress, both of them school factors, were found to be associated with the phenomenon as a whole. Results are discussed in relation to future development of anti-bullying policy in the Scottish schools.

9.1 Introduction

Although bullying remains one of the most challenging problems in schools, there has been little systematic investigation to date in Britain (Smith and Sharp, 1994). One of the first articles in the area was entitled "Teasing and Bullying" (Burk, 1897) but there has been a long research silence ever since. In the 1970's and the 1980's the issue of school bullying appeared again in the literature (e.g. Lowenstein, 1987) but the vast majority of research so far was still being conducted and published in Norway and Sweden (Smith and Sharp, 1994). However, during the last five years school bullying has been included in the educational agenda in the UK. This increasing interest in school bullying may be due to increased incidents in the UK schools as well as to the recent evidence that schools could play a significant role to minimise the phenomenon (Smith and Sharp, 1994).

9.1.1 Definition / characteristics of bullying

School bullying has been defined as the exposition, repeatedly and over time, to negative actions towards one or more other students (Olweus, 1986). Olweus (1973) has defined these "negative actions" as intentional attempts to injure or cause discomfort upon another person. However, bullying may also involve other parts such as teachers and school staff.

School bullying can take verbal (e.g. name calling), physical (e.g. pushing) (Olweus, 1993a) or emotional / behavioural form (e.g. forcing people to follow the group) (Berkowitz, 1993). Bullying can be carried out by a single individual or by a group and there is usually an asymmetric relationship of power (physical or psychological) between the bully and the victim. Another characteristic of bullying refers to its direct (open attacks towards the victim) or indirect nature (e.g. social isolation). Finally, bullying varies in terms of its intensity (from name - calling to vicious assault),

duration (occasional or regular), and motives (e.g. power vs. affiliation) (Tattum, 1994; Mellor, 1997).

9.1.2 Prevalence of bullying

American schools have approximately 2.1 million bullies and 2.7 million victims (Fried, 1997). Although the percentages vary across different studies in Britain, Whitney and Smith (1993), in a project carried out in Sheffield LEA (Local Education Authority) (n = 6.578 primary and secondary school pupils), estimated that 10% of the secondary school sample had been bullied "sometimes" or "more frequently" and 4% "once a week or more". Incidence rates in the same study were as follows: having been bullied sometimes or more: 13 - 20%, been bullied once a week or more: 5 - 8%, having bullied others sometimes or more: 6 - 15%, having bullied others once a week or more: 2 - 7%. Differences regarding bullying incidents were also detected among the different schools in the above study. It was also revealed that bullying most frequently occurred in the first three grades of the secondary school. Name-calling was found the most common bullying form used (62%) and it was carried out usually by one boy (35%) or a group of boys (31%).

9.1.3 Theoretical formulations concerning risk factors of bullying and victimisation

Olweus (1980) and Loeber and Stouthamer - Loeber (1986) have identified four developmental factors in childhood that could increase the risk for development of hostile behaviour in adolescence. These were parental attitude which lacks warmth and involvement, permissive parental attitude towards aggression, experience of prolonged physical punishment, parental use of emotional violence / abuse and finally child's temperament / personality disposition.

Behavioural factors regarding the causes of bullying have included prolonged observation of a model acting aggressively (Olweus, 1993a). International research

has also suggested that children who watch too much violence on TV often become more aggressive and have less empathy for victims of bullying and aggression (Pearl et al., 1982, Eron and Huesmann, 1986).

Olweus (1984) has proposed the theory "sketch of factors of potential significance for victims and / or bully problems". According to this theory there are four sets of factors that could lead to potential bullying problems. These are school setting (size, teachers, group climate), external characteristics of potential victims and bullies (physical handicaps, obesity, language problems, physical strength), behaviour / characteristics of victims and bullies (attitude to violence, aggression, self - esteem, anxiety levels) and socio-economic background, home conditions, child rearing.

More recent research regards bullying and victimisation as the manifestation of the unique interaction between bully and victim, rather than as the result of any individual characteristics that bullies and victims might have (Pepler and Craig, 1995; Randall, 1997). Salmivalli et al. (1996) have also included that "bullying may be regarded as a group phenomenon" (p. 11). However, the study of those factors that could facilitate the development of this relationship has been rather neglected.

9.1.4 Demographics and bullying - victimisation

Research in the demography of bullying / victimisation in secondary schools suggests that bullying is more likely to take place in the first grades and tends to decrease at higher grades. The use of physical bullying also decreases at higher grades. Olweus (1993a) reported that 50% of bullied children in the lower grades, are bullied by older students, and that, boys tend to demonstrate higher percentages of bullying / victimisation incidents than girls.

The tendency for bullying and aggressiveness to be greater in males than in females has been used to argue for the role of socialisation in shaping aggressiveness. Condry

and Ross (1985), for example, found that parental tolerance of the expression of aggressive behaviour is higher in the case of boys than in girls.

Gender differences have also been presented in the way that bullying is experienced and expressed. Girls were found more likely to be exposed to indirect and subtle forms of bullying whereas boys are usually exposed to open attacks. It has been found that girls exercise mainly indirect methods of bullying (e.g. spreading rumours) whereas direct physical bullying is more common amongst boys (Olweus, 1993a). As far as gender differences are concerned, it has been estimated that 60% of bullied girls have been attacked by boys, whereas the majority of male victims (80%) are reported to have been bullied by boys (Olweus, 1993a).

Past research has also revealed that parental socio-economic and educational status might have an influence on children's aggressive behaviour. Feldusen et al. (1973), from data derived from a longitudinal study (n = 1550 children from 3 and 4 grade in primary school and grade 3 in secondary school), reported that children whose parents were of lower than average educational and occupational level tended to exhibit more aggressive behaviour.

9.1.5 School factors and bullying - victimisation

Although earlier views regarded bullying as a reaction to frustrations and failures at school, Olweus (1983), in a study of 444 adolescent boys in Stockholm, suggested that bullying did not occur as a result of poor school performance. The fact however that bullying occurs more frequently in some schools than others (Ahmad et al., 1991) indicates that there might be some school factors, which increase the prevalence rates in some schools.

Past literature has suggested that bullying occurs more frequently in larger schools, in larger classes, in schools where there is no organised prevention and / or disciplinary

policy of bullying and in central area schools (Stephenson and Smith, 1994; Mellor, 1997). Davison (1985) has also suggested that school ethos could be responsible for aggressive behaviour in school. According to Davison (1985), teaching style, discipline, organisational structure and attitudes / values towards school should be investigated further in conjunction with bullying. However, no study has been found assessing directly the relationship between bullying / victimisation with school stress or Q.S.L. (Quality of School Life).

9.1.6 General well – being and bullying - victimisation

Davies (1986) reported that one of the primary school pupils' fears of the secondary school (n = 155 pupils in their last two weeks of primary school) is the fear of being potentially bullied. Several studies have also suggested that bullying can have detrimental effects on pupils' life.

Thus, bullying has been found to be responsible for low self - esteem (Boulton and Smith, 1994), depression (Olweus, 1993 b), learning and concentration problems in school and difficulties with problem solving skills (Turkell and Eth, 1990), physical illness and general school difficulties (Sharp and Thompson, 1992), difficulties with intimate relationships (Gilmartin, 1987) and high levels of general stress (Sharp, 1995; Sharp, 1996). However, there is no previous systematic research concerning whether well - being could be associated with either bullying or victimisation.

9.1.7 Personality factors and bullying - victimisation

Relevant literature has suggested that there are various common personality characteristics and life events usually found in bullies. Tendency to perceive behaviour as provocative, need to appear tough in the peer group, fear of being bullied, little awareness of the other's feelings (Boulton and Underwood, 1992), antisocial behaviour (Olweus, 1991), family problems (e.g. aggressive behaviour from

fathers to bullies) (Farrington, 1993) are some of the issues that bullies may confront. Research on aggressive behaviour has also revealed that hostile behaviour against others might be associated with negative affectivity. Positive affectivity, on the other hand, has been found to reduce levels of hostile behaviour (see Brehm and Kassin, 1996). However, it is important to mention that bullying does not always involve aggressive behaviour (e.g. social exclusion), indicating that bullying and aggressive behaviour may share not only similarities but also some differences (Connell and Farrington, 1996).

It has been also suggested that bullies are usually quite outgoing and socially confident, with low levels of anxiety and guilt, dominant and powerful in the peer group. Expression of aggression for bullies is acceptable and they could use bullying as a tool for demonstrating their social position. They also believe that their behaviour is supported by family attitudes (Smith and Sharp, 1984).

Victims on the other hand, have been found to lack self - assertiveness skills, manifest poor handling of aggressive behaviour towards them (Smith and Sharp, 1994) and to have low self – esteem levels (Hoover and Hazler, 1991; Rigby and Slee, 1993; Rigby and Cox, 1996). In the area of victimisation, Smith and Boulton (1991) suggested that there are two different types of victims. Passive victims are those who do not disrupt others and do not usually start fights. Provocative victims on the other hand tend to start fights within the peer group and tend to be the least liked children of all.

With regard to personality factors, It is important to note that there is no systematic research concerning bullying / victimisation in relation to locus of control. However, Smorti and Ciucci (2000) found that bullies tend to use an "internal attribution style" whereas victims an external one. They have explained externality in victims as a result of feelings of lack of control over the situation of being bullied, which

consequently leads to a withdrawn and passive role. Past research has also failed to determine the role of different self – esteem sources (i.e. peer vs. school) on bullying / victimisation.

9.1.8 The present research

Published research on bullying in the UK and especially in Scotland has lacked extensive systematic research concerning bullying and victimisation. In the majority of studies to date, bullies and victims were treated separately (i.e. bullies vs. non-bullies and victims vs. non-victims) neglecting the issue that bullies and victims might share many similar characteristics in relation to various factors.

The present study has compared bullies vs. victims. vs. those not involved in relation to demographic, school (Quality of School Life, student stress), well – being and personality measures (self - esteem, affectivity, locus of control). In addition we have compared those involved in either bullying or victimisation or both with those never involved in relation to the same aforementioned measures. We have treated bullying and victimisation separately in order to identify factors that separate them (i.e. differences) and, as an entity, in order to identify any factors that contribute to the phenomenon as a whole (i.e. similarities).

Furthermore, past research has focused on studying clusters of factors independently to others in a single study (i.e. personality only), neglecting the fact that variance might be shared between different factors and clusters of factors. Such an approach within bullying research has failed to identify which are the most important factors in bullying / victimisation. The simultaneous study of demographic, personality, school and non – school factors in relation to the phenomenon would allow a more comprehensive understanding of bullying / victimisation, since it facilitates comparisons between factors regarding their predictive value.

It was also aimed to determine the most important from the above clusters of factors in predicting overall involvement, in order to provide schools with evidence that would help them to develop effective anti-bullying policies by focusing on the most important factors that cause or maintain the problem as a whole.

Prevalence and incidence rates of both bullying and victimisation were also examined.

9.2 Method

Method for this chapter is as described in chapter 3.

9.3 Scales

Instruments used in this chapter are as described in chapter 3. These include:

Bullying questionnaire

Demographics

Quality of School Life Scale

Student Stress Inventory (Children's Version) (Alban Metcalfe et al., 1982)

P.G.I. General Well - Being Scale (Verma et al, 1983)

Hare Self - esteem Scale (HSES) (Hare, 1985)

Nowicki's – Strickland's Locus of control Scale for Children (Nowicki and Strickland, 1973)

Positive and Negative Affect Schedule (PANAS) (Watson et al., 1988 a)

9.4 Sample

Subjects are as described in chapter 3.

9.5 Statistical Analysis

Differences in relation to demographic, school, non - school and personality measures were analysed between bullies vs. victims vs. not involved and involved vs. not involved using ANOVA and t – test analysis. Chi - square analysis was used to detect any statistical differences between categorical variables.

Logistic Regression was used for predicting group membership for involved vs. not involved using these variables defined as statistically significant in univariate tests. Two stages of Logistic Regression were performed. Firstly, Logistic regression was performed on significant factors (defined by univariate tests) to determine whether they were significant predictors. Secondly, those factors which were defined as significant (Model $X^2p < .05$) predictors in individual Logistic regression were entered into an overall Logistic regression analysis in order to determine which of the factors is the most important in predicting overall involvement.

9.6 Results

9.6.1 Prevalence of bullying

A proportion of 7.5% of total sample reported having bullied others since the current school year began (6 to 8 months time interval) (see table 9.1). From those who reported having bullied others, 22.6% reported bullying a friend, 22.6% bullied a pupil from the same class, 32.3% bullied a pupil from another class, 12.9% bullied the teachers and 3.2% bullied other school staff.

Table 9.1. Sum and % of bullies, victims, bullies – victims, involved and not involved

Category	Sum (425)	% (100)
Bullies	32	7.5
Victims	71	16.7
Bullies – Victims	18	4.2
Involved	121	28.5
Not involved	287	67.5

Calling names was found the most common form of bullying (56.3%) used, followed by teasing 34.4%, pushing 18.8%, threatening 15.6%, leaving people out of things 15.6%, hitting 12.5%, spreading rumours 12.5%, punching 6.3%, forcing people to follow the group 6.3% and damaging things 3.1%. Thus, it appeared that verbal bullying was the most common form reported (59.4%), followed by physical (28.1%) and behavioural (28.1%).

9.6.2 Prevalence of victimisation

A proportion of 16.7% reported having experienced bullying (see table 9.1), while 2.1% did not answer this question. From those who reported having been victimised, 65.2% were victimised by a pupil from another class, followed by a pupil from the same class (47.8%), friends (21.7%), teachers (11.6%) and other school staff (5.8%). Having been called names was the most popular form of bullying experienced by victims (90.0%), followed by having been teased (58.6%), rumours spread about one self (48.6%), having been pushed (35.7%), having been left out of things (32.9%), having been threatened (31.4%), having been hit (21.4%), having been punched (12.9%), having own things damaged (14.3%) and having been forced to follow the group (14.3%).

Thus, it appears that verbal bullying was the most widely experienced bullying type (91.4%). Behavioural bullying was the second most common type experienced (55.7%) followed by physical (44.3%).

9.6.3 Bullies vs. victims vs. non - involved

Bullies, victims and non - involved pupils were compared in relation to demographic, school, non – school and personality factors. The "bullies – victims" group was excluded from this stage of analysis as it was consisted of 18 subjects only, therefore any further statistical analysis regarding this group would be inappropriate. With regard to demographics, there were statistically significant differences by different school ($X^2 = 6.1$, Df = 2, $p < .047$), grade ($X^2 = 19.1$, Df = 10, $p < .039$) and gender ($X^2 = 10.1$, Df = 2, $p < .006$). Thus, more victims were detected in school B, more bullies in school A and more pupils from school B were found not to have been involved. In relation to grade more victims were detected in 4^{th} year, more bullies in the 2^{nd} year and more pupils from the non - involved group in the 4^{th} and 5^{th} years (see table 9.2). No statistical differences across groups were detected for parental educational and socio-economic status. Table 9.2 also indicates that comparisons between bullies and victims only, in relation to demographics, show statistically significant differences between bullies and victims in relation to school and gender, but not grade.

Table 9.2. Bullies vs. victims vs. not involved: Differences in demographic factors (school, grade and gender)

	Sum Bullies (%)	Sum Victims (%)	Comparison	Sum Not – involved (%)	Comparison
Variable					
School			$X^2 = 5.4$, Df = 1, p<.020*		$X^2 = 6.1$, Df = 2, p<.047*
School A	21 (11.9)	29 (16.5)		126 (71.6)	
School B	11 (5.1)	42 (19.6)		161 (75.2)	
Grade			$X^2 = 8.3$, Df = 5, p< .138		$X^2 = 19.1$, Df = 10, p< .039*
First	4 (8.0)	11 (22.0)		35 (70.0)	
Second	12 (19.4)	10 (16.1)		40 (64.5)	
Third	3 (4.9)	16 (26.2)		42 (68.9)	
Fourth	7 (6.9)	19 (28.4)		75 (74.3)	
Fifth	4 (4.4)	11 (12.2)		75 (83.3)	
Sixth	2 (8.3)	3 (12.5)		19 (79.2)	
Gender			$X^2 = 9.7$, Df = 1, p<.002**		$X^2 = 10.1$, Df = 2, p<.006**
Males	21 (12.8)	24 (14.6)		119 (72.6)	
Females	10 (4.5)	46 (20.7)		166 (74.8)	

*p<.05, **p<.01, ***p <.001.

Statistically significant differences between the groups were also detected in relation to personality factors. Victims presented with higher levels of negative affectivity than bullies and non - involved ($F = 11.0$, Df = 2, 356, $p < .000$). Higher levels of peer self – esteem were detected in bullies ($F = 6.3$, Df = 2, 344, $p < .002$) in comparison to victims and the non - involved group but higher levels of self – esteem total were found in those who had never been involved neither as bullies nor victims ($F = 4.9$, Df = 2, 329, $p < .008$), in comparison to bullies and victims. Finally, higher levels of external locus of control were detected again in the non - involved group ($F = 5.0$, Df

= 2, 324, p < .007) in comparison to bullies and victims and higher levels of internal locus of control in bullies (F = 5.0, Df = 2, 324, p < .007) in comparison to victims and non - involved (see table 9.3).

Table 9.3. Bullies vs. victims vs. not involved: Differences in school factors (Q.S.L., student stress), non – school factors (well – being) and personality factors (affectivity, self – esteem, locus of control)

	Bullies (Mean)	Victims (Mean)	Not involved (Mean)	F	Df	p <	Scheffe
School Factor							
Q.S.L. total	157.7	163.6	165.2	1.8	2,326	.173	-
Stress total	40.0	40.0	37.1	.6	2,323	.543	-
Non – school factor							
WB Total	59.5	59.6	61.9	2.4	2,297	.090	-
Personality Factors							
Positive Affectivity	36.0	34.9	35.3	.3	2,368	.721	-
Negative Affectivity	19.5	20.1	16.6	11.0	2,356	.000***	2-3**
Peer self – esteem	30.0	27.3	29.2	6.3	2,344	.002**	1-2*, 2-3**
Home self – esteem	31.9	31.0	32.6	2.2	2,342	.108	-
School Self - esteem	29.1	28.7	29.8	1.5	2,335	.226	-
SE Total	91.0	87.1	91.8	4.9	2,329	.008**	2-3**
External Loc	5.1	5.4	6.0	5.0	2,324	.007**	1-3*
Internal Loc	4.9	4.5	4.1	5.0	2,324	.007**	1-3*

*p<.05, **p<.01, ***p <.001. Scheffe key: 1 = Bullies, 2 = Victims, 3 = Not involved

No statistical significant differences across the three groups were detected in relation to school factors (Q.S.L. and school stress), well – being, positive affectivity, home self – esteem and school self – esteem.

Post – hoc scheffe indicated statistically significant lower external and higher internal locus of control for bullies in comparison to the not involved group. Victims on the other hand, presented with statistically significant higher levels of negative affectivity, lower peer self – esteem and self – esteem total in comparison to non – involved group. Bullies and victims were statistically differentiated in relation to peer self – esteem only, as post – hoc scheffe indicated, with bullies experiencing higher levels of peer self – esteem than victims (see table III).

9.6.4 Involved (bullies, victims, bullies / victims) vs. not – involved

9.6.4.1 Demographics

Bullies, victims and bullies / victims were also compared with those never involved, in relation to demographic, school, non – school and personality factors. With regard to demographic differences, statistical significant effects were detected only by grade ($X^2 = 11.7$, Df = 5, $p < .039$), where it was found that more pupils from both the involved and non - involved groups were in the 4th year (see table 9.4). Grade was a significant ($p < .032$) and accurate predictor of bullying - victimisation involvement since 70.44% of pupils were correctly classified as involved or not involved. Logistic regression also showed that school grade was able to explain 3.2% of whether someone had been involved in bullying and / or victimisation (see table 9.6).

