Associations between life satisfaction, time use and exploratory buying behavior - Quantitative exploratory study among Finnish business students

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Purpose of the study

This study contributes to the research on life satisfaction, time use and customer behavior by studying the associations between life satisfaction, use of time and exploratory buying behavior. Data used for this study is collected among the business students of Aalto University and consequently an interesting insight on how satisfied students are with their lives is revealed. Furthermore, relations of other variables such as *mental health, spending, working while studying* or *spare time* to the main variables and to each other are analyzed. Finally, this study argues for importance of studying life satisfaction and time use further. This could give plenty of useful information to marketers about consumers' behavior.

Methodology

The data for the study was collected in 2013 using an online questionnaire. A total of 132 responses were obtained and the data was representative of business students of both genders. The data was analyzed with quantitative research methods including correlation analysis and regression analysis.

Findings

The findings of the study suggest that there is a relationship between life satisfaction and polychronic-monochronic tendency. Exploratory consumer buying behavior did not correlate with life satisfaction or polychronic–monochronic time use. In addition, relations of 14 more variables' to the main variables and to each other were analyzed. The regression models constructed revealed that spending, spare time, age and mental problems explained life satisfaction. Surprisingly, spare time correlated negatively to life satisfaction. Additionally, working while studying had positive relation to life satisfaction. Furthermore, spending and working explained polychronic– monochronic time use, and exploratory buying behavior was explained by gender and spending.

Keywords

Life satisfaction, polychronic-monochronic tendency, time perception, exploratory consumer buying behavior, consumer behavior, quantitative research

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1. Introduction

"Happiness is the ultimate goal in life", claims Aristotle in his *Nicomachean Ethics* for more than 2300 years ago. His ideas are still valid.

1.1. Relevance of the study

"What is happiness and how can I get it?" is a question that is on our lips. If there would be an easy comprehensive answer to that, the question would have been answered already. Happiness is subjective and every individual values their life based on their own standards (Diener et al. 1998). In other words, no one can set the standards for individuals' happiness but they themselves. Despite its complexity, happiness is predictable, measurable and comparable across contexts (Diener 1984; Diener et al. 1999; Gilbert 2006).

This study explores the association of cognitive component of happiness – that is, life satisfaction – with individuals' time use and exploratory buying behavior. Cotte et al. (2004) argued that an individual's personal timestyle could have a noteworthy effect on buying behavior and product and service choice. Furthermore, the concept of time appears frequently in consumers' descriptions of their consumption habits and behavior (Usunier and Valette-Florence 2007).

In order to understand the nature of the studied subjects, I will first provide an overview on the existing literature concerning life satisfaction, time and consumer behavior, and exploratory buying behavior. Furthermore, by analyzing the research data with quantitative methods, this study aims to study the associations between life satisfaction, polychronic-monochronic time use and exploratory buying behavior.

Data used for this study is collected among Aalto University School of Business students and will give interesting insight to