Table 9.4. Involved (bullies, victims, bullies / victims) vs. not involved: Differences in demographic factors (school, grade and gender)

	Sum Involved (%)	Sum Not – involved (%)	Comparison
Variable			
School			$X^2 = 1.1$, Df = 1, $p < .292$
School A	60 (32.2)	126 (67.7)	
School B	61 (27.5)	161 (72.5)	
Grade			$X^2 = 11.7$, Df = 5, $p < .039$*
First	16 (31.4)	35 (68.6)	
Second	26 (39.4)	40 (60.6)	
Third	25 (37.3)	42 (62.7)	
Fourth	31 (29.2)	75 (70.8)	
Fifth	16 (17.6)	75 (82.4)	
Sixth	6 (24.0)	19 (76.0)	
Gender			$X^2 = 2.1$, Df = 1, $p < .149$
Males	59 (33.1)	119 (66.9)	
Females	60 (26.5)	166 (73.5)	

*p<.05, **p<.01, ***p <.001.

No statistical differences across groups were detected for gender, school, parental educational and socio-economic status.

9.6.4.2 School factors

Those who never involved in bullying and / or victimisation were found to have significantly higher levels of Q.S.L. (t = -2.0, Df = 343, p < .043) and lower levels of school stress (t = -2.2, Df = 338, p < .030) (see table 9.5). Both factors were found statistically significant (p < .043 for Q.S.L. and p < .030 for school stress) and accurate predictors of involvement (69.28% were correctly classified for Q.S.L. and

70.88% for school stress). Q.S.L. was found to explain 1.7% and school stress 1.9% of whether someone had been involved. However, when the two factors were combined, a higher percentage of the variance of the bullying / victimisation involvement was explained (4.3%). The combination of the two school factors was a significant ($p < .009$) and accurate predictor of bullying involvement (69.70% of the sample were correctly classified as involved and not involved) (see table 9.6).

Table 9.5. Involved (bullies, victims, bullies/victims) vs. not involved: Differences in school factors (Q.S.L., student stress), non – school factors (well – being) and personality factors (affectivity, self – esteem, locus of control)

	Involved (Mean)	Not - involved (Mean)	t	Df	p <
School Factor					
Q.S.L. total	160.3	165.2	-2.0	343	.043*
Stress total	42.4	37.2	2.2	338	.030*
Non – school factor					
WB Total	58.9	61.9	-2.9	310	.003**
Personality Factors					
Positive Affectivity	34.5	35.3	-1.0	385	.303
Negative Affectivity	20.2	16.6	5.3	373	.000***
Peer self – esteem	27.6	29.2	-3.2	359	.002**
Home self – esteem	30.1	32.6	-2.6	356	.010*
School Self - esteem	28.3	29.8	-2.8	349	.005**
SE Total	87.0	91.8	-3.8	343	.000***
External Loc	5.4	6.0	-3.1	339	.002**
Internal Loc	4.6	3.9	3.1	339	.002**

*p<.05, **p<.01, ***p <.001.

9.6.4.3 Non school – factor (well –being)

Lower levels of well – being were detected in those involved than those never involved in bullying / victimisation ($t = -2.9$, $Df = 310$, $p < .003$) (see table 9.5). Logistic regression showed that well – being was a significant ($p < .003$) and accurate predictor of bullying / victimisation involvement with 72.12% of the pupils being

correctly classified as involved / not involved. Well – being explained 3.9% of whether someone had been involved in bullying and / or victimisation (see table 9.6).

9.6.4.4 Personality factors

Those involved in bullying / victimisation appeared to have significantly higher levels of negative affectivity ($t = 5.3$, $Df = 373$, $p < .000$), and internal locus of control ($t = 3.1$, $Df = 339$, $p < .002$) and lower levels of peer self – esteem ($t = -3.2$, $Df = 359$, $p < .002$), home self – esteem ($t = -2.6$, $Df = 356$, $p < .010$), school self – esteem ($t = -2.8$, $Df = 349$, $p < .005$), self – esteem total ($t = -3.8$, $Df = 343$, $p < .000$), and external locus of control ($t = -3.1$, $Df = 339$, $p < .002$) (see table 9.5). Involved and not – involved groups were not statistically different in relation to levels of positive affectivity.

All personality factors were found to predict significantly ($p < .000$ to $.002$) and accurately bullying - victimisation involvement (range of overall correctly classified as involved and not – involved across personality measures 69.50 – 72.57%). Separate Logistic regression analysis on personality factors showed that negative affectivity was able to explain the highest percentage of whether someone had been involved in bullying and / or victimisation (Negelkerke $R^2 = .080$). When personality factors were combined, in a new Logistic regression, it was found that self – esteem total had the greatest influence on bullying and / or victimisation involvement ($\exp(\beta) = 1.022$). The combination of all the personality factors proved to be a significant ($p < .000$) and accurate predictor of bullying and / or victimisation involvement with 72.73% of the pupils being correctly classified. Overall personality factors were found able to explain 13.9% of whether someone had been involved in bullying and / or victimisation (see table 9.6).

9.6.4.6 Overall Effects

In order to detect which of the factors is the best predictor of bullying - victimisation involvement, an additional Logistic regression was performed including all the factors defined as significant (Model $X^2p < .05$) at the individual Logistic regressions. It was found that Q.S.L. total ($\exp(\beta) = 1.002$) and stress total ($\exp(\beta) = 1.002$) had the greatest influence on bullying and / or victimisation involvement. All the factors found to make a significant ($p < .000$) and accurate prediction of bullying and / or victimisation involvement with 74.78% of the pupils being correctly classified. All the factors, when combined, accounted for 21.3% of whether someone had been involved in bullying and / or victimisation (see table 9.6).

Table 9.6. Predicting bullying / victimisation involvement from school (Q.S.L., student stress), non – school (well – being) and personality factors (affectivity, self – esteem, locus of control)

Variable	B	S.E.	Exp (B)	Model X^2	Model Df	Model p <	Negelkerke R^2	% Overall correctly classified
Demographics								
Grade[1]				12.2	5	.032*	.042	70.44
School factors								
Q.S.L. total	.011	.005	1.011	4.1	1	.043*	.017	69.28
School stress	-.012	.005	.987	4.7	1	.030*	.019	70.88
School Factors				9.2	2	.009**	.043	69.70
- Q.S.L. total	.009	.006	1.009					
- School stress	-.012	.006	.987					
Non – school factors								
Well – being total	.046	.016	1.048	8.7	1	.003**	.039	72.12
Personality factors								
Negative Affectivity	4.113	1.016	61.147	21.752	1	.000***	.080	71.47
SE Total	.042	.011	1.043	14.4	1	.000***	.058	72.57
External Loc	.194	.046	1.214	9.3	1	.002**	.038	69.50
Internal Loc	-.194	.064	.823	9.3	1	.002**	.038	69.50
Personality overall				31.7	3	.000***	13.9	72.73
- Negative Af.	3.599	1.167	36.568					
- SE Total	.022	.013	1.022					
- Locus con[2]	.155	.073	1.168					

Table continued.

Overall								
Overall factors				36.3	11	.000***	.213	74.78
. Grade[1]								
. Q.S.L. total	.002	.010	1.002					
. Stress total	.002	.009	1.002					
. Well - being	.006	.030	1.006					
. Negative Af.	5.121	1.757	167.64					
. SE Total	.023	.021	1.024					
. Locus con[2]	.131	.092	1.140					

[1]Individual coefficients for each grade are not reported for the sake of brevity. [2]Internal Locus of control was made redundant from the design matrix because is equal to 10 – External Locus of control. *p<.05, **p<.01, ***p <.001.

9.7 Discussion

Bullying remains one of the main problems that secondary schools might be called to deal with. Its incidence is gradually increasing in UK schools, making it necessary to develop strategies to manage and tackle the problem. Previous research has indicated that bullying and victimisation could be affected by various demographic (e.g. Olweus, 1984), school (e.g. Smith and Sharp, 1994; Olweus, 1994), non – school (e.g. Sharp and Thompson, 1992) and personality factors (e.g. Smith and Sharp, 1994).

With regard to prevalence rates, results of the present research indicated that a relatively high number of pupils (7.5%) have reported that they have bullied others since the current school year began. Such percentages are consistent with previous research, although some studies have reported slightly higher numbers (Whitney and Smith, 1993). An even higher proportion of victims was also reported (16.7%). This percentage is higher than the ones reported in previous studies (e.g. Whitney and Smith, 1993). However, it is important to emphasise that even more recent studies (e.g. Baldry and Farrington, 1999) have found higher rates of bullying and victimisation, that reached 50% of their sample. Differences regarding prevalence

rates of bullying and victimisation across regions may also be due to cultural variations. Past environmental studies on aggression have suggested that there are differences in the incidents of aggressive behaviour among different areas (see Rutter et al., 1994 for an overview in Conduct Disorder). Brehm and Kassin (1996) also reported that Scotland has higher levels of assaultative injuries than England, Wales and Ireland. Another possible methodological explanation of these results may concern what pupils understand under the terms bullying and victimisation, which may vary across studies due to differences in scales used. Siann et al. (1994) proposed that there is inconsistency in the use of these terms, both from researchers and subjects, making it rather difficult to compare prevalence rates among different studies. Although, we have not examined pupils definitions of bullying / victimisation in the present study, we have presented types of bullying to the pupils in one of the questions, in order to allow them to describe what kind of bullying they have done / experienced and give them an idea of our perception of these terms.

The largest proportion of bullies reported that they had bullied their friends or a pupil from the same class. Victims, on the other hand, reported that they had mostly been bullied by a pupil from another class. It is also important to note that bullies and victims have reported bullying experiences against / from teachers and other school staff. This is a new dimension of bullying / victimisation that literature to date has provided little evidence for and it is worth study further. These results might also contradict the evidence that bullying exists in a power relationship (Olweus, 1993a), where bullies have more power than the bullied, since it is expected that teachers are those who have higher levels of power in the student / teacher relationship. However, previous research has lacked systematic information concerning the sources of bullying / victimisation and the role of teachers in the phenomenon.

Similarly to previous research, calling names was the most common type of bullying used by bullies and experienced by victims (see also Whitney and Smith, 1993), indicating that verbal bullying was the most frequent type of bullying / victimisation occurring in schools.

Current research (i.e. Pepler and Craig, 1995) in bullying has pointed out that bullies and victims engage in a special relationship. Such research has emphasised the need for treating bullies and victims as one group and compare it with those that never involved neither as bullies nor victims. Treating bullies and victims as one group, this would provide evidence concerning the factors that would contribute to the phenomenon overall (similarities). However, treating bullies and victims as separate groups, this would provide evidence concerning the factors that differentiate bullying and victimisation (differences). The present research approached bullying in both ways.

When we treated bullying and victimisation separately we found that the factors that differentiate bullies and victims were school itself, gender and peer self – esteem. Thus, more bullies were detected in school A and more victims in school B. Such results support the idea of the role of school in relation to bullying and victimisation (Olweus, 1984) as well as differences across schools regarding incidence of bullying victimisation. In addition, bullies were found more likely to be males (see also Olweus, 1993a) and victims more likely to be females. Possible explanations about this finding come from Condry and Ross (1985), who suggested that parents are more tolerant of the aggressive behaviour in boys than in girls. As a consequence, boys learn to be more aggressive than girls. The present findings support this hypothesis, although such social / developmental dimensions of bullying should be subject to longitudinal research. Significantly lower levels of peer self – esteem were also found

in victims in comparison to bullies. Lower levels of peer self – esteem in victims in comparison to bullies and those never involved may be due to the experience of bullying. Thus, bullies, may engage in bullying in order to increase their peer self – esteem, by gaining power from abusing the victim.

When pupils involved in bullying as bullies or victims or bullies / victims were treated as one group and compared with those never involved, in relation to a number of measures, statistically significant differences between the two groups were detected in relation to demographic, school, non – school and personality factors.

The only demographic feature that was found to have an effect on overall involvement was grade. In contrast with previous research (Olweus, 1993a), which suggested that bullying occurs mostly in lower grades, the majority of pupils involved were found in 4^{th} grade, whereas pupils from the not involved group tended to be either in the 4^{th} or 5^{th} grades.

Those involved either as bullies and / or victims were also found to have significantly lower levels of Q.S.L. and higher levels of stress total. These findings support the association between school satisfaction and bullying, although there is no previous research to make any comparisons in the findings. Therefore, further research is required to verify the present findings. In addition, although Borkowitz (1993) claimed that negative affectivity and not stress is responsible for aggressive behaviour, the present study found a direct relationship between bullying and student stress. These differences could be attributed to use of different measures. The scale used in the present study concerns school related stress and not general stress. Past research however has also indicated that school factors could play a significant role in bullying (Davison, 1985; Ahmad et al., 1991), but the area has lacked extensive and

consistent research concerning the association between Q.S.L. and school stress and bullying and victimisation.

Those who were involved were also found to have lower levels of well – being in comparison with those never involved. Although the well - being of bullies has not been previously studied extensively, the detrimental effects of bullying on victims' well - being have been discussed (e.g. Olweus, 1993b; Sharp and Thompson, 1992). There has been strong evidence, in the present research, that low levels of general well – being is associated with bullying from the bully's point of view, whereas the experience of bullying from the victim's point of view could result in lower well – being levels. Previous research has focused on well – being in relation to victimisation predominantly rather than bullying itself.

With regard to personality factors, those who were involved were found to have significantly higher levels of negative affectivity and lower levels of self – esteem both total (Baron, 1977; Olweus, 1984; Borkowitz, 1993) and area specific (peer, home and school). Finally, those involved were found to have higher levels of internal locus of control and lower levels of external locus of control than those never involved. Just like locus of control, there is no previous evidence regarding the relationship between negative affectivity and bullying, to allow for any comparisons between the present and previous findings. However, research on aggressive behaviour in general confirms this finding (e.g. Brehm and Kassin, 1996), indicating that negative affectivity could cause aggressive behaviour. High levels of negative affectivity in victims might also be responsible for provocative styles (Smith and Boulton, 1991) of behaviour towards the bully. As previously mentioned, lower levels of self – esteem could be also imposed on victims, due to the experience of bullying.

Bullies, on the other hand, may engage in bullying in order to increase their self – esteem, by gaining power from abusing the victim.

Overall it was found in the present study that there are more factors that converge bullies and victims rather than factors that differentiate them. Thus, it could be suggested that bullying and victimisation may be facets of the same entity and they could also be treated as one group in future research. Therefore, future research instead of focusing on differences between bullies and victims, it could also be focused on their similarities, in order to provide a clearer picture of the factors that cause and maintain the phenomenon overall. It might also be more functional to talk about the "bullying phenomenon" rather than about bullies and victims separately. However, one may argue that by treating bullies and victims as one group, as we did in the present study, is not a sufficient method to assess the "bullying phenomenon" argument (i.e. one entity hypothesis). Such hypothesis requires additional support from studies that investigate group processes and group interactions. On the other hand, we cannot ignore the present finding that bullies and victims found to differ in relation to demographics and peer self – esteem.

Logistic regression revealed that from all the above factors Q.S.L. total and school stress total, which are both school factors, had the greatest influence on bullying involvement. These results indicate that school factors are highly associated with whether a pupil is involved in bullying and / or victimisation. In addition these results indicate that although demographic (i.e. school, gender) and personality factors (i.e. peer self - esteem) may differentiate bullying from victimisation, school factors (i.e. Q.S.L. and school stress) contribute to the phenomenon as a whole and may be responsible for its retention.

Drawbacks of present research have been the lack of evidence concerning frequency of bullying and victimisation (how many times) (e.g. Rigby, 1999) as well as whether bullies were bullying repeatedly a victim(s) and whether victims were bullied by the same bully(ies). It would be claimed that frequency of bullying / victimisation, to / by same individuals, may have an effect on some factors (e.g. school stress or well - being). Such issues however should be subject to future research. In addition, the use of self – report bullying scales, employed by the present study, have been negatively criticised for their reliability (e.g. Salmivalli et al., 1996). Also, since the sample employed in the present research consisted of two Scottish schools only, it would be rather risky to generalise the present findings to the population of pupils in Scotland or the UK.

The importance of school factors on bullying and victimisation suggests that schools and the anti-bullying policies they adopt could facilitate the prevention of bullying / victimisation. General school factors such as the size of the school, relationships with teachers, how pupils cope with the curriculum, negative teaching style (i.e. unfairness, authoritarian methods of discipline) and factors regarding school satisfaction (i.e. relationship with teachers) may facilitate the development of maladaptive behaviours in school (see also Wise and Upton, 1998), especially for bullies. Another issue, which would explain the role of Q.S.L. in victimisation, concerns whether the school has a clear anti-bullying policy. When schools do not adopt a straightforward bullying policy, victimised pupils may feel that their school does not take serious consideration of the problems they might face at school (Hoover, 1991). As a consequence, they are less satisfied with their school life.

Anti-bullying policies adopted by schools, should include possible actions for both bullies and victims and must target both individual pupils (bullies or victims) and

school as a whole, as a preventive strategy (see also Salmivalli et al., 1996). The possibility to explore levels of satisfaction with various school issues should be given to pupils during classes. It might be also worth including stress management techniques or assertiveness training (for low self - esteem) and problem-solving skills in the curriculum. Assertiveness skills training should also target the role of the pupil within the peer - group.

Part E – Substance Use and its Relationship to Q.S.L. Comparing Q.S.L. and other School, Well – being and Personality factors Regarding their Association with Substance Use

Chapter 10: Predicting Use and Maintenance of Use of Substances (Tobacco, Alcohol, Illicit Drugs) in Young Adolescents

Abstract

It was aimed firstly to investigate prevalence rates and consumption patterns of smoking, alcohol and drug use in a sample of Scottish adolescents. Secondly to study the role of demographic (grade, gender, parental socio-economic and educational status), school (Quality of School Life (Q.S.L.), school stress), non – school (well – being) and personality (affectivity, self – esteem, locus of control) factors in predicting use and maintenance of use of tobacco, alcohol and illicit drugs. For the purposes of the study, a set of measures was distributed to secondary school pupils (n = 425), in the Stirling area of Scotland. Differences and predictive values of the above factors were investigated for users vs. non-users and regular vs. occasional users for smoking, alcohol and drugs separately. It was found that having tried smoking or alcohol could be predicted at best from school stress but having tried drugs from peer self – esteem. Maintenance of smoking was predicted at best from Q.S.L. and of drinking from peer self – esteem. None of the factors studied in the present research were found to predict significantly maintenance of drug use. Implications of these findings for decreasing prevalence of substance use are discussed.

10.1 Introduction

Substance use in adolescence is not a new phenomenon. Substance use, rose from mid to late 1970's and plateaud in the early 80's, rising again during the 90's (Johnston et al., 1995). Silbereisen et al. (1995) have predicted that in the future there will be a further increase in the prevalence of substance use, since there has been an increase over the years in the number of young people who are experimenting with substances.

10.1.1 Prevalence of substance use

Previous research has indicated that the most widely used substance by adolescents is alcohol, followed by cigarettes and marijuana (Johnston et al., 1989, 1994, 1995). It has also been proposed that young people report using solvents, opiates and other drugs with an early start and increasing frequency (Zeitkin and Swadi, 1994).

Crome (1997) in reviewing several studies of substance use in secondary school aged children concluded that 10% - 20% smoke regularly, 30 - 90% drink regularly, 10% drink more than moderately, up to 70% have tried at least one illicit drug and 2.5% are using drugs weekly or more.

Adelekan et al. (1994) have also found that weekly use of cigarettes and monthly use of alcohol and drugs is the most common consumption pattern of use among adolescents. These authors also reported that, although experimentation with substances might start at the first grades it might increase at the higher grades of secondary school. Below the association between substance use and the variables of interest is presented. However, literature is not presented for each substance in relation to each factor separately, for the sake of brevity.

10.1.2 The demography of substance use

Crome (1997) suggested that the average age for starting consuming alcohol is 11 - 12 years and for drug use 13 - 14 years. Morgan et al. (1986) in their study with

secondary school Bristol pupils, found that the majority of the children reported that they had tried cigarettes before the age of 11. Adelekan et al. (1994) studying the prevalence of different substances in secondary schools found that 4th and 5th year students have the highest prevalence in alcohol and cigarette consumption. High rates of prevalence for other substances were also confirmed for the highest grades in the same study.

Gender has been found to be one of the main factors, which account for substance use. The level of regular smoking for example is higher in girls than boys (see also Murray et al., 1983; Oakley et al., 1992) at the ages of 13 - 15 years. By the age of 16 this difference disappears. McCarthy et al. (1986), however, reported that boys are more likely to smoke at lower grades than girls.

When it comes to family's socio-economic status, some research has suggested that this is not one of the main factors that are associated with an increase in the likelihood of using drug-related substances. Glendinning et al. (1994) in their study on Scottish adolescents found no effect of family socio-economic status on smoking. However, they found that socio-economic status is associated with substance use for those adolescents who lived on their own. Other studies though (e.g. Murray et al., 1983) found that children whose parents have manual jobs are more likely to start smoking than those whose parents have a non - manual job.

10.1.3 School factors and substance use

Although, Johnson et al. (1985) suggested that "the role of school organisational features are unrelated to smoking", several studies proposed that general Quality of Life (Q.O.L.) as well as Quality of School Life (Q.S.L.) factors could be positively related with substance use. McCarthy (1986) reported that general quality of life is highly associated with smoking in the 1st (12.3%) as well as the 5th grade (12.5%).

Newcomb et al. (1986) assessing the effects of alcohol consumption found that it is associated with dissatisfaction in relation to school, work, and peer relationships. Murray et al. (1983) also found that those who favoured school were less likely to increase their levels of smoking and they had high levels of school satisfaction. Nutbeam and Aaro (1991) studying health behaviours of children in several European countries arrived at similar results. The more negative the attitudes towards school the more likely pupils were to smoke on a weekly basis. Finally, Oakley et al. (1992) revealed that satisfaction with school achievement could have a positive effect on decreasing smoking behaviour. They also detected that general stress and uncertainty could increase the levels of smoking.

Similar results were reported by Baer et al. (1987) who studied the relation of alcohol use with various anxiety measures. They found that students who reported more alcohol use, also reported more daily hassles and conflict in the family. In addition Hee - Soon et al. (1995) looked at correlates of smoking in Korean adolescents and found that academic stress was associated with smoking status. Nevertheless, Dewey (1999) reported that overall the study of school factors in relation to substance use has been rather neglected compared with the study of other factors.

10.1.4 Out of school factor (well - being)

Substance use incorporates major threats to the general well - being of adolescents (Bearinger and Blum, 1997). Blum (1987) concluded that substance use might be responsible for accidents, homicides, and suicide and could play a significant role in death rates of young adolescents. Substance use in adolescence could also lead to various social, emotional and physical problems in adulthood. Stewart et al. (1995), who examined the effect of smoking cessation in a wide age range (18 - 65), found that those who had quitted smoking for six months tended to have better

psychological well - being, cognitive functioning, energy levels and sleep adequacy compared to those who continued to smoke. However, no differences were found in social functioning between those who quitted and those who continued smoking. Kandel et al. (1976) have suggested that high levels of depression in adolescence could be associated with slight increased probability of marijuana use. Overall previous research has viewed substance use as a consequence rather than as a cause of general well - being.

10.1.5 Personality and substance use

Research concerning the relationship between substance use and various personality factors remains inconclusive. Brook et al. (1977) for example found that drug use is related with higher levels of internal locus of control. Others have found no significant relationship (e.g. Schilling and Carman, 1978) and others a rather weak relationship between such variables. Some authors, however, found that locus of control is associated with specific school grades and substances only (e.g. Bearinger and Blum, 1997).

When it comes to self – esteem in adolescents, Dielman et al. (1984) reported that it produces small and sometimes significant negative correlations in relation to use of cigarettes, alcohol consumption and marijuana use ($r = -0.09$ to -0.18) (see also Dielman et al., 1987). Moreover, Kaplan (1975) proposed that negative self - attitudes could be related to substance abuse and other deviant behaviours during adolescence. However, Jessor and Jessor (1977) and Kandel (1978) found no significant relationships between self - esteem and adolescent substance use.

Affect and mood have also been found to be associated with substance use. McCarthy (1986) for example found that 4.2% in the 1st school grade, 2.3% in the 3rd school grade and 4.1% in the 5th school grade, of smoking rate, could be explained by mood

state measures. Slice et al. (1998) in their study of substance use escalation and de-escalation in a community sample of adolescents, found that negative affectivity could successfully predict substance use escalation.

10.1.6 The present research

The present study aimed firstly to investigate the prevalence and frequency rates of smoking, alcohol and drug use and secondly, the role of demographic, personality, school and non – school factors in predicting experimentation and maintenance of substance use in a sample of secondary school pupils.

Although there has been extensive literature regarding correlates of substance use in young people, there also exists a number of methodological limitations associated with research, including distinction between "use" and "misuse" (Burkstein and Kaminer, 1994). In the present project, participants were asked to report actual frequency of smoking, alcohol, drugs and quantity of smoking and alcohol.

Other methodological limitations of previous research include use of heterogeneous groups, wide age ranges and samples which vary in terms of culture, ethnicity and geographical area plus use of small and unrepresentative samples (Crome, 1997). The present research was conducted on a relatively large sample of secondary school aged pupils from a specific geographical area.

In addition, previous literature (e.g. Bearinger and Bloom, 1997) has suggested that different factors might account for use of different substances such as smoking, alcohol and drugs, therefore these have been examined separately in the present study. Furthermore, previous research, with a few exceptions, has rather neglected the issue that different factors might be responsible for trying or experimenting with a substance, in comparison to the factors responsible for maintaining the habit (e.g. Flay et al., 1998). The majority of substance use studies so far have examined the

phenomenon in relation to use or no use only. Some studies however, have stressed the need to expand the user / non-user dichotomy. McCusker et al. (1995), for example, have expanded the category of users to include experimental and repeated and that of non-users to include resistant and vulnerable, indicating that substance use may involve separate stages. Others like Flay et al. (1983) proposed a four-stage model of adolescent smoking. This comprised of the preparatory stage (formation of knowledge, beliefs and expectation about smoking), first trial (physiological effects of smoking and psychosocial reinforcements), the experimentation stage (repeated but irregular use for an extended period of time – occasional use) and regular use. These latter two stages, that involve mostly adolescents, were the substance use categories that were incorporated in the present research and included experimentation with (tried / not tried) and maintenance of substance use (regular / occasional). Differences between groups were studied in relation to the aforementioned individual and clusters of factors, across different substances.

There has also been some research suggesting that different factors account for different stages in substance use. Flay et al. (1994) for example suggested that peer smoking was more important in initiation rather than escalation of smoking. Identification of the factors that increase the likelihood of taking up substances across different stages / groups (stage theory) has important implications for policy making. In smoking, for example, primary prevention targets early trying and experimental use and secondary prevention involves experimenters or regular users to quit (Flay et al., 1998).

10.2 Method

Method for this chapter is as described in chapter 3.

10.3 Scales

Instruments used in this chapter are as described in chapter 3. These included:

Substance Use Scale

Demographics

Quality of School Life Scale

Student Stress Inventory (Children's Version) (Alban Metcalfe et al., 1982)

P.G.I. General Well - Being Scale (Verma et al, 1983)

Hare Self - esteem Scale (HSES) (Hare, 1985)

Nowicki's – Strickland's Locus of Control Scale for Children (Nowicki and Strickland, 1973)

Positive and Negative Affect Schedule (PANAS) (Watson et al., 1988 a)

10.4 Sample

Subjects are as described in chapter 3.

10.5 Statistical analysis

The first stage of analysis aimed to investigate differences between those who have or not tried smoking, alcohol and drugs in relation to demographic, school, non - school and personality measures. This analysis was performed in order to identify the significant factors that would increase the likelihood of experimentation with substances in adolescence. In the second stage, differences between occasional and regular users in relation to the same measures were investigated. Regular and occasional users were defined according to frequency of consumption of cigarettes, alcohol and drugs. This second stage of analysis aimed to detect the significant factors that would lead to maintenance of substance use, once adolescents have started using

these substances. In both stages of analysis differences between the two sets of groups (tried vs. not - tried and occasional vs. regular users) regarding smoking, alcohol and drug consumption, as well as the predictive value of factors (demographic, school, non-school, personality) were investigated.

T – test analysis was used to detect any differences between those who had / or not tried smoking, alcohol, drugs and between occasional / regular users of the same substances, when continuous variables were concerned. Chi – square analysis was used to detect any statistical differences between categorical variables.

All variables that were found to have statistically significant effects in either experimentation or maintenance of substance use, in univariate tests, were entered into Logistic regression analysis. Separate Logistic regression was used for predicting group membership for having / or not having tried smoking, alcohol, drugs and for occasional / regular users of the same substances from significant factors (defined from univariate tests).

Stages followed in Logistic regression analysis are described below. Significant variables / factors were entered firstly into individual logistic regression in order to determine whether they were significant predictors. Those factors found significant in this stage were also entered into an overall Logistic regression in order to identify which of the factors is the most important in predicting group membership.

10.6 Results

10.6.1 Smoking – Prevalence and factors that contribute to having tried smoking

It was found that 40.1% had tried smoking, while 51.8% had never tried (8.1% left the question unanswered) (see table 10.1). The majority of those who had tried smoking (25.6%) reported that they smoked occasionally. From those who had tried smoking, a

proportion of 6% reported that they smoked every day, 4% a few days a week, 2.8% every few weeks and 0.9% once a month or less (see table 10.2). Number of cigarettes consumed per week was 9.3 on average (Sd = 9.2), indicating a higher number of cigarettes for some pupils.

Table 10.1. Prevalence of substance use

Categories	Smoking (%)	Alcohol (%)	Drugs (%)
Tried	40.1	77.2	21.2
Never tried	51.8	15.8	70.6
Unanswered	8.1	7.1	8.2

Table 2. Frequency of substance use

Categories	Smoking (%) *Tried (40.1%)*	Alcohol (%) *Tried (77.2%)*	Drugs (%) *Tried (21.2%)*
Every day	6.8	1.2	1.4
Only a few days a week	4.0	7.3	2.6
Only every few weeks	2.8	22.6	3.3
Once a month or less	0.9	8.2	1.9
Only occasionally	25.6	37.9	12.0

From the demographics, only grade and gender were found to be significantly associated with experimenting with smoking. Fourth and fifth graders were found more likely to have tried smoking (X^2= 14.1, Df = 5, p< .013). Girls were also more likely to have tried smoking (X^2= 4.5, D.F = 1, p< .033). No significant differences were found by school, parental educational and socio-economic status, in relation to those who had tried and those who had not tried smoking.

Logistic regression revealed that both grade and gender could significantly predict experimentation with smoking (p<.011 and p<.033 respectively). Both factors were found to accurately predict experimentation with smoking. For grade, 58.27% and for gender 56.01% of the sample were correctly classified as having or not tried smoking.

When the two demographic factors were combined, it was found that the prediction was significant (p<.005) and quite accurate as 60.61% of the sample was correctly classified as having or not tried smoking. Both demographic factors were found able to predict 6.1% of smoking experimentation (see table 10.4).

Table 10.3. Tried vs. never tried smoking: Differences in school factors (Q.S.L., student stress), non – school factors (well – being) and personality factors (affectivity, self – esteem, locus of control)

Factors	Have tried (n = 175)	Have not tried (n = 220)	t	Df	p <
School Factors					
Q.S.L. total	158.2	168.7	-4.8	332	.000***
School stress	44.1	34.5	4.4	345	.000***
Non – school factors					
Well – being total	59.6	62.1	-2.7	318	.007**
Personality Factor					
Positive affectivity	35.1	35.1	-0.0	375	.969
Negative affectivity	18.5	17.1	2.3	363	.024*
Self - esteem total	89.3	91.0	-1.5	353	.141
Peer self – esteem	29.1	28.2	1.8	370	.075
Home self – esteem	31.4	32.7	-2.3	366	.024*
School Self - esteem	28.6	30.0	-2.9	360	.004**
External Loc	4.0	4.2	0.9	348	.389
Internal Loc	6.0	5.8	-0.9	348	.389

*p<.05, **p<.01, ***p <.001.

Both school factors, Q.S.L. and school stress, were found to be associated with having tried smoking. Statically significant lower levels of both Q.S.L. (t = -4.8, Df = 332, p<.000) and school stress (t = 4.4, Df = 345, p< .000) were found in those who had tried smoking than those who had never tried it. Both factors were found to predict significantly experimentation with smoking (p<.000), even when combined (p<.000),

(see table 10.3). Prediction was relatively accurate with 60.78% for Q.S.L. and 59.94% for school stress of the sample being correctly classified as having or not tried smoking. The combination of the two school factors explained a higher percentage of smoking experimentation (10.1%) than the two factors alone (see table 10.4).

Having tried smoking was also found to be associated with levels of general well – being. It was found that those who had tried smoking had lower levels of general well – being ($t = -2.7$, $Df = 318$, $p < .007$) (see table 10.3). Logistic regression showed that general well – being was a significant ($p < .006$) and accurate predictor of experimentation with smoking with 58.13% of the sample correctly classified as having or not tried smoking. General well – being explained 3.1% of experimentation with smoking (see table 10.4).

Higher levels of negative affectivity ($t = 2.3$, $Df = 363$, $p < .024$), lower levels of home self - esteem ($t = -2.3$, $Df = 366$, $p < .024$) and school self – esteem ($t = -2.9$, $Df = 360$, $p < .004$) were found in those who had tried smoking in comparison to those who had never tried (see table 10.3). It was also found that all these personality factors were able to predict significantly ($p < .003$ - $.024$) and accurately experimentation with smoking (57.26 - 58.08% of the sample were correctly classified as having or not tried smoking) (see table 10.4). When all personality factors were combined it was found that home self – esteem had the greatest influence on smoking experimentation ($\exp(\beta) = 1.011$).

Overall, it was found that a combination of demographic, school and personality factors was able to predict significantly ($p < .001$) and accurately having tried smoking with 65.24% of the sample correctly classified. Combination of the factors was able to predict 17.4% of experimentation with smoking. Overall, the most important factors

in smoking experimentation were school stress (exp(β) = .988) and general well – being (exp(β) = .989) (see table 10.4).

Table 10.4. Predicting experimentation with smoking from school (Q.S.L., student stress), non – school (well – being) and personality factors (affectivity, self – esteem)

Factors	B	S.E.	Exp (B)	Model X^2	Model Df	Model p <	Negelkerke R^2	% Overall correctly classified
Demographics								
Grade[1]				14.785	5	.011*	.049	58.27
Gender	.440	.207	1.554	4.546	1	.033	.015	56.01
Demographics overall[1] Grade - Gender				18.249	6	.005**	.061	60.61
School factors								
Q.S.L. total	.026	.005	1.026	22.107	1	.000***	.086	60.78
School stress	-.023	.005	.976	19.000	1	.000***	.071	59.94
School Factors				23.921	2	.000***	.101	60.73
- Q.S.L. total	.019	.006	1.019					
- School stress	-.014	.006	.985					
Non–school factors								
Well – being total	.039	.014	1.040	7.445	1	.006**	.031	58.13
Personality factors								
Negative affectivity	2.013	.877	7.489	6.323	1	.011*	.023	57.26
Home Self - esteem	.043	.019	1.044	5.065	1	.024*	.018	57.61
School Self - esteem	.066	.023	1.068	8.337	1	.003**	.031	58.56
Personality overall				10.912	3	.012*	.043	58.08
- Negative Af.	1.087	.908	2.967					
- Home self – esteem	.011	.024	1.011					
- School Self - esteem	.052	.029	1.053					
Overall								
Overall factors				32.580	12	.001***	.174	65.24
- Grade[1]								
- Gender	.767	.298	2.153					
- Q.S.L. total	.020	.009	1.020					
- Stress total	-.011	.008	.988					
- Well - being	-.011	.026	.989					
- Negative Af.	1.870	1.536	6.494					
- Home self – esteem	.014	.032	1.014					
- School Self - esteem	.012	.045	1.012					

[1]Individual regression coefficients are not presented for the sake of brevity. *p<.05, **p<.01, ***p <. 001.

10.6.2 Smoking - Factors that contribute to regular smoking

No differences were found between regular and occasional users, regarding demographic variables. However, differences, between those who were regular and occasional users, were detected for Q.S.L., well – being, self – esteem total and school self – esteem. It was found that those who were regular smokers had lower levels of Q.S.L. ($t = -2.5$, $Df = 144$, $p < .014$), well – being ($t = -2.5$, $Df = 134$, $p < .012$), school self – esteem ($t = -2.7$, $Df = 153$, $p < .008$) and self – esteem total ($t = -2.1$, $Df = 148$, $p < .039$) (see table 10.5). Logistic regression showed that all these factors could significantly ($p < .011$-$.037$) and accurately predict maintenance of smoking with 66.18 – 68.00% correctly classified as regular and occasional users. Individual Logistic regressions revealed that well - being total could account for the highest percentage of smoking maintenance (6.3%) in comparison to the other factors (see table 10.6).

Table 10.5. Regular vs. occasional smokers: Differences in school factors (Q.S.L., student stress), non – school factors (well – being) and personality factors (affectivity, self – esteem, locus of control)

Factors	Regular Users (n = 58)	Occasional Users (n = 113)	t	Df	p <
School Factors					
Q.S.L. total	151.9	161.0	-2.5	144	.014*
School stress	44.1	45.1	-0.3	150	.766
Non – school factors					
Well – being total	57.2	60.8	-2.5	134	.012*
Personality Factor					
Positive affectivity	34.2	35.4	-1.1	161	.286
Negative affectivity	19.5	18.1	1.1	160	.264
Self - esteem total	86.5	90.6	-2.1	148	.039*
Peer self – esteem	29.0	29.2	-0.2	156	.805
Home self – esteem	30.0	32.0	-2.1	156	.038*
School Self - esteem	27.2	29.3	-2.7	153	.008**
External Loc	4.0	4.0	-0.0	151	.976
Internal Loc	6.0	6.0	0.0	151	.976

*p<.05, **p<.01, ***p <.001.

However, when significant factors were combined in a new Logistic regression, self – esteem total was found to have the greatest influence as regards regular smoking ($\exp(\beta) = 1.007$). Combinations of factors were also found to significantly ($p < .009$) and accurately predict maintenance of smoking (66.18 – 68.00% were correctly classified as occasional and regular smokers across measures). All factors were found able to predict 13.3% of the smoking maintenance (see table 10.6).

Table 10.6. Predicting regular and occasional smoking from school (Q.S.L.), non – school (well – being) and personality factors (self – esteem)

Factors	B	S.E.	Exp (B)	Model X^2	Model Df	Model p <	Negelkerke R^2	% Overall correctly classified
School factors								
Q.S.L. total	.020	.008	1.021	5.982	1	.014*	.056	67.81
Non–school factors								
Well – being total	.058	.024	1.060	6.320	1	.011*	.063	66.18
Personality factors								
Self – esteem total	.032	.015	1.033	4.314	1	.037*	.040	68.00
Overall								
Overall factors				11.398	3	.009**	.133	69.30
- Q.S.L. total	.016	.012	1.017					
- Well – being	.055	.039	1.057					
- Self – esteem total	.007	.025	1.007					

*p<.05, **p<.01, ***p < .001.

10.6.3 Alcohol – Prevalence and factors associated with having tried alcohol

It was found that a higher percentage of pupils (77.2%) had tried alcohol rather than smoking. Those who had never tried alcohol represented only 15.8% (7.1% left the question unanswered) (see table 10.1).

Occasional drinking was again the most common consumption pattern for alcohol (37.9%). From those who reported that had tried alcohol, a proportion of 1.2% reported that they drank every day, 7.3% a few days a week, 22.6% every few weeks and 8.2% once a month or less (see table 10.2).

The number of units consumed every week for those who drank regularly was 4.8 on average, with a quite high Sd (6.0), which indicates that some of the pupils drank quite heavily.

From the various demographics examined only grade was found to be significantly associated experimenting with alcohol. It was revealed that 4th and 5th graders were more likely to have tried alcohol than pupils from other grades ($X^2 = 51.9$, Df = 5, p < .000). No statistical significant differences were detected between those who had tried alcohol and those not, in relation to gender, different schools and parental socio-

economic and educational status. As table 10.8 indicates, grade was a significant ($p < .000$) and accurate predictor of experimentation with alcohol with 82.95% of pupils correctly classified as having or not tried alcohol. Grade was able to explain 19.1% of experimenting with alcohol variance.

School factors, Q.S.L. and school stress total were also found to be associated with experimentation with alcohol. It was found that those who had tried alcohol also had lower levels of Q.S.L. ($t = -4.2$, $Df = 332$, $p < .000$) and higher levels of school stress ($t = 3.6$, $Df = 345$, $p < .000$) than those who had not (see table 10.7). Both factors were found to significantly ($p < .000$) and accurately predict experimentation with alcohol as 83.53% for Q.S.L. and 83.00% of pupils for school stress being correctly classified as having or not tried alcohol. Individual Logistic regression analysis on Q.S.L. and school stress revealed that Q.S.L. is a better predictor of alcohol experimentation as it could explain a higher percentage (9.1%) of its variance in comparison to school stress (6.3%). However, stress total ($\exp(\beta) = .985$) was found to have a greater influence on alcohol experimentation than Q.S.L., when the two factors were combined in a new Logistic regression. It was revealed that the combination of these two factors was able to predict significantly ($p < .000$) and accurately experimentation with alcohol with 83.50% correctly classified as having or not tried alcohol (see table 10.8).

Table 10.7. Tried vs. never tried alcohol: Differences in school factors (Q.S.L., student stress), non – school factors (well – being) and personality factors (affectivity, self – esteem, locus of control)

Factors	Have tried (n = 328)	Have not tried (n = 67)	t	Df	p <
School Factors					
Q.S.L. total	161.9	175.0	-4.2	332	.000***
School stress	40.6	30.2	3.6	345	.000***
Non – school factors					
Well – being total	60.2	65.2	-4.1	318	.000***
Personality Factor					
Positive affectivity	35.0	35.9	-1.0	375	.311
Negative affectivity	18.0	16.2	2.1	363	.033*
Self - esteem total	89.9	92.3	-1.6	353	.117
Peer self – esteem	28.7	28.3	0.6	370	.531
Home self – esteem	31.8	33.5	-2.2	366	.028*
School Self - esteem	29.2	30.3	-1.7	360	.096
External Loc	6.0	5.2	2.6	348	.009**
Internal Loc	4.0	4.8	-2.6	348	.009**

*p<.05, **p<.01, ***p <.001.

Personality factors were also found to be associated with experimentation with alcohol. It was found that those who had tried alcohol scored higher on levels of negative affectivity ($t = 2.1$, $Df = 363$, $p < .033$) and external locus of control ($t = 2.6$, $Df = 348$, $p < .009$), and lower on home self – esteem ($t = -2.2$, $Df = 366$, $p < .028$) and internal locus of control ($t = -2.6$, $df = 348$, $p < .009$) (see table 10.7). Individual Logistic regression analysis revealed that the above personality factors were able to significantly ($p < .009$ - $.026$) and accurately predict experimentation with alcohol, with 82.74 – 84.57% of pupils correctly classified as having or not tried alcohol. Separate Logistic regression analysis on the above personality factors also showed

that locus of control was the best predictor of alcohol experimentation by explaining 3.3% of its variance. However, when all these personality factors were combined in a new Logistic regression, it was shown that home self – esteem had the greatest influence on having tried alcohol ($\exp(\beta) = 1.091$). Their combination provided a significant ($p < .000$) and accurate prediction with 83.80% of pupils correctly classified as having tried or not alcohol. All personality factors were found to explain 9.1% of experimentation with alcohol variance (see table 10.8).

When significant demographic, school and personality factors were combined in a new Logistic regression, it was found that school stress was the most important factor in predicting experimentation with alcohol ($\exp(\beta) = .990$). The combination of the factors revealed a significant ($p < .000$) and accurate prediction of alcohol experimentation with 85.78% of sample correctly classified. All factors explained 26.7% of experimentation with alcohol variance (see table 10.8).

Table 10.8. Predicting experimentation with alcohol from demographics (grade), school (Q.S.L., student stress), non – school (well – being) and personality factors (affectivity, self – esteem)

Factors	B	S.E.	Exp (B)	Model X^2	Model Df	Model p <	Negelkerke R^2	% Overall correctly classified
Demographics								
Grade[1]				47.642	5	.000***	.191	82.95
School factors								
Q.S.L. total	.033	.008	1.034	18.435	1	.000***	.091	83.53
Stress total	-.027	.007	.972	13.363	1	.000***	.063	83.00
School Factors				19.435	2	.000***	.105	83.50
Q.S.L. total	.029	.009	1.029					
School stress	-.014	.008	.985					
Non–school factors								
Well – being total	.087	.022	1.091	17.212	1	.000***	.091	84.69
Personality factors								
Negative affectivity	3.002	1.554	20.136	4.922	1	.026*	.022	82.74
Home Self - esteem	.063	.029	1.065	5.200	1	.022*	.024	83.15
Internal Loc	.203	.078	1.225	6.754	1	.009**	.033	84.57
External Loc	-.203	.078	.861	6.754	1	.009**	.033	84.57
Personality overall				17.433	3	.000**	.091	83.80
Negative Af.	2.304	1.752	10.015					
Home self – esteem	.087	.035	1.091					
Internal Loc[2]	.276	.088	1.317					
Overall								
Overall factors				38.382	11	.000***	.267	85.78
Grade[1]								
Q.S.L. total	.011	.012	1.011					
Stress total	-.009	.012	.990					
Well - being	.027	.040	1.027					
Negative Af.	1.433	2.455	4.193					
Home self – esteem	.071	.052	1.074					
Internal Loc[2]	.164	.115	1.178					

[1]Regression coefficients for individual grades are not presented for the sake of brevity. [2]External locus of control was made redundant from the design matrix because equals to 10 – Internal locus of control. *p<.05, **p<.01, ***p <. 001.

10.6.4 Alcohol – Factors associated with regular use of alcohol

From the demographic factors, only school grade was found to be associated with frequency of alcohol consumption. It was found that regular alcohol users were more likely to be in fourth year (X^2 = 34.1, Df = 5, p < .000). Those who were regular alcohol users also presented with lower levels of Q.S.L. (t = -4.0, Df = 277, p < .000) and higher levels of peer self – esteem (t = 3.2, Df = 306, p < .002) in comparison to occasional users (see table 10.9). Logistic regression revealed that all these factors

were able to significantly ($p < .000 - .001$) and accurately predict maintenance of alcohol consumption with 59.74 – 64.72% correctly classified as occasional and regular alcohol users. Individual Logistic regression, regarding these factors, showed that the best predictor of regular alcohol use was school grade, since it explained 14.8% of the variance of maintenance of alcohol use (see table 10.10).

Table 10.9. Regular vs. occasional alcohol users: Differences in school factors (Q.S.L., student stress), non – school factors (well – being) and personality factors (affectivity, self – esteem, locus of control)

Factors	Regular users (n = 132)	Occasional users (n = 196)	t	Df	p <
School Factors					
Q.S.L. total	156.2	165.7	-4.0	277	.000***
School stress	43.2	38.9	1.8	286	.080
Non – school factors					
Well – being total	60.4	60.1	0.3	270	.778
Personality Factor					
Positive affectivity	34.7	35.1	-0.5	310	.641
Negative affectivity	17.9	18.1	-0.3	300	.787
Self - esteem total	90.2	89.5	0.6	293	.569
Peer self – esteem	29.6	28.0	3.2	306	.002**
Home self – esteem	31.7	31.9	-0.4	304	.711
School Self - esteem	28.8	29.4	-1.3	300	.205
External Loc	6.1	5.9	1.1	295	.253
Internal Loc	3.9	4.1	-1.1	295	.253

*p<.05, **p<.01, ***p <. 001.

When all significant factors were combined in a new Logistic regression, it appeared that the most important factor in predicting frequency of alcohol consumption was peer self – esteem ($\exp(\beta) = .901$). The combination of the factors provided a

significant ($p < .000$) and accurate prediction of maintenance of alcohol use with 67.94% correctly classified as regular and occasional alcohol users. All factors were found able to explain 24.7% of the maintenance of alcohol use variance (see table 10.10).

Table 10.10. Predicting regular and occasional alcohol use from demographics (grade), school (Q.S.L.) and personality factors (self – esteem)

Factors	B	S.E.	Exp (B)	Model X^2	Model Df	Model p <	Negelkerke R^2	% Overall correctly classified
Demographics								
Grade[1]				37.761	5	.000***	.148	64.72
School factors								
Q.S.L. total	.024	.006	1.025	15.560	1	.000***	.073	63.08
Personality factors								
Peer Self - esteem	-.085	.027	.917	10.229	1	.001***	.044	59.74
Overall								
Overall factors				53.285	7	.000***	.247	67.94
Grade[1]								
Q.S.L. total	.033	.008	1.033					
Peer self – esteem	-.103	.032	.901					

[1]Regression coefficients for individual grades are not presented for the sake of brevity. *p<.05, **p<.01, ***p <. 001.

10.6.5 Drugs – Prevalence and factors that contribute to having tried drugs

A relatively high number of pupils (21.2%) reported that they had tried drugs, whilst 70.6% had never tried (8.2% left the question unanswered) (see table 10.1).

Occasional consumption of drugs was found again the most common consumption pattern (12%). From those who reported that had tried drugs, a proportion of 1.4% reported that they used drugs every day, 2.6% a few days a week, 3.3% every few weeks and 1.9% once a month or less (see table 10.2).

The only demographic factor, which was found to be associated with experimentation with drugs, was school grade. It was found that fourth year pupils were more likely to have tried drugs ($X^2 = 27.8$, $Df = 5$, $p < .000$). School grade appeared a significant ($p < .000$) and accurate predictor of experimentation with drugs (77.06% correctly classified as having or not tried drugs) as Logistic regression showed. School grade

was found able to explain 12% of the experimenting with drugs variance (see table 10.12).

Those who had tried drugs were also found to have significantly lower levels of Q.S.L. ($t = -3.8$, $Df = 328$, $p < .000$) and higher levels of school stress ($t = 3.6$, $Df = 341$, $p < .000$) (see table 10.11). Both factors were able to significantly ($p < .000$) and accurately predict experimentation with drugs, with 78.48% for Q.S.L. and 76.97% for school stress correctly classified. However, individual Logistic regression analyses for Q.S.L. and school stress showed that Q.S.L. is a better predictor than school stress (5.3%) of experimentation with drugs, since it was able to explain 6.3% of its variance (see table 10.12). When the two factors were combined in a new Logistic regression, school stress appeared to have had the greatest influence on experimentation with drugs ($\exp(\beta) = .987$). The combination of the two school factors provided a significant ($p < .000$) and accurate prediction of experimentation with drugs, with 78.67% of the sample correctly classified. Both factors, when combined, explained 7.3% drug experimentation (see table 10.12).

Table 10.11. Tried vs. never tried drugs: Differences in school factors (Q.S.L., student stress), non – school factors (well – being) and personality factors (affectivity, self – esteem, locus of control)

Factor	Have tried (n = 90)	Have not tried (n = 300)	t	Df	p <
School Factors					
Q.S.L. total	156.1	166.3	-3.8	328	.000***
School stress	45.9	36.6	3.6	341	.000***
Non – school factors					
Well - being total	59.2	61.7	-2.3	316	.021*
Personality Factor					
Positive affectivity	33.8	35.5	-2.0	371	.042*
Negative affectivity	19.0	17.3	2.2	359	.028*
Self - esteem total	89.4	90.7	-0.9	349	.373
Peer self – esteem	29.8	28.3	2.7	366	.007**
Home self – esteem	31.1	32.4	-2.0	362	.045*
School Self - esteem	28.4	29.7	-2.3	356	.022*
External Loc	6.3	5.7	-2.3	344	.024*
Internal Loc	3.7	4.3	-2.3	344	.024*

*p<.05, **p<.01, ***p <.001.

Well – being levels were found lower in those who had tried drugs than those who had never tried (t = -2.3, Df = 316, p < .021) (see table 10.11). Well – being also appeared a significant (p <.020) and accurate predictor of having experimented with drugs (75.47% of the sample were correctly classified). Well – being was able to explain 2.5% of the experimentation with drugs variance (see table 10.12).

Those who had tried drugs reported lower levels of positive affectivity (t = -2.0, Df = 371, p < .042), home self – esteem (t = -2.0, Df = 362, p < .045), school self – esteem (t = -2.3, Df = 356, p <.022), internal locus of control (t = -2.3, Df = 344, p <.024) and higher levels of negative affectivity (t = 2.2, Df = 359, p <.028), peer self – esteem (t

= 2.7, Df = 366, p <.007) and external locus of control (t = -2.3, Df = 344, p <.024) (see table 10.11). Individual Logistic regression analysis on the above personality factors showed them able to predict significantly (p< .005 - .048) and accurately experimentation with drugs, with 75.14 – 77.29% of pupils correctly classified. Logistic regression on the above personality factors also showed that negative affectivity and peer self – esteem were the best predictors of experimentation with drugs, since they each explained 3.1% of its variance (see table 10.12). When all personality factors were combined it was shown that peer self – esteem ($\exp(\beta)$ = .875) was the most important factor in determining whether a pupil had tried drugs. The combination of all the above personality factors provided a significant (p< .000) and accurate prediction of experimentation with drugs, with 76.77% of the sample to be correctly classified. All personality factors were found able to explain 13.9% of the experimenting with drugs variance (see table 10.12).

When all significant factors were combined in a new Logistic regression, the most important one for determining experimentation with drugs was peer self – esteem ($\exp(\beta)$ = .858). The combination of factors provided a significant (p< .000) and accurate prediction of experimentation with drugs, with 78.41% of pupils to be correctly classified. The combined factors were found to explain 23.4% of drugs experimentation (see table 10.12).

Table 10.12. Predicting experimentation with drugs from demographics (grade), school (Q.S.L., student stress), non – school (well – being) and personality factors (affectivity, self – esteem, locus of control)

Factor	B	S.E.	Exp (B)	Model X^2	Model Df	Model p <	Negelkerke R^2	% Overall correctly classified
Demographics								
Grade[1]				31.983	5	.000***	.120	77.06
School factors								
Q.S.L. total	.024	.006	1.024	13.771	1	.000***	.063	78.48
Stress total	-.021	.006	.978	12.242	1	.000***	.053	76.97
School Factors				14.542	2	.000***	.073	78.67
· Q.S.L. total	.018	.007	1.018					
· Stress total	-.012	.007	.987					
Non–school factors								
Well – being total	.038	.016	1.038	5.350	1	.020*	.025	75.47
Personality factors								
Positive Af.	.034	.017	1.035	4.029	1	.044*	.016	76.94
Negative Af.	2.197	.852	8.998	7.495	1	.006**	.031	77.29
Peer Self - esteem	-.079	.029	.923	7.577	1	.005**	.031	77.17
Home Self - esteem	.044	.022	1.045	3.893	1	.048*	.016	76.92
School Self - esteem	.062	.027	1.063	5.298	1	.021*	.022	76.82
Internal locus con.	.153	.068	1.166	5.222	1	.022*	.022	75.14
External locus con	-.153	.068	.857	5.222	1	.022*	.022	75.14
Personality overall				30.747	6	.000***	.139	76.77
· Positive Af.	.013	.021	1.013					
· Negative Af.	-.046	.023	.954					
· Peer Self - esteem	-.132	.036	.875					
· Home self – esteem	.010	.029	1.010					
· School Self - esteem	.102	.041	1.108					
· Internal Loc[2]	.138	.077	1.148					
Overall								
Overall factors				38.633	14	.000***	.234	78.41
· Grade[1]								
· Q.S.L. total	.013	.012	1.013					
· Stress total	-.004	.010	.995					
· Well – being	-.001	.032	.998					
· Positive Af.	.002	.034	1.002					
· Negative Af.	-.051	.033	.950					
· Peer Self - esteem	-.152	.046	.858					
· Home self – esteem	.031	.039	1.031					
· School Self - esteem	.062	.058	1.064					
· Internal Loc[2]	.135	.102	1.145					

[1]Regression coefficients for individual grades are not presented for the sake of brevity. [2]External locus of control was made redundant from the design matrix because equals to 10 – Internal locus of control. *p<.05, **p<.01, ***p <. 001.

10.6.6 Drugs – Factors associated with regular consumption of drugs

Table 10.13 indicates that when regular and occasional drug users were compared in relation to demographic, school, non - school and personality factors, none of these factors was significantly associated with frequency of drug consumption. Hence no further analysis was performed.

Table 10.13. Regular vs. occasional drug users: Differences in school factors (Q.S.L., student stress), non – school factors (well – being) and personality factors (affectivity, self – esteem, locus of control)

Factor	Regular Users (n = 31)	Occasional Users (n = 59)	t	Df	p <
School Factors					
Q.S.L. total	150.2	159.8	-1.8	71	.076
Stress total	50.2	42.8	1.5	78	.146
Non – school factors					
WB Total	57.6	60.2	-1.3	75	.197
Personality Factor					
Positive affectivity	31.8	34.8	-1.7	84	.097
Negative affectivity	20.0	18.3	1.0	83	.309
Self - esteem total	89.2	89.8	-0.2	77	.834
Peer self – esteem	30.4	29.6	0.7	81	.458
Home self – esteem	31.2	31.2	0.0	81	.982
School Self - esteem	27.5	28.8	-1.2	80	.241
External L.O.C.	6.1	6.4	-0.7	83	.501
Internal L.O.C.	3.9	3.6	0.7	83	.501

*p<.05, **p<.01, ***p <.001.

10.7 Discussion

Silbereisen et al. (1995) have predicted a future increase in the prevalence of substance use in young people, therefore the need to develop appropriate prevention

and intervention strategies has become evident. On the other hand, Crome (1997) found that it is at the age of 11 when young people usually start using illicit drug substances, indicating that research concerning the factors associated with substance use should focus on secondary school pupils.

The major drawback of previous research concerning the causation of substance use in adolescence is the lack of evidence about differences in the factors that would increase the likelihood of experimenting with substances and factors that maintain it, across different substances. Therefore, the present research has studied separately the role of school, non – school and personality factors on experimenting and maintaining the use of tobacco, alcohol and drugs.

It was found that a considerably high percentage of pupils reported that they had tried smoking, alcohol and drugs. Alcohol was the most popular substance pupils had tried (77.2%), followed by smoking and drugs. Occasional consumption though constituted the most common consumption pattern for all the different substances. Higher percentages of daily consumption were detected for smoking, in comparison to drugs and alcohol. Quite high weekly consumption rates were reported for smoking and alcohol, taking into account the age of the participants. These results are consistent with previous research in the area (e.g. Crome, 1997) which has indicated that drinking and smoking are highly prevalent in secondary schools. It is also important to mention that the high Sd of both, number of cigarettes and alcohol units consumed in a weekly basis, indicated that some pupils were heavy smokers and drinkers.

Crome (1997) (and Johnston et al., 1989, 1994, 1995) found that regular drinking posses higher prevalence rates than smoking. However, higher prevalence rates of daily smoking found in the present study may be due to easier access to cigarettes than to alcohol by pupils. This discrepancy in the results between the present and

previous studies might also indicate an increase in the prevalence rates of smoking in adolescence in recent years. However, such hypothesis needs to be tested in larger scale studies that include additional areas. Furthermore, in contrast with Adelekan et al. (1994) who suggested that monthly use of drugs was the most common consumption pattern, a quite high number of pupils reported weekly and every few weeks consumption of drugs. These results may also indicate an increase in frequency of drug use during recent years.

Overall results have shown that experimenting with and maintaining use of different substances in secondary school aged pupils can be associated with various demographic, school, non – school, and personality factors as well. Grade was found to be significantly associated with smoking, alcohol and drugs' experimentation, but it significantly predicted maintenance of alcohol use only. Previous research has also suggested that 4^{th} and 5^{th} graders are more likely to try smoking and alcohol (see also Adelekan et al. 1994). Gender, on the other hand, was found to be significantly associated with smoking experimentation, with girls being at higher risk of trying smoking than boys and possibly becoming regular smokers in the future (see also Murray et al., 1983; Oakley et al., 1992). Therefore, it could be suggested that health education about substance use should predominantly focus on these particular grades found to be at risk. Health education campaigns against smoking should also target girls who were found to be at greater risk than boys for experimenting with smoking. No demographic factors however have been found to be associated with maintenance of consumption for smoking and drugs.

From school factors, both Q.S.L. and school stress have been found to be associated with experimentation and maintenance of substance use. Levels of Q.S.L. were shown to significantly predict experimentation with smoking, alcohol and drugs (Strivastava

and Strivastava, 1986; Newcomb, 1986; Oakley et al., 1992). Q.S.L. was also able to predict maintenance of use of smoking and alcohol. A possible explanation for the association between low levels of Q.S.L. and experimentation with drugs might be the possible seeking of alternative sources of satisfaction, since school may not meet pupil's own needs. School stress was found able to predict experimentation with smoking, alcohol and drugs (Baer et al., 1987; Oakley et al., 1992) but it was not a strong predictor of regular use of any of the substances under scrutiny. These results provide evidence that school stress might be an important factor for starting using substances but does not have a strong a strong association with maintaining their use.

Well – being was found able to predict experimentation with smoking, alcohol and drugs (Blum, 1987; Bearinger and Blum, 1997), but it was able to predict only maintenance of smoking. These findings suggest that regular smoking, but not regular use of alcohol and drugs, is associated with well – being currently and vice versa. However, alcohol and drug use may also have long term effects on pupil's well – being, but such hypothesis need to be tested with longitudinal rather than cross – section designs.

Personality factors were also found to be associated with both experimenting and maintaining the use of substances. Significantly lower levels of positive affectivity were detected in those who had tried drugs but not in those who had tried smoking or alcohol. Negative affectivity however was found to significantly predict experimentation with all these substances (Stice, 1998). Affectivity did not have a significant effect on the maintenance of consumption for any of these substances.

Although general self – esteem was found to significantly predict only maintenance of smoking, area specific self – esteem was found to be more highly associated with experimentation and maintenance of substance use. Low home self – esteem was

found to significantly predict having experimented with smoking, alcohol and drugs, but it was found to significantly predict only the maintenance of smoking. School self – esteem was also able to significantly predict maintenance of smoking. Past research has indicated the negative effects of low general self - esteem on taking up legal and illegal substances (e.g. Dielman et al., 1984) but the area has lacked research concerning the association between area specific self - esteem and substance use / abuse. In contrast with home and school self – esteem, significantly higher levels of peer self – esteem were found able to predict experimentation with drugs and maintenance of alcohol use.

When it comes to locus of control, it was found that significantly higher levels of external locus of control and lower levels of internal locus of control could significantly predict having tried alcohol and drugs. However, there have been inconsistent results, in previous studies, in relation to the role of locus of control on substance use (e.g. Brook et al., 1977; Schilling and Carman, 1978). In the present study, no significant association between locus of control and experimenting with smoking or maintaining the use of smoking, alcohol and drugs was found.

Comparing the importance of different factors on experimenting with substances, the present results suggest that experimentation with smoking or alcohol could be predicted at best from school stress but experimentation with drugs from peer self – esteem. Maintenance of smoking behaviour was predicted at best from Q.S.L. and of drinking behaviour from peer self – esteem. None of the factors studied in the present research were found to predict significantly maintenance of drug use. The above results suggest that experimenting with different substances and becoming a regular user is subject to various different factors. However, Q.S.L., school stress and peer self – esteem seem to be the core factors in the experimentation and maintenance of

substance use in general, since they were repeatedly found to be associated with substance use across different consumption levels (experimentation, maintenance).

Since overall it was found that the best predictors of substance use were school stress, Q.S.L. and peer self – esteem, two of these factors being predominantly school related, this indicates that schools could play a very important role in substance use prevention and intervention. Brook et al. (1989) have also reported that school climate could be associated with drug involvement. They suggested that ineffective teaching, the presence of inattentive and disruptive students were positively related with greater substance use. Schools could facilitate the prevention of substance use by improving Q.S.L. and reducing levels of school stress. Improvement of Q.S.L. could be enhanced by identifying the particular needs that pupils may have in relation to various Q.S.L. domains (i.e. support) and then to take appropriate action to improve these areas. Also the use and implementation of certain school - related, stress - management strategies could facilitate reduction of the levels of school stress. When it comes to the relationship between self – esteem and substance use, Kaplan et al. (1982) proposed that people who suffer from low general self – esteem, may seek out environments that reinforce substance use or other maladaptive behaviours and, Leary et al (1995) have reported that substance use may blunt negative self - feelings. Yarnold (1992) has also stressed that drug use is strongly driven by peer – influences. It was successfully shown in the past that the likelihood of drug use is increased when there is a considerably high number of drug users in the social environment (Dembro et al., 1981) and when peers are in favour of drug use (Ried et al., 1986).

Prevention programmes run by schools might also incorporate peer self – esteem as means of reducing substance use. In well-structured sessions, class scenarios could be modelled on how peers are pressuring the use of substances. Facilitators then would

be able to "educate" pupils how they would effectively resist peer – pressure (see also Flannery et al., 1994). Sessions like this can boost coping – skills related to peer pressure (see also Carvajal et al., 1998). Since peer self – esteem was found associated with substance use, peer education programmes regarding substance use could be also considered as means for preventing substance use. Hansen (1992) found that social influence programmes are of the most successful in preventing the onset of substance use.

However, controlling use of substances following stage models (i.e. Flay et al., 1983) should include targeting those factors that were found to be responsible for the use of different substances in different stages. This means that early / primary prevention (tried vs. not groups), or secondary prevention (experimental vs regular use) should incorporate the specific factors found to affect them, across substances. Nevertheless, it may be important to add the majority of studies that have investigated stages of substance use have been based on longitudinal data, whereas the present study is a cross – sectional one. Verification of the present findings requires further research, employing longitudinal designs.

Although the present project enlightened many of the issues concerning the use and maintenance of use of tobacco, alcohol and drugs in adolescents, some questions have been left unanswered. For example, the location where different substances are being consumed, distributed or purchased may be a quite important factor (e.g. Hussong et al., 2000), and may be associated with the factors studied in the present study.

In addition, the present research has lacked information concerning the type of alcohol and drugs that pupils consume. It is well known that substances differ in the amount of harm they cause, which may be an important issue in the area of well - being. Finally, it is also important noting that the present study has not used measures

specifically designed to assess aspects of substance use. On the other hand, self – reported data, used by the present research, may suffer from lack of reliable responses, especially in a sensitive topic such as substance use. In addition, data used in the present research were derived from two schools only, thus the present results could not be generalised to the population of pupils in Scotland.

Moreover, family factors should be investigated by future research in relation to substance use since family represents the other most important area, apart from school, where young adolescents interact. Future research should also focus on comparing the effects of family and school on substance use and facilitate the development of prevention and interventions programmes, which take into account both family and school factors. This suggestion becomes evident if we take into account the effects of family self – esteem on substance use found in present research.

Part G – Summary of the Main Findings Practical Implications and Recommendations for Future Research

Chapter 11: Summary of the Main Findings, Practical Implications and Recommendations for Future Research.

11.1 Introduction

The present thesis aimed to investigate what constitutes school satisfaction, its correlates and factors that are associated with school satisfaction, in secondary school children. For the purposes of the study a series of seven cross – sectional studies were conducted.

Since previous instruments regarding Q.S.L. were limited in scope and predominantly restricted to university populations, a new instrument that measures school satisfaction was firstly developed and tested. The new scale and its psychometric properties were described in chapter 1. Secondly, some of the factors associated with school satisfaction were examined. Chapter 2 compared the effects of demographics, school stress, well – being and personality factors (self – esteem, locus of control and affectivity) on Q.S.L. The results of a cross – cultural study regarding correlates and predictors of Q.S.L. between Scotland and Greece were presented in chapter 3. In addition, three main school issues were examined in association with school satisfaction, which were school performance (chapter 7), school misbehaviour (chapter 8) and school bullying (chapter 9). Although, school satisfaction was the variable of interest and studied in relation to the three aforementioned areas, other factors such as demographics, school stress, well – being and personality (self – esteem, locus of control, affectivity) were also studied as correlates / predictors / in relation to these three areas and in conjunction with school satisfaction. This design has enabled not only to check whether school satisfaction is associated with the aforementioned school issues, but also how strong this association was when compared with the associations between the same issues and other factors. The same

design was also used in chapter 10, that aimed to compare Q.S.L. and other school, well – being and personality factors regarding their relation with substance use.

The purpose of the current chapter is to discuss the general findings of the thesis, as these arose from its different chapters and overall. Limitations of the present research, its practical implications, as well as areas that need to be further investigated, by future research, will also be discussed. Three main areas were approached in the present thesis, which are firstly the construction of a school satisfaction scale and associative factors of school satisfaction, secondly school satisfaction and school factors / issues and finally school satisfaction and substance use. The present chapter discusses these three areas separately and overall in relation to main findings, limitations and avenues for future research.

11.2 School satisfaction: Its construction and correlates

Chapters 4 and 5, aimed to discuss the construction of a new Q.S.L. scale and a model of Q.S.L. that included demographics, school stress, well – being and personality factors. In chapter 6 a cross – cultural comparison between Scotland and Greece regarding Q.S.L. levels and its correlates was discussed. As noted in chapter 5, previous research on British samples regarding Q.S.L. and Q.S.L. instruments, especially devised for secondary school pupils, has been rather limited.

One of the innovations of the new Q.S.L. scale is that it was based on school performance indicators (areas of assessing quality of services provided by schools), as these defined by the Scottish Office. In addition, previous scales have also been predominantly based on University populations, whereas the Q.S.L. areas studied in such scales, may have included not only school factors (e.g. family issues). The present Q.S.L. scale followed a pupil – centred perspective, as it is the pupils and not

the school that make the quality assessment in various school domains. Furthermore only school related Q.S.L. domains were chosen to be included in the present scale. Previous literature presented in chapter 5 has suggested that Q.S.L. could be associated with various factors including demographic, school and personality factors. The study described in chapter 5 was incorporated a selection of the above clusters of factors to be studied in relation to Q.S.L. Such selection has been predominantly based on previous literature regarding Q.S.L.

11.2.1 Main findings

- The new Q.S.L. scale proved to be an easy to use, reliable and valid instrument, although there is a need to establish further its psychometric properties. It may also be important to note that a high reliability coefficient of the Q.S.L. scale was also obtained in the Greek sample.
- Studying the demographic (school, school grade, gender), school (school – stress) and personality (self – esteem, affectivity, locus of control) predictors of Q.S.L., it was found that demographic factors were the weakest predictors of Q.S.L. School stress was found to explain 16.9% of the Q.S.L. variance. However, overall, the strongest predictor of Q.S.L. was personality, which was found to explain 37.7% of the Q.S.L. variance in total (self – esteem total, affectivity). It was also found that from the individual factors, the strongest predictor of Q.S.L. was school self – esteem as it explained 28.5% of the Q.S.L. variance, followed by positive affectivity (24.7%). The high association between Q.S.L. and personality factors provided some grounds for conceptualising Q.S.L. as a trait rather than a state.
- The high association between Q.S.L. and personality factors was also highlighted in the cross – cultural study between Scotland and Greece. For both samples

positive affectivity was the best predictor of Q.S.L. Another important finding regarding this cross - cultural study was that Scottish pupils obtained significantly higher scores in relation to Q.S.L. total, indicating higher levels of Q.S.L. Scottish pupils also obtained significantly higher means in all Q.S.L. domains apart from the Objective Environmental factors domain, where Greeks obtained a higher mean, indicating higher levels of satisfaction with this domain.

11.2.2 Limitations of the studies and recommendations for future research

Although the new Q.S.L. instrument has been found to have good psychometric properties, such properties need to be tested further by future research. This is so because the sample that was used for the standardisation of the scale may be criticised as rather small for a standardisation study, and in particular, a rather small percentage of 6th graders included. Additionally, lower grades (1st to 3rd) were not included in the sample of the cross – cultural study. When it comes to the study of correlates of Q.S.L., although demographics, school stress and personality were investigated in relation to Q.S.L., other factors that may have an important impact on Q.S.L., also require to be considered in future research (e.g. family attitudes towards schooling). Some methodological biases regarding the cross – cultural study, raise some difficulties in accepting the higher levels of Q.S.L. of Scottish pupils in comparison to the Greek as true. The most important of them may be the construction of Q.S.L. scale, used with both samples, but based on performance indicators devised by Scottish educational authorities. It could be argued that Greek authorities may value different areas and if such issues had been included, this would have changed the results. Therefore, further cross – cultural research may be required to confirm the findings.

11.2.3 The practical implications of the research

The present Q.S.L. scale could be used by individual schools in order to assess any areas of satisfaction or dissatisfaction of pupils within several school key areas. In larger scale projects the instrument might be used for investigating and identifying common areas across schools that might be a source of satisfaction or dissatisfaction for pupils, thereby enabling policy makers to enhance the quality of services provided. The scale could also be used to identify any disadvantaged areas in schools that require interventions to be applied in order to improve, when it is necessary, and to identify school - related research priorities for the future. The Q.S.L. scale could also be used with caution in Greece, as high reliability coefficients were found, although again the present findings need to be tested further.

Since Q.S.L. was highly associated with personality factors and especially school self – esteem such a factor should be carefully considered when enhancement of Q.S.L. is concerned. Several methods could be applied in order to increase school self – esteem. The use of positive attitude by teachers towards pupils appeared as quite important in increasing school self – esteem.

11.3 School satisfaction and school factors

In part D of the thesis the association between Q.S.L. and self – rated school performance, school punishment and bullying / victimisation, in conjunction with other demographic, school, well – being and personality factors was investigated.

With regard to school performance, previous research has suggested that it is associated with various demographic, school, well – being and personality factors. However, no data were available for self – rated performance. Although there has been some evidence that school factors may be associated with school performance

(e.g. Al – Methen and Wilkinson, 1985), no study has been found assessing the relationship between Q.S.L. and self – rated performance, at least in the same depth as the present thesis has approached Q.S.L. In chapter 7, the association between Q.S.L. and other factors with self – rated performance was investigated. However, such investigations took place at two levels, separately for each syllabus subject and overall. It was one of the innovations of the present research to investigate associations between various factors and self – rated performance in different syllabus subjects, in a single study.

Previous research regarding the correlates of school misbehaviour has predominantly focused on attitudes towards discipline (e.g. Caffyn, 1989), effectiveness of disciplinary methods (e.g. Houghton et al., 1990) and other school related factors. One of the main gaps in previous research was a lack of literature regarding the association between school misbehaviour and demographics, school and personality factors, in comparison, in order to identify best predictors of school misbehaviour. A study like this, however, was described in chapter 8.

In chapter 9, the association between Q.S.L. with bullying and victimisation, in conjunction with other factors, was investigated. However, in this chapter bullying / victimisation was approached in two ways. Firstly, similarities and differences between bullies and victims in relation to Q.S.L. and other school, demographic, well – being and personality factors were identified. In addition, in this chapter bullies and victims were investigated as one group, in order to identify similarities of those involved in either bullying and / or victimisation, as opposed to those never involved.

11.3.1 Main findings

- Q.S.L. was found to be associated with higher self – rated performance in science only, but it was not its best predictor, when compared with other demographic,

school, well – being and personality factors regarding their strength of their association towards self - rated performance in this subject. No other significant associations between Q.S.L. and other school subjects were found. Another important finding of this study was that different factors predict at best different self – rated performance across individual subjects and performance overall. Gender was found the best predictor of self rated performance in English and Arts. Levels of well – being found to predict at best self – rated performance in maths and science. The best predictors of overall self – rated performance were negative affectivity and school self – esteem.

- Just like the association between Q.S.L. and self – rated school performance, Q.S.L. was found to be associated with school misbehaviour. It was found that those who had misbehaved in class presented with significantly lower levels of Q.S.L. However, when Q.S.L. was compared with other demographic, school, well – being and personality factors regarding their predictive value towards these variables, it was found that the best predictor of school misbehaviour was gender, with boys being more likely to misbehave in school than girls. The significant role of gender on school misbehaviour is supported by previous research (e.g. McFadden et al., 1992).
- Although Q.S.L. was not found to be the best predictor of self – rated performance and misbehaviour, it was found to be the strongest predictor of overall involvement of bullying and / or victimisation, alongside with school stress. These results indicate that school factors could play an important role in bullying and / or victimisation. On the other hand, although it was found that school factors were associated with the bullying phenomenon as a whole, demographics (e.g. gender) and peer self – esteem, were found able to

differentiate between bullying and victimisation. Overall results indicate that bullying and victimisation shared some similarities as well as some differences.

11.3.2 Limitations of the studies and recommendations for future research

The main criticism regarding the self – rated performance study, refers to the collection and use of self – rated data. One may argue that pupils may have not reported the actual grades they get in school. Therefore, further research is needed to confirm the findings of this piece of research. Such research should probably be based on actual data from school files, as far is performance is concerned. The limitation regarding the use of self – rated data could also apply to the studies that investigated school misbehaviour and bullying / victimisation as well. In addition, there where some issues regarding the present study of bullying / victimisation that should be investigated further as they were rather neglected by the present research. Frequency of bullying and victimisation was not investigated in the present research in relation to Q.S.L., and one could argue that it could be associated with the levels of Q.S.L. It is also worth noting that future research regarding bullying and victimisation could probably focus on the role of peer self – esteem on bullying and victimisation, as it was identified as the most important factor that differentiates bullying from victimisation. Although it was found that bullies have higher levels of peer self – esteem, further research is needed to highlight the role of peers, in general, on bullying and victimisation. Such research could probably investigate interaction patterns between bullies, victims and peers, in order to highlight aspects of peer behaviour that may cause and / or retain the problem.

11.3.3 The practical implications of the research

Since no single factor was found to account for self – rated performance across academic subjects and overall, it becomes rather difficult to make one single

suggestion to improve performance, if required. The findings of the present research suggested that when this is the case individual academic subjects should be approached separately. However, overall performance was found to be predicted at best by school self – esteem and negative affectivity. The fact that school self – esteem, which is a school factor, is the best predictor of overall self – rated performance implies that school might play a crucial role in pupils' performance. However, negative affectivity could also be an out of school factor which implies that school performance is not also subject to school, but also to out of school factors as well. The interactive pattern of school and non-school factors in relation to school performance should be investigated further in the future.

School misbehaviour is one of the problems that is rising (e.g. Parson and Howelett, 1986), providing the need to educational authorities to implement interventions to tackle the problem. According to the results of chapter 8, there are various factors, including Q.S.L., that are associated with misbehaviour in school. However, the best predictor was found to be gender, therefore careful consideration should be given to this factor, as far as policies regarding school misbehaviour are concerned. It is quite important to note though that such gender differences regarding behaviour in school could be also socially constructed (e.g. higher parental tolerance towards behaviour of boys; Bleach, 1996). Therefore, out - of - school factors are quite important in shaping children's behaviour in school. Collaboration between school and family seems to be the best avenue to tackle the problem.

Since overall involvement in bullying and victimisation was found to be predicted at best by Q.S.L. and school stress, it indicates that school factors could be quite important in tackling the problem overall (see also e.g. Wise and Upton, 1998). Exploring and dealing with any school areas that pupils have identified as

unsatisfactory, might have a positive effect on prevalence rates of bullying / victimisation, in a given school. The application of school related stress – management techniques by teachers during classes may also help to tackle the problem. Finally, peer self – esteem could also be used as an element of intervention strategies regarding bullying and victimisation, as it was also found a key factor in the problem.

11.4 School satisfaction and substance use

Chapter 10 aimed to identify factors associated with experimentation and maintenance of use of alcohol, tobacco and illicit drugs. Such factors have included demographics, school, well – being and personality. Previous research has suggested that experimentation and maintenance of use of substances is associated with various factors, including Q.S.L. (e.g. Newcomb et al., 1986).

11.4.1 Main findings

- Q.S.L. was found to predict significantly experimentation with smoking, alcohol and drugs as well as maintenance of smoking and alcohol use. However, Q.S.L. was found the best predictor only of smoking maintenance, when it was compared with other demographic, school, well – being and personality factors, regarding their effects on experimentation and maintenance of different substances. It was also found that experimentation with smoking or alcohol could be predicted at best from school stress and experimentation with drugs from peer self – esteem. Maintenance of alcohol use was predicted at best by peer self – esteem.

11.4.2 Limitations of the studies and recommendations for future research

There were some questions that should be investigated further in relation to experimentation and maintenance of use of substances. For example the actual location where such substances are purchased and consumed was not investigated in the study discussed in chapter 10. Another important question that should be investigated further is the association between different alcohol and drug types in relation to various factors. One could claim that different substances may have different effects on well – being.

11.4.3 The practical implications of the research

In chapter 10 it appeared that school factors such as school stress and Q.S.L., could play an important role in experimentation and maintenance of substance use, although peer self – esteem was also found to be a significant factor. These results indicate that by improving the levels of Q.S.L. and reducing the levels of school stress, a decrease in prevalence and frequency of substance use may be achieved. The significant association between experimentation with drugs and peer self – esteem, again highlights the role of peers in problems that adolescents may confront. Therefore, peer self – esteem should be probably part of intervention programs aiming to decrease substance use prevalence and frequency of consumption.

11.5 Summary of conclusions

One of the main purposes of the present thesis was to investigate the associations between Q.S.L. and school performance, school misbehaviour, school bullying and substance use. It was found that Q.S.L. was associated with self – rated performance in science, school misbehaviour, experimentation with smoking, alcohol and drugs and maintenance of alcohol use, although it was not their best predictor. However,

Q.S.L. was the best predictor of overall involvement in bullying and / or victimisation, and smoking maintenance. Such multiple associations between Q.S.L. and other factors lead to the following general conclusions:

- Firstly, there is a wide range of factors that Q.S.L. is associated with, and despite it being a predominantly school factor, it could significantly predict school (e.g. misbehaviour) factors and factors that have school and out - of - school manifestation (e.g. substance use). A possible explanation for such complex associations between Q.S.L. and other school and non – school issues may be that the best correlate of Q.S.L. is personality and particularly self – esteem. Personality factors also have been found to be associated with most of the above factors. Therefore, one could argue that personality is the mediator between Q.S.L. and the above factors / issues.
- Secondly, there are factors that Q.S.L. forms stronger associations with (e.g. bullying) than others (e.g. self - rated performance). This finding indicates that Q.S.L. tends to function as any other psychological factor (e.g. personality), which may form stronger associations with some variables than with others. Although Q.S.L. is part of many behavioural manifestations, it has the tendency to affect more strongly some of these. This phenomenon may be due to the fact that it is predominantly associated with personality factors and personality has been shown to hold stronger associations with particular behavioural outcomes. In addition, from the present findings, we are unable to conclude on the exact relationship between Q.S.L. and Q.O.L. From the strong association between Q.S.L. and general well – being found in the present thesis, it could be suggested that the two might be highly interrelated. However, further research is required to verify this hypothesis, incorporating controlled comparisons between the two. It

may be also important to add that both Q.O.L. (e.g. Diener, 1984) as well as Q.S.L. formulate high associations with personality factors, which could also be an indication of their association. The Q.S.L. associations with various behavioural phenomena may also suggest that these may be parts of Q.S.L., therefore they should be included as domains in future Q.S.L. scales. Again at the moment we are unable to conclude whether this approach for future research is a correct one. This is predominantly due to failure of past research to provide a widely accepted and concrete definition of Q.O.L., that would provide the limits of what exactly constitutes Q.O.L. Therefore, future research should predominantly focus on what Q.O.L. is. Determining what constitutes Q.O.L. exactly would also provide some directions on what constitutes Q.O.L. in schools (i.e. Q.S.L.), or at least this new evidence on Q.O.L. could be used as an indication of how Q.S.L. should be approached.

- Thirdly, the fact that Q.S.L. is associated with such important issues, that both pupils and schools of secondary education may confront, implies the need for schools and educational authorities to consider Q.S.L. as an important aspect of schooling and attempt to maintain high levels of Q.S.L. in order to achieve positive school outcomes. Future research could also focus on intervention strategies aiming at enhancing Q.S.L. In such interventions, however, personality should be carefully considered and implemented.
- Fourthly, Q.S.L. should be given more attention in studies that investigate the above issues and also should be included in intervention strategies aiming to tackle the above issues / problems. This is especially the case for the issues / problems that Q.S.L. was found to best predict when compared with other factors (e.g. bullying).

When it comes to summarise the most important findings regarding the correlates of Q.S.L., it appears from chapter 5 that Q.S.L. is associated with both demographics and personality factors. However, it has been found that Q.S.L.'s best predictor from all the demographics studied in relation to Q.S.L. was age / school year and from the personality factors the best predictor was school self – esteem. The association between age and Q.S.L. implies that it is a dynamic concept that changes over the school career of a pupil. From the strong association between Q.S.L. and school self – esteem we could conclude firstly that perceptions about self in the school setting could play a very important role in shaping school satisfaction more than any other factor. Secondly, if we accept that school self – esteem remains quite stable over the school years, as many personality factors do, then it becomes evident that levels of Q.S.L. may also remain stable over time. Thus, the next question may be whether schools have the power to intervene, in order to increase the levels of Q.S.L., if necessary. On the other hand, how is it possible for Q.S.L. to be both dynamically changeable and stable, at the same time. It would be rather scientifically naïve to adopt "a black or white" attitude when it comes to such complex and multifactorially determined notions as Q.S.L. Certainly more research is required to determine such aspects of Q.S.L. with explicit focus on how perceptions of Q.S.L. are acquired, mentally represented and reported when asked. From our data it appears that Q.S.L. has a tendency to remain reasonably stable over time as its best predictor was school self – esteem, which is a personality factor. However, although there is a tendency to believe that personality factors remain stable over time, they could probably change by use appropriate interventions. On the other hand, little is known about how specific areas of self – esteem, like school and family, are developed and evolved throughout ones' life. A preliminary assumption, regarding whether school self – esteem is stable

or it changes over time, would be that it might vary through the school years as pupils become mature and move towards adulthood. However, such assumptions need to be tested by future research. Furthermore, self – esteem may be very much a social concept indicating that is formed within a social context and changes according to the social effects.

Nevertheless, it may be important to mention that such complexity that accompany Q.S.L. should not deter research but rather should ensure that future research designs are of adequate sophistication. From the present thesis it appears that Q.S.L. seems like a canvas, a "background" factor, that colours and helps to stand out different aspects of school life. It may be a "latent" concept, in a sense that its effect is manifested via other behaviours and phenomena. However, it is always there to underline, illustrate and, seemingly, determine the very presence and progress of certain school behaviours and tendencies.

Declaration of Thesis Publications

In accordance with Section A7.4 of the regulations for the Degree of Doctor of Philosophy at the University of Stirling, a candidate must state the status of work published, in press, or submitted for publication that is included in the thesis.

In accordance with this regulation, this is the status of the current thesis with regards to publication at the time of submission:

In press:

Chapter 4:

published as Karatzias, A.; Power, K.G. & Swanson, V. "Quality of School Life: Development and Preliminary Standardisation of an Instrument Based on Performance Indicators in Scottish Secondary Schools" to *School Effectiveness and School Improvement Journal. An International Journal of Research, Policy and Practice.*

Chapter 5:

published as Karatzias, A.; Power, K.G.; Flemming, J.; Lennan, F. & Swanson, V. "The Role of Demographics, Personality Variables and School Stress on Predicting School Satisfaction / Dissatisfaction: Review of the Literature and Research Findings" to *Educational Psychology. An International Journal of Experimental Educational Psychology.*

Chapter 6:

published as Karatzias, A.; Papadioti – Athanasiou, V.; Power, K.G. & Swanson, V. "Quality of School Life: Correlates and Predictors. A Cross - Cultural Study Between Greek and Scottish Secondary School Pupils" to *European Journal of Education.*

Chapter 9:

published as Karatzias, A.; Power, K.G. & Swanson, V. "Bullying and Victimisation in Scottish Secondary Schools: Same or Separate Entities?" to *Aggressive Behaviour.*

Chapter 10:

published as Karatzias, A.; Power, K.G. & Swanson, V. "Predicting Use and Maintenance of Use of Substances in Scottish Adolescents" to *Journal of Youth and Adolescence.*

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Appendix I:

Information letter that accompanied the set of scales

Dear pupil,

We would like to ask for your assistance in a research project concerning life at school. Very little information is available about how pupils feel about school. This study aims to collect information about your school life in general. We hope this information will help to improve school life in future. We would like to ask your help in completing this questionnaire. Taking part in this survey is completely voluntary, anonymous and confidential. Please complete all parts of the questionnaire.

Many thanks for taking part.

Principal Researcher: Mr A. Karatzias

Supervised by: Professor K.G.Power
Dr V. Swanson

Appendix II:

Demographics

The following questions are designed to help us to understand your family background, your life style and some information about your school life. Please be sure that you answer all the statements.

1. Year / Class_____ 2. Male ❑ Female ❑ 3. Age_____ (in years)

4. Did / Does your father / carer go to higher education (University or College)? (tick only one)

Yes ❑
No ❑
Don't know ❑

5. Did / Does your mother / carer go to higher education (University or College)? (tick only one)

Yes ❑
No ❑
Don't know ❑

6. What is your father's or carer's job? _____

7. What is your mother's or carer's job? _____

Appendix III:

Quality of School Life Scale

elow there are a number of statements about your school life. Please circle the number which best escribes how strongly you agree or disagree with each statement, using the scale below. Try to keep in ind that all **the statements refer to the school year you are in now**. There are no right or wrong nswers. Please be sure you answer all the statements. There is an example below.

1 = Strongly Disagree
2 = Disagree
3 = Agree
4 = Strongly Agree

Example

For example if you were to reply to the item "I enjoy the class work".
If you circle **1** this means that you **strongly disagree** with the statement that class work is enjoyable to you.
If you circle **2** this means that you **disagree** with the statement that class work is enjoyable to you.
If you circle **3** this means that you **agree** with the statement that class work is enjoyable to you.
If you circle **4** this means that you **strongly agree** with the statement that class work is enjoyable to you.

1. I am satisfied with the variety of subjects being taught at school.	1	2	3	4
2. I am satisfied with the number of subjects I take at school.	1	2	3	4
3. I am satisfied with the timetable at school.	1	2	3	4
4. I enjoy the day to day activities in the class.	1	2	3	4
5. I enjoy the class work.	1	2	3	4
6. I am satisfied with my performance on the class work.	1	2	3	4
7. I am satisfied with the opportunities I have to participate in class.	1	2	3	4
8. I feel I can deal with the tasks set in class work by teachers.	1	2	3	4
9. I enjoy the way I am taught during the class.	1	2	3	4
10. I am satisfied with the answers to my questions given by teachers.	1	2	3	4
11. I enjoy talking with teachers during class.	1	2	3	4
12. I enjoy the homework set by teachers.	1	2	3	4
13. I like the way that tasks move from topic to topic during class.	1	2	3	4
14. I like the chance that teachers give me to explore in depth different topics.	1	2	3	4
15. When I leave class I feel that all my questions have been answered.	1	2	3	4
16. I am satisfied with the amount of time spent on different tasks during class work at school.	1	2	3	4
17. Classes at school make me think a lot.	1	2	3	4
18. I enjoy learning new and different things at school.	1	2	3	4
19. I feel that knowledge I gain at school makes me think about things.	1	2	3	4
20. I believe I have the chance to exchange knowledge with others during class.	1	2	3	4
21. I feel free to choose between different tasks and activities at school.	1	2	3	4
22. I find the experiences of school interesting for me as a person.	1	2	3	4
23. I feel that teaching at school fits in with my own way of learning new things.	1	2	3	4
24. I am satisfied with the out - of - class activities at my school.	1	2	3	4

1 = Strongly Disagree
2 = Disagree
3 = Agree
4 = Strongly Agree

25. I feel that tests and exams are the proper way of assessing my performance at school.	1	2	3	4
26. I feel that I get the grades I deserve at school.	1	2	3	4
27. I feel that teacher's comments given with my grades help me to improve my work at school.	1	2	3	4
28. I am satisfied with my performance in tests / exams.	1	2	3	4
29. I feel that I am treated with respect by the staff at school.	1	2	3	4
30. I feel I get praised enough when I achieve something at school.	1	2	3	4
31. I feel that school rules leave me space to express myself.	1	2	3	4
32. I feel welcome at school.	1	2	3	4
33. I enjoy being a student	1	2	3	4
34. I am proud of my school.	1	2	3	4
35. I feel that my own expectations are well met at school.	1	2	3	4
36. I am satisfied with the interest my parents show for my life at school.	1	2	3	4
37. I feel that my teacher / other school staff are there for me when I have problems at school.	1	2	3	4
38. I feel that my friends are there for me when I have problems at school.	1	2	3	4
39. I am satisfied with the support services that school provides me when I have problems.	1	2	3	4
40. I feel that my parents are there for me when I have problems at school.	1	2	3	4
41. I feel that school helps me to understand my strengths and weaknesses.	1	2	3	4
42. I feel that school helps me to develop new skills.	1	2	3	4
43. I feel that school helps me to choose a future career.	1	2	3	4
44. I feel that school helps me to meet the demands of a future job.	1	2	3	4
45. I am satisfied with the relationship I have with my teachers, in general.	1	2	3	4
46. I am satisfied with the relationship I have with non teaching school staff.	1	2	3	4
47. I am satisfied with the relationship I have with other pupils at school.	1	2	3	4
48. I am satisfied with the relationship I have with my friends at school.	1	2	3	4
49. I am satisfied with the sport facilities at my school.	1	2	3	4
50. I feel that my school is adequately furnished.	1	2	3	4
51. I am satisfied with the availability of social areas to meet with friends at break times.	1	2	3	4
52. I feel that food services at my school are satisfactory.	1	2	3	4
53. I find decoration at my school pleasant.	1	2	3	4
54. I find the equipment at school adequate.	1	2	3	4
55. I feel that my school is quite near my home.	1	2	3	4
56. I feel safe at school.	1	2	3	4

Please list below what you think could make your life at school better?_____

Appendix IV:

Student Stress Inventory (Alban Metcalfe et al., 1982)

We would like you to tell us, as a pupil, how much each of the 40 following items **is a source of stress to you**. Please circle the number that best describes how you feel about each item, using the following scale. There are no right or wrong answers. Please be sure you have answered each item. If an item does not apply to you, circle 0. There is an example below.

0 = No Stress At All
1 = Slight Stress
2 = A Lot of Stress
3 = Extreme Stress

Example
For example if you were to reply to the item "how stressful is the homework you have to do?"
If you circle **0** this means that homework is **not at all stressful** to you.
If you circle **1** this means that homework is **slightly stressful** to you.
If you circle **2** this means that homework is **a lot of stress** to you.
If you circle **3** this means that homework is **extremely stressful** to you.

How stressful are each of the following for you?

1. the number of pupils in my school	0	1	2	3
2. older children bully young ones	0	1	2	3
3. too many compulsory subjects on the time table	0	1	2	3
4. too much uninteresting homework	0	1	2	3
5. teachers who talk at pupils rather than to them	0	1	2	3
6. some pupils being set homework and others not	0	1	2	3
7. homework's deadlines too rigid	0	1	2	3
8. no place in school to do homework or private study	0	1	2	3
9. system of grades for poor work	0	1	2	3
10. system of grades for good work	0	1	2	3
11. teachers who are too easy going	0	1	2	3
12. teachers who are too strict	0	1	2	3
13. understanding questions in examinations and tests	0	1	2	3
14. expense of school holidays abroad	0	1	2	3
15. help with choice of career	0	1	2	3
16. time taken to travel to school	0	1	2	3
17. locker / cloakroom accommodation	0	1	2	3
18. few suitable jobs for school leavers	0	1	2	3
19. petty rules and regulations at school	0	1	2	3
20. being treated like young children.	0	1	2	3
21. getting along with teachers	0	1	2	3
22. cost of school uniform	0	1	2	3
23. losing friends as you move up the school	0	1	2	3

0 = No Stress At All
1 = Slight Stress
2 = A Lot of Stress
3 = Extreme Stress

24. making new friends as you move up the school	0	1	2	3
25. relevance (usefulness) of subjects studied at school	0	1	2	3
26. formal teaching methods	0	1	2	3
27. punishment for lateness	0	1	2	3
28. progress reports and exam reports to parents	0	1	2	3
29. being ridiculed for poor work	0	1	2	3
30. confidentiality of information given to teachers	0	1	2	3
31. little knowledge of standards required by the teacher	0	1	2	3
32. lack of / insufficient time in school for private study	0	1	2	3
33. high levels of noise in the school	0	1	2	3
34. personal problems	0	1	2	3
35. parents over anxious about my school work	0	1	2	3
36. consequences of letting down my parents	0	1	2	3
37. conflicting attitudes to life between pupils and parents	0	1	2	3
38. conflicting attitudes to life between parents and school	0	1	2	3
39. when friends repeatedly get high marks for their work	0	1	2	3

Appendix V:

P.G.I. General Well – being Scale (Verma et al., 1983)

Below there are a number of statements about how you have felt **since the school year began**. Please tick the answer which you think most nearly applies to you. Please make sure you answer all the statements.

Example
For example, if you were to reply to the item "feel useful / wanted".
If you tick **"not at all"** this means that you **don't feel at all useful / wanted**.
If you tick **"rarely"** this means that you **rarely feel useful / wanted**.
If you tick **"often or most of the time"** this means that you **usually feel useful / wanted**.
If you tick **"frequently or all the time"** this means that you **always feel useful / wanted**.

I usually...	**Not at all**	**Rarely**	**Often or most of the time**	**Frequently or all the time**
1. feel interested in life most of the time.	❑	❑	❑	❑
2. feel bothered by illness or pain.	❑	❑	❑	❑
3. feel satisfied with life in general.	❑	❑	❑	❑
4. feel energetic most of the time.	❑	❑	❑	❑
5. feel fairly happy in my personal life.	❑	❑	❑	❑
6. feel bothered by anxiety or worry.	❑	❑	❑	❑
7. feel productive, creative.	❑	❑	❑	❑
8. feel cheerful most of the time.	❑	❑	❑	❑
9. feel as having a sense of belonging.	❑	❑	❑	❑
10. feel easily tired.	❑	❑	❑	❑
11. feel in good spirits.	❑	❑	❑	❑
12. feel depressed or dejected.	❑	❑	❑	❑
13. feel easily irritated most of the time.	❑	❑	❑	❑
14. feel relaxed most of the time.	❑	❑	❑	❑
15. sleep fairly well.	❑	❑	❑	❑
16. feel in good health.	❑	❑	❑	❑
17. feel emotionally stable most of the time.	❑	❑	❑	❑
18. feel useful, wanted.	❑	❑	❑	❑
19. feel bothered by nervousness.	❑	❑	❑	❑
20. feel in firm control of my behaviour and feelings.	❑	❑	❑	❑

Appendix VI:

Performance Scale

Below there are a number of statements about your experiences at school. Tick the answer that best applies to you. There are no right or wrong answers. Please be sure you answer all the statements.

Your grades at school last year were.... (tick only one for each subject area)

	Does not apply to me	Lower level	Middle level	Upper level
in English	❑	❑	❑	❑
in Maths	❑	❑	❑	❑
in Science	❑	❑	❑	❑
in Geography / History	❑	❑	❑	❑
in Modern Studies	❑	❑	❑	❑
in Arts/ Music / Drama	❑	❑	❑	❑

Appendix VII:

School Punishment Scale

Below there are a number of statements about your experiences at school. Tick the answer that best applies to you. There are no right or wrong answers. Please be sure you answer all the statements.

1. Have you experienced punishment at school since this school year began? (tick only one)

Yes ❑
No ❑

2. If "Yes" what kind of punishment? (tick as many as apply to you)

Detention ❑
Telling off ❑
Forbidding of certain activities / clubs ❑
Exclusion from school ❑
Lines ❑
Extra work ❑
Yellow slip
Other ❑ Please specify_____

Appendix VIII:

Bullying Questionnaire

Below there are a number of statements about your experiences at school. Tick the answer that best applies to you. There are no right or wrong answers. Please be sure you answer all the statements.

1. Have you experienced bullying at school since this school year began? (tick only one)
Yes ❑ If Yes go to question 6
No ❑ If No go to question 8

2. Since this school year began, have you experienced bullying from....(tick as many as apply to you).
A Friend(s) ❑
A pupil(s) in your class ❑
A pupil(s) from another class ❑
Your teacher(s) ❑
Other school staff ❑

3. What kind of bullying have you experienced? (tick as many as apply to you)
Being called names ❑
Having rumours spread about you ❑
Left out of things ❑
Your things damaged ❑
Forced to follow the group or to do things ❑
Being hit ❑
Being threatened ❑
Being teased ❑
Being pushed / shoved ❑
Being punched ❑
Other ❑ Please specify _____

4. Have you bullied anyone at school since this school year began? (tick only one)
Yes ❑ If Yes go to question 9
No ❑ If No go to next page (part 4)

5. Since this school year began, have you bullied....(tick as many as apply to you).
A Friend(s) ❑
A pupil(s) in your class ❑
A pupil(s) from another class ❑
Your teacher(s) ❑
Other school staff ❑ Please specify_____

6. What kind of bullying have you used? (tick as many as apply to you)

Calling names	❑
Spreading rumours about people	❑
Leaving people out of things	❑
Damaging people's things	❑
Forcing people to do what you or your group want to do	❑
Hitting people	❑
Threatening people	❑
Teasing people	❑
Pushing / shoving people	❑
Punching people	❑
Other	❑ Please specify _____

Appendix IX:

Substance Use Scale

Below there are a number of statements about substance use. Tick the answer that best applies to you. There are no right or wrong answers. Please be sure you answer all the statements.

1. Have you ever smoked cigarettes? (tick only one)
Yes ❑ If "Yes" go to question 2.
No ❑ If "No" go to question 4.

2. Do you usually smoke....
Every day ❑
Only a few days a week ❑
Only every few weeks ❑
Once a month or less ❑
Only occasionally ❑

3. If you smoke daily, how many cigarettes do you usually smoke per day?
Please specify _____

4. Have you ever drunk alcohol? (tick only one)
Yes ❑ If "Yes" go to question 5.
No ❑ If "No" go to question 7.

5. Do you usually drink....(tick only one)
Every day ❑
Only a few days a week ❑
Only every few weeks ❑
Once a month or less ❑
Only occasionally ❑

6. How many units do you usually drink per week?
Please specify _____
(1 unit = 1/2 pint beer, 1 glass of wine or 1 measure of spirits)

7. Have you ever used illegal drugs (for example Amphetamines, Ecstasy, Cannabis, Solvents etc.)? (tick only one)
Yes ❑ If "Yes" go to question 10.
No ❑ If "No" go to next page (part 8).

8. Do you normally use illegal drugs.... (tick only one)
Every day ❑
Only a few days a week ❑
Only every few weeks ❑
Once a month or less ❑
Only occasionally ❑

Appendix X:

Hare Self – esteem Scale (Hare, 1985)

The following sentences are designed to find out how you generally feel when you are with other people your age. Please circle the number that best describes how you feel about the sentence, using the following scale. There are no right or wrong answers. Please be sure you answer all the statements.

a = Strongly Disagree
b = Disagree
c = Agree
d = Strongly Agree

1. I have at least as many friends as other people my age.	a	b	c	d
2. I am not as popular as other people my age.	a	b	c	d
3. In the kinds of things that people my age like to do, I am at least as good as most other people.	a	b	c	d
4. People my age often pick on me.	a	b	c	d
5. Other people think I am a lot of fun to be with.	a	b	c	d
6. I usually keep to myself because I am not like other people my age.	a	b	c	d
7. Other people wish that they were like me.	a	b	c	d
8. I wish I were a different kind of person because I'd have more friends.	a	b	c	d
9. If my group of friends decided to vote for leaders of their group I'd be elected to a high position.	a	b	c	d
10. When things get tough, I am not a person that other people my age would turn to for help.	a	b	c	d

The following sentences are designed to find out how you generally feel when you are with your family. Please circle the number that best describes how you feel about the sentence, using the following scale. There are no right or wrong answers. Please be sure you answer all the statements.

a = Strongly Disagree
b = Disagree
c = Agree
d = Strongly Agree

1. My parents are proud of me for the kind of person I am.	a	b	c	d
2. No one pays much attention to me at home.	a	b	c	d
3. My parents feel that I can be depended on.	a	b	c	d
4. I often feel that if they could, my parents would trade me in for another child.	a	b	c	d
5. My parents try to understand me.	a	b	c	d
6. My parents expect too much of me.	a	b	c	d
7. I am an important person to my family.	a	b	c	d
8. I often feel unwanted at home.	a	b	c	d
9. My parents believe that I will be a success in the future.	a	b	c	d
10. I often wish that I had been born into another family.	a	b	c	d

The following sentences are designed to find out how you generally feel when you are in school. Please circle the number that best describes how you feel about the sentence, using the following scale. There are no right or wrong answers. Please be sure you answer all the statements.

a = Strongly Disagree
b = Disagree
c = Agree
d = Strongly Agree

1. My teachers expect too much of me.	a	b	c	d
2. In the kinds of things we do in school, I am as good as other people in my classes.	a	b	c	d
3. I often feel worthless at school.	a	b	c	d
4. I am usually proud of my report card.	a	b	c	d
5. School is harder for me than most other people.	a	b	c	d
6. My teachers are usually happy with the kind of work I do.	a	b	c	d
7. Most of my teachers do not understand me.	a	b	c	d
8. I am an important person in my class.	a	b	c	d
9. It seems that no matter how hard I try, I never get the grades I deserve.	a	b	c	d
10. All in all, I feel I've been very fortunate to have had the kinds of teachers I've had since I started school.	a	b	c	d

Appendix XI:

Positive and Negative Affect Schedule (Watson et al., 1988)

This scale consists of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to the word. **Indicate to what extend <u>you generally feel</u> this way, that is, how you feel on average**. Use the following scale to record your answers.

1	2	3	4	5
Very Slightly	**A Little**	**Moderately**	**Quite a Bit**	**Extremely**

_____ interested
_____ distressed
_____ excited
_____ upset
_____ strong
_____ guilty
_____ scared
_____ hostile
_____ enthusiastic
_____ proud
_____ irritate
_____ alert
_____ ashamed
_____ inspired
_____ nervous
_____ determined
_____ attentive
_____ jittery
_____ active
_____ afraid

Appendix XII:

Nowicki's – Strickland's Locus of Control Scale for Children (Nowicki and Strickland, 1973)

In the box provided (❑) please tick "Yes" or "No" as it applies to you. These questions have been designed to find out your view of different issues in life. There are no right or wrong answers. Please make sure you answer all the statements.

	Yes ❑	No ❑
1. Do you believe that most problems will solve themselves if you ignore them?		
2. Do you feel that most of the time parents listen to what their children have to say?	❑	❑
3. When you get punished does it usually seem its for no good reason at all?	❑	❑
4. Most of the time do you find it hard to change a friend's (mind) opinion?	❑	❑
5. Do you feel that it's nearly impossible to change your parents mind about anything?	❑	❑
6. Do you feel that one of the best ways to handle most problems is just no to think about them?	❑	❑
7. Do you feel that when a kid your age decides to hit you, there's little you can do to stop him or her?	❑	❑
8. Do you feel that when somebody your age wants to be your enemy there's little you can do to change matters?	❑	❑
9. Do you feel that when someone doesn't like you there's little you can do about it?	❑	❑
10. Do you usually feel that it's almost useless to try in school because most other children are just cleverer than you are?	❑	❑

Appendix XIII:

Information letter that accompanied the set of scales in the Greek sub-sample (in Greek)

Αγαπητέ μαθητή / μαθήτρια,

Πολύ λίγα γνωρίζουμε μέχρι τώρα για το πώς νιώθουν οι μαθητές για το σχολείο τους. Η συγκεκριμένη έρευνα αποσκοπεί στο να συγκεντρώσει πληροφορίες γενικά για τη ζωή στο σχολείο. Ελπίζουμε ότι οι πληροφορίες αυτές θα καλυτερεύσουν τη ζωή σου στο σχολείο. Για το λόγο αυτό θα θέλαμε να ζητήσουμε τη βοήθειά σου με τη συμπλήρωση αυτού του ερωτηματολογίου. Η συμμετοχή στην έρευνα είναι εθελοντική και το ερωτηματολόγιο είναι ανώνυμο και εμπιστευτικό. Παρακαλούμε να συμπληρώσετε όλα τα μέρη του ερωτηματολογίου.

Ευχαριστούμε πολύ για τη συμμετοχή σας.

Μεταπτυχιακός Ερευνητής:
Αθανάσιος Καρατζιάς

Appendix XIV:

Demographics (in Greek)

Οι ακόλουθες ερωτήσεις έχουν σχεδιαστεί για να μας βοηθήσουν να συγκεντρώσουμε κάποιες πληροφορίες σχετικά με σένα και την οικογενειακή σου κατάσταση. Παρακαλώ βεβαιωθείτε ότι έχετε απαντήσει όλες τις ερωτήσεις.

1. Φύλο:
Αγόρι ❑ Κορίτσι ❑

2. Ηλικία:
12 ❑ 13 ❑ 14 ❑ 15 ❑ 16 ❑17 ❑ 18 ❑

3. Τάξη _____

4. Γραμματικές γνώσεις γονέων (<u>βάλε √ μόνο στο ανώτερο στάδιο εκπαίδευσης, που έχει φτάσει ο πατέρας και η μητέρα σου</u>)

Πατέρα		**Μητέρας**	
Δημοτικό	❑	Δημοτικό	❑
Γυμνάσιο	❑	Γυμνάσιο	❑
Λύκειο	❑	Λύκειο	❑
Πανεπιστήμιο	❑	Πανεπιστήμιο	❑
Μεταπτυχιακές σπουδές	❑	Μεταπτυχιακές σπουδές	❑

5. Τι δουλειά κάνει ο πατέρας σου; _____

6. Τι δουλειά κάνει η μητέρα σου; _____

Appendix XV:

Quality of School Life Scale (in Greek)

Οι περιγραφές που ακολουθούν αναφέρονται στη ζωή σου στο σχολείο. Βάλε σε κύκλο τον αριθμό που περιγράφει με τον καλύτερο τρόπο το κατά πόσο συμφωνείς ή διαφωνείς με καθεμιά από τις περιγραφές. Να θυμάσαι ότι **όλες οι περιγραφές αναφέρονται στη σχολική χρονιά στην οποία βρίσκεσαι τώρα**. Δεν υπάρχουν σωστές ή λαθος απαντήσεις. Παρακαλώ σιγουρευτείτε ότι έχετε απαντήσει σε όλες τις περιγραφές. Ακολουθεί ένα παράδειγμα.

Παράδειγμα
Στην περιγραφή "Μου αρέσει η δουλειά που γίνεται στην τάξη":
Εάν κυκλώσετε 1, αυτό σημαίνει ότι **δεν σας αρέσει καθόλου** η δουλειά που γίνεται στην τάξη.
Εάν κυκλώσετε 2, αυτό σημαίνει ότι **δεν σας αρέσει και τόσο** η δουλειά που γίνεται στην τάξη.
Εάν κυκλώσετε 3, αυτό σημαίνει ότι **σας αρέσει αρκετά** η δουλειά που γίνεται στην τάξη.
Εάν κυκλώσετε 4, αυτό σημαίνει ότι **σας αρέσει πάρα πολύ** η δουλειά που γίνεται στην τάξη.

	Διαφωνώ Απόλυτα	**Διαφωνώ**	**Συμφωνώ**	**Συμφωνώ Απόλυτα**
1. Είμαι ικανοποιημένος / η με την ποικιλία των μαθημάτων που διδάσκομαι στο σχολείο.	1	2	3	4
2. Είμαι ικανοποιημένος / η με τον αριθμό των μαθημάτων που διδάσκομαι στο σχολείο.	1	2	3	4
3. Είμαι ικανοποιημένος / η με το εβδομαδιαίο πρόγραμμα στο σχολείο.	1	2	3	4
4. Είμαι ευχαριστημένος / η με τις καθημερινές δραστηριότητες στα μαθήματα.	1	2	3	4
5. Μου αρέσει η δουλειά που γίνεται στη τάξη.	1	2	3	4
6. Είμαι ικανοποιημένος / η με επίδοσή μου στο σχολείο.	1	2	3	4
7. Είμαι ικανοποιημένος / η με τις ευκαιρίες που μου δίνονται για να συμμετέχω μέσα στην τάξη.	1	2	3	4
8. Νιώθω ότι μπορώ να τα καταφέρω με τη δουλειά που μου αναθέτουν οι καθηγητές μου στην τάξη.	1	2	3	4
9. Μου αρέσει ο τρόπος διδασκαλίας στην τάξη.	1	2	3	4
10. Είμαι ευχαριστημένος / η με τις απαντήσεις των καθηγητών στις ερωτήσεις μου.	1	2	3	4
11. Μου αρέσει να συζητώ με τους καθηγητές μου μέσα στο μάθημα.	1	2	3	4
12. Μου αρέσει η δουλειά που μου αναθέτουν οι καθηγητές για το σπίτι.	1	2	3	4
13. Μου αρέσει ο τρόπος με τον οποίο τα διάφορα θέματα διαδέχονται το ένα το άλλο στα μαθήματα.	1	2	3	4
14. Μου αρέσει η δυνατότητα που μου δίνουν οι καθηγητές να εξερευνώ σε βάθος διάφορα θέματα στο σχολείο.	1	2	3	4
15. Όταν φεύγω από την τάξη νιώθω ότι όλες μου οι απορίες σχετικά με το μάθημα έχουν λυθεί.	1	2	3	4
16. Είμαι ικανοποιημένος / η με το χρόνο που αφιερώνουμε σε διάφορα θέματα μέσα στην τάξη.	1	2	3	4

17. Τα μαθήματα στο σχολείο με βάζουν να σκέφτομαι αρκετά.	1	2	3	4
18. Διασκεδάζω με το να μαθαίνω καινούργια και διαφορετικά πράγματα στο σχολείο.	1	2	3	4
19. Νιώθω ότι οι γνώσεις που παίρνω στο σχολείο με κάνουν να σκέφτομαι για τα πράγματα.	1	2	3	4
20. Πιστεύω ότι έχω την ευκαιρία να ανταλλάσω απόψεις με τους συμμαθητές μου μέσα στην τάξη.	1	2	3	4
21. Νιώθω ότι είμαι ελεύθερος / η να επιλέγω διάφορες δραστηριότητες στην τάξη.	1	2	3	4
22. Βρίσκω τις εμπειρίες στο σχολείο ενδιαφέρουσες για μένα ως άτομο.	1	2	3	4
23. Νιώθω ότι οι τρόποι διδασκαλίας στο σχολείο ταιριάζουν με τον δικό μου τρόπο να μαθαίνω καινούργια πράγματα.	1	2	3	4
24. Είμαι ικανοποιημένος / η με τις εκτός τάξης δραστηριότητες που μου παρέχει το σχολείο.	1	2	3	4
25. Νιώθω ότι τα διαγωνίσματα και οι εξετάσεις στο σχολείο είναι ο καταλληλος τρόπος για την αξιολόγηση της επίδοσής μου.	1	2	3	4
26. Νιώθω ότι παίρνω τους βαθμούς που αξίζω στο σχολείο.	1	2	3	4
27. Νιώθω ότι τα σχόλια των καθηγητών που συνοδεύουν τους βαθμούς μου με βοηθούν να καλυτερεύσω τη δουλειά μου στο σχολείο.	1	2	3	4
28. Είμαι ικανοποιημένος με την επίδοσή μου στα διαγωνίσματα / εξετάσεις.	1	2	3	4
29. Νιώθω ότι το προσωπικό του σχολείο μου συμπεριφέρεται με σεβασμό.	1	2	3	4
30. Νιώθω ότι με επαινούν αρκετά, όταν πετυχαίνω κάτι στο σχολείο.	1	2	3	4
31. Νιώθω ότι οι κανονισμοί του σχολείου δεν με εμποδίζουν να εκφράζομαι.	1	2	3	4
32. Νιώθω καλοδεχούμενος στο σχολείο.	1	2	3	4
33. Διασκεδάζω με το να είμαι μαθητής.	1	2	3	4
34. Είμαι περήφανος για το σχολείο μου.	1	2	3	4
35. Νιώθω ότι το σχολείο εκπληρώνει τις προσδοκίες μου.	1	2	3	4
36. Είμαι ικανοποιημένος / η με το ενδιαφέρον που δείχνουν οι γονείς μου για τη ζωή μου στο σχολείο.	1	2	3	4
37. Νιώθω ότι μπορώ να απευθυνθώ στους καθηγητές / το άλλο (μη εκπαιδευτικό) προσωπικό, όταν έχω προβλήματα στο σχολείο.	1	2	3	4
38. Νιώθω ότι μπορώ να απευθυνθώ στους φίλους μου, όταν έχω προβλήματα στο σχολείο.	1	2	3	4
39. Είμαι ικανοποιημένος / η με την υποστήριξη που παίρνω από τους καθηγητές / το άλλο προσωπικό, όταν έχω προβλήματα στο σχολείο.	1	2	3	4
40. Νιώθω ότι μπορώ να απευθυνθώ στους γονείς μου, όταν έχω προβλήματα στο σχολείο.	1	2	3	4

41. Νιώθω ότι το σχολείο με βοηθάει να καταλάβω τις δυνατότητες και τις αδυναμίες μου.	1	2	3	4
42. Νιώθω ότι το σχολείο με βοηθάει να αναπτύξω καινούργιες δεξιότητες.	1	2	3	4
43. Νιώθω ότι το σχολείο με βοηθάει να επιλέξω την μελλοντική μου σταδιοδρομία (καριέρα).	1	2	3	4
44. Νιώθω ότι το σχολείο με βοηθάει να ανταποκριθώ στις απαιτήσεις ενός μελλοντικού επαγγέλματος.	1	2	3	4
45. Είμαι ικανοποιημένος / η γενικά με τις σχέσεις που έχω με τους καθηγητές μου στο σχολείο.	1	2	3	4
46. Είμαι ικανοποιημένος / η με τις σχέσεις που έχω με το υπόλοιπο (μη εκπαιδευτικό) προσωπικό του σχολείου.	1	2	3	4
47. Είμαι ικανοποιημένος / η με τις σχέσεις που έχω με τους άλλους μαθητές στο σχολείο.	1	2	3	4
48. Είμαι ικανοποιημένος / η με τις σχέσεις που έχω με τους φίλους μου στο σχολείο.	1	2	3	4
49. Είμαι ικανοποιημένος με τις αθλητικές εγκαταστάσεις στο σχολείο μου.	1	2	3	4
50.Νιώθω ότι το σχολείο μου είναι επαρκώς επιπλωμένο.	1	2	3	4
51. Είμαι ικανοποιημένος / η με τους κοινούς χώρους που είναι διαθέσιμοι στο σχολείο για να συναντάω τους φίλους μου στα διαλείμματα.	1	2	3	4
52. Είμαι ευχαριστημένος με το κυλικείο στο σχολείο μου.	1	2	3	4
53. Βρίσκω τη διακόσμηση στο σχολείο μου ευχάριστη.	1	2	3	4
54. Βρίσκω τον εξοπλισμό (οπτικοακουστικά μέσα) του σχολείου μου ικανοποιητικό.	1	2	3	4
55. Αισθάνομαι ότι το σχολείο μου είναι αρκετά κοντά με το σπίτι μου.	1	2	3	4
56. Νιώθω ασφαλής στο σχολείο.	1	2	3	4

Γράψε επιγραμματικά , στο χώρο που ακολουθεί, τι νομίζεις ότι θα έκανε τη ζωή σου στο σχολείο καλύτερη

_____

_____

_____

_____

Appendix XVI:

Student Stress Inventory (Alban Metcalfe et al., 1982) (in Greek)

Στο μέρος 4 θα θέλαμε να μας πεις κατά πόσο οι ακόλουθες 33 περιγραφές **είναι πηγή άγχους για σένα** ως μαθητή / τρια. Βάλε σε κύκλο τον αριθμό που περιγράφει με τον καλύτερο τρόπο το πως νιώθεις για την κάθε περιγραφή. Δεν υπάρχουν σωστές ή λάθος απαντήσεις. Εάν μία από τις παρακάτω περιγραφές δεν σου προκαλεί καθόλου άγχος βάλε σε κύκλο το 0. Παρακαλώ σιγουρευτείτε ότι έχετε απαντήσει όλες τις ερωτήσεις. Ακολουθεί ένα παράδειγμα.

Παράδειγμα

Στην περιγραφή "κατανόηση ερωτήσεων σε εξετάσεις και διαγωνίσματα":
Εάν βάλεις σε κύκλο το 0, σημαίνει ότι η κατανόηση των ερωτήσεων στις εξετάσεις και στα διαγωνίσματα **δεν σου δημιουργεί καθόλου άγχος**.
Εάν βάλεις σε κύκλο το 1, σημαίνει ότι η κατανόηση των ερωτήσεων στις εξετάσεις και στα διαγωνίσματα **σου δημιουργεί λίγο άγχος**.
Εάν βάλεις σε κύκλο το 2, σημαίνει ότι η κατανόηση των ερωτήσεων στις εξετάσεις και στα διαγωνίσματα **σου δημιουργεί αρκετό άγχος**.
Εάν βάλεις σε κύκλο το 3, σημαίνει ότι η κατανόηση των ερωτήσεων στις εξετάσεις και στα διαγωνίσματα **σου δημιουργεί πάρα πολύ άγχος**.

Πόσο άγχος σού προκαλεί καθένα από τα ακόλουθα;

	Καθόλου άγχος	**Λίγο άγχος**	**Πολύ άγχος**	**Πάρα πολύ άγχος**
1. ο αριθμός των μαθητών στο σχολείο γενικά	0	1	2	3
2. μεγαλύτερα παιδιά να εκφοβίζουν μικρότερα παιδιά	0	1	2	3
3. πολύ διάβασμα για το σπίτι που δεν σου κινεί το ενδιαφέρον	0	1	2	3
4. καθηγητές που μιλάνε στα παιδιά χωρίς να επικοινωνούν με αυτά	0	1	2	3
5. μικρό χρονικό περιθώριο για να τελειώσουν τα μαθήματα στο σπίτι	0	1	2	3
6. έλλειψη χώρου για προσωπικό διάβασμα στο σχολείο	0	1	2	3
7. σύστημα βαθμολόγησης για κακή επίδοση	0	1	2	3
8. σύστημα βαθμολόγησης για καλή επίδοση	0	1	2	3
9. καθηγητές που είναι πολύ προσιτοί	0	1	2	3
10. καθηγητές που είναι πολύ αυστηροί	0	1	2	3
11. κατανόηση ερωτήσεων σε εξετάσεις και διαγωνίσματα	0	1	2	3
12. βοήθεια στον επαγγελματικό προσανατολισμό	0	1	2	3
13. χρόνος που χρειάζεται για να φτάσεις στο σχολείο	0	1	2	3

	Καθόλου άγχος	Λίγο άγχος	Πολύ άγχος	Πάρα πολύ άγχος
14. λίγες δουλειές κατάλληλες για όσους τελειώνουν το σχολείο	0	1	2	3
15. ασήμαντοι κανόνες και κανονισμοί στο σχολείο	0	1	2	3
16. το να σε μεταχειρίζονται σαν μικρό παιδί	0	1	2	3
17. το να τα πηγαίνεις καλά με τους καθηγητές	0	1	2	3
18. το να χάνεις φίλους καθώς προχωράς σε μεγαλύτερες τάξεις	0	1	2	3
19. το να κάνεις καινούργιους φίλους καθώς προχωράς σε μεγαλύτερες τάξεις	0	1	2	3
20. χρησιμότητα των μαθημάτων που διδάσκονται στο σχολείο	0	1	2	3
21. μέθοδοι διδασκαλίας	0	1	2	3
22. τιμωρία όταν αργείς στο σχολείο	0	1	2	3
23. καρτέλες βαθμολογίας (έλεγχος) στους γονείς	0	1	2	3
24. το να σε μειώνουν για χαμηλή επίδοση	0	1	2	3
25. το άν μένουν εμπιστευτικές οι πληροφορίες για προσωπικά ζητήματα που δίνεις στους καθηγητές	0	1	2	3
26. το να μην ξέρεις ποιες ακριβώς είναι οι απαιτήσεις των καθηγητών	0	1	2	3
27. το να υπάρχει πολύς θόρυβος στο σχολείο	0	1	2	3
28. προσωπικά προβλήματα	0	1	2	3
29. το να ανησυχούν οι γονείς σου υπερβολικά για την επίδοσή σου στο σχολείο	0	1	2	3
30. συνέπειες που θα έχεις αν απογοητεύσεις τους γονείς σου	0	1	2	3
31. αντίθετες αντιλήψεις για τη ζωή μεταξύ μαθητών και γονιών	0	1	2	3
32. αντίθετες αντιλήψεις για τη ζωή μεταξύ γονιών και σχολείου	0	1	2	3
33. το να παίρνουν οι φίλοι σου επανειλημμένα μεγάλους βαθμούς για την επίδοσή τους	0	1	2	3

Appendix XVII:

P.G.I. General Well – being Scale (Verma et al., 1983) (in Greek)

Ακολουθεί μία σειρά από περιγραφές για το πως νιώθεις **από τη στιγμή που ξεκίνησε η φετινή σχολική χρονιά**. Βάλε √ στην απάντηση που σε εκφράζει με τον καλύτερο τρόπο. Παρακαλώ σιγουρευτείτε ότι απαντήσατε όλες τις ερωτήσεις.

Παράδειγμα
Στην περιγραφή "νιώθω χρήσιμος / επιθυμητός":
Εάν βάλεις √ στο **"καθόλου"** αυτό σημαίνει ότι **δεν νιώθεις καθόλου χρήσιμος / η - επιθυμητός / ή**.
Εάν βάλεις √ στο **"σπάνια"** αυτό σημαίνει ότι **σπάνια νιώθεις χρήσιμος / η - επιθυμητός / ή**.
Εάν βάλεις √ στο **"συχνά ή τον περισσότερο καιρό"** αυτό σημαίνει ότι **αρκετά συχνά νιώθεις χρήσιμος / η - επιθυμητός / ή**.
Εάν βάλεις √ στο **"συνήθως ή τον περισσότερο καιρό"** αυτό σημαίνει ότι **πάντα νιώθεις χρήσιμος / η - επιθυμητός / ή**.

	καθόλου	**σπάνια**	**συχνά ή τον περισσότερο καιρό**	**συνήθως ή τον περισσότερο καιρό**
1. νιώθω ότι η ζωή έχει ενδιαφέρον.	❑	❑	❑	❑
2. με απασχολεί κάποια αρρώστια ή πόνος.	❑	❑	❑	❑
3. νιώθω ικανοποιημένος / η με τη ζωή γενικά.	❑	❑	❑	❑
4. νιώθω γεμάτος / η ενέργεια.	❑	❑	❑	❑
5. νιώθω αρκετά ευτυχισμένος / η στη προσωπική μου ζωή.	❑	❑	❑	❑
6. με απασχολεί κάποιο άγχος ή στενοχώρια.	❑	❑	❑	❑
7. νιώθω παραγωγικός / ή, δημιουργικός / ή.	❑	❑	❑	❑
8. νιώθω ευδιάθετος / η.	❑	❑	❑	❑
9. νιώθω ότι ανοίκω κάπου.	❑	❑	❑	❑
10. νιώθω ότι κουράζομαι εύκολα.	❑	❑	❑	❑
11. νιώθω χαρούμενος / η	❑	❑	❑	❑
12. νιώθω θλιμένος / η, ότι με έχουν απορρίψει.	❑	❑	❑	❑
13. νιώθω ευερέθιστος / η.	❑	❑	❑	❑
14. νιώθω ήρεμος / η.	❑	❑	❑	❑
15. κοιμάμαι αρκετά καλά.	❑	❑	❑	❑
16. νιώθω υγιής.	❑	❑	❑	❑
17. νιώθω συναισθηματικά ισορροπημένος /η.	❑	❑	❑	❑
18. νιώθω χρήσιμος / η, επιθυμητός / η.	❑	❑	❑	❑

19. νιώθω ότι έχω νευρικότητα.	❑	❑	❑	❑
20. νιώθω ότι έχω απόλυτο ελέγχο στην συμπεριφορά μου και τα συναισθήματά μου.	❑	❑	❑	❑

Appendix XVIII:

Hare Self – esteem Scale (Hare, 1985) (in Greek)

Οι επόμενες περιγραφές αναφέρονται στο πώς νιώθεις γενικά όταν είσαι με άλλα άτομα της ηλικίας σου. Βάλε σε κύκλο το γράμμα που περιγράφει με τον καλύτερο τρόπο το πώς νιώθεις για την πρόταση χρησιμοποιώντας την ακόλουθη κλίμακα. Δεν υπάρχουν σωστές ή λάθος απαντήσεις. Πρακαλώ σιγουρευτείτε ότι έχετε απαντήσει σε όλες τις περιγραφές.

	Διαφωνώ Απόλυτα	**Διαφωνώ**	**Συμφωνώ**	**Συμφωνώ Απόλυτα**
1. Εχω τόσους φίλους όσους άλλα άτομα της ηλικίας μου.	α	β	γ	δ
2. Δεν είμαι τόσο δημοφιλής όσο άλλα άτομα της ηλικίας μου.	α	β	γ	δ
3. Είμαι τόσο καλός / ή στο να κάνω πράγματα που αρέσουν σε άτομα της ηλικίας μου, όσο οι περισσότεροι άλλοι άνθρωποι.	α	β	γ	δ
4. Συχνά γίνομαι στόχος για πειράγματα από άτομα της ηλικίας μου.	α	β	γ	δ
5. Οι άλλοι πιστεύουν ότι είμαι πολύ ευχάριστος / η για παρέα.	α	β	γ	δ
6. Συνήθως μένω κλειστός / ή στον εαυτό μου, γιατί είμαι διαφορετικός / ή από άλλα άτομα της ηλικίας μου.	α	β	γ	δ
7. Οι άλλοι εύχονται να ήταν σαν εμένα.	α	β	γ	δ
8. Εύχομαι να ήμουν διαφορετικός / ή, γιατί έτσι θα είχα περισσότερους φίλους.	α	β	γ	δ
9. Αν η παρέα μου αποφάσιζε να ψηφίσει για αρχηγούς, θα ήμουν υψηλά στην προτίμησή τους.	α	β	γ	δ
10. Δεν είμαι ο τύπος του ανθρώπου που τα άτομα της ηλικίας μου θα στρεφόταν για βοήθεια σε κάποιο πρόβλημα που θα αντιμετώπιζαν.	α	β	γ	δ

Οι επόμενες περιγραφές αναφέρονται στο πώς νιώθεις γενικά, όταν είσαι με την οικογένειά σου. Βάλε σε κύκλο το γράμμα που περιγράφει με τον καλύτερο τρόπο το πώς νιώθεις για την πρόταση. Δεν υπάρχουν σωστές ή λάθος απαντήσεις. Πρακαλώ σιγουρευτείτε ότι έχετε απαντήσει σε όλες τις περιγραφές.

	Διαφωνώ Απόλυτα	**Διαφωνώ**	**Συμφωνώ**	**Συμφωνώ Απόλυτα**
1. Οι γονείς μου είναι περήφανοι για μένα.	α	β	γ	δ
2. Κανένας δεν μου δίνει πολλή προσοχή στο σπίτι.	α	β	γ	δ
3. Οι γονείς μου πιστεύουν ότι μπορεί κάποιος να βασίζεται πάνω μου.	α	β	γ	δ
4. Συχνά νιώθω, ότι, αν μπορούσαν οι γονείς μου θα με άλλαζαν για ένα άλλο παιδί.	α	β	γ	δ
5. Οι γονείς μου προσπαθούν να με καταλάβουν.	α	β	γ	δ
6. Οι γονείς μου έχουν πολύ υψηλές προσδοκίες από μένα.	α	β	γ	δ
7. Είμαι ένα σημαντικό πρόσωπο στην οικογένειά μου.	α	β	γ	δ
8. Συχνά νιώθω ανεπιθύμητος / η στο σπίτι μου.	α	β	γ	δ
9. Οι γονείς μου πιστεύουν ότι θα πετύχω στο μέλλον.	α	β	γ	δ
10. Συχνά εύχομαι να είχα γεννηθεί σε μια άλλη οικογένεια.	α	β	γ	δ

Οι επόμενες περιγραφές αναφέρονται στο πώς νιώθεις γενικά όταν είσαι στο σχολείο. Βάλε σε κύκλο το γράμμα που περιγράφει με τον καλύτερο τρόπο το πώς νιώθεις για την πρόταση. Δεν υπάρχουν σωστές ή λάθος απαντήσεις. Πρακαλώ σιγουρευτείτε ότι έχετε απαντήσει σε όλες τις περιγραφές.

	Διαφωνώ Απόλυτα	**Διαφωνώ**	**Συμφωνώ**	**Συμφωνώ Απόλυτα**
1. Οι καθηγητές μου έχουν πολύ υψηλές προσδοκίες από εμένα.	α	β	γ	δ
2. Στα πράγματα που κάνουμε στο σχολείο, είμαι τόσο καλός όσο και οι συμμαθητές μου.	α	β	γ	δ
3. Συχνά νιώθω ανίκανος / η στο σχολείο.	α	β	γ	δ
4. Συνήθως είμαι περήφανος / η για τη βαθμολογική μου καρτέλα / έλεγχο.	α	β	γ	δ
5. Το σχολείο είναι δυσκολότερο για μένα από ότι για τους περισσότερους ανθρώπους.	α	β	γ	δ
6. Οι καθηγητές μου είναι συνήθως ευχαριστημένοι με τη δουλειά μου στο σχολείο.	α	β	γ	δ
7. Οι περισσότεροι από τους καθηγητές μου δεν με καταλαβαίνουν.	α	β	γ	δ
8. Είμαι ένα σημαντικό άτομο στην τάξη μου.	α	β	γ	δ
9. Νομίζω ότι όσο σκληρά και αν προσπαθώ, δεν παίρνω ποτέ τους βαθμούς που αξίζω.	α	β	γ	δ
10. Τελικά πιστεύω, ότι είμαι πολύ τυχερός να έχω τους δασκάλους που είχα μέχρι τώρα, από τότε που ξεκίνησα το σχολείο.	α	β	γ	δ

Appendix XVIV:

Positive and Negative Affect Schedule (Watson et al., 1988) (in Greek)

Η παρακάτω κλίμακα αποτελείται από λέξεις που περιγράφουν διάφορα αισθήματα και συναισθήματα. Διάβασε την κάθε λέξη και βάλε σε κύκλο τον αριθμό που εκφράζει το πώς νιώθεις για την κάθε λέξη. **Ο αριθμός αυτός δείχνει πως νιώθεις γενικά, πράγμα που σημαίνει κατά μέσο όρο.**

	Πολύ Λίγο	**Λίγο**	**Μέτρια**	**Πολύ**	**Πάρα Πολύ**
Ενδιαφέρων / ουσα	1	2	3	4	5
Πιεσμένος / η	1	2	3	4	5
Συναρπαστικός / ή	1	2	3	4	5
Ανήσυχος / η	1	2	3	4	5
Δυνατός / ή	1	2	3	4	5
Ενοχος / η	1	2	3	4	5
Τρομαγμένος / η	1	2	3	4	5
Εχθρικός / ή	1	2	3	4	5
Ενθουσιώδης	1	2	3	4	5
Περήφανος / η	1	2	3	4	5
Ευέξαπτος / η	1	2	3	4	5
Σε εγρήγορση	1	2	3	4	5
Ντροπιασμένος / η	1	2	3	4	5
Με έμπνευση	1	2	3	4	5
Νευρικός / ή	1	2	3	4	5
Αποφασιστικός / ή	1	2	3	4	5
Επιμελής	1	2	3	4	5
Αναστατωμένος / η	1	2	3	4	5
Δραστήριος / α	1	2	3	4	5
Φοβισμένος / η	1	2	3	4	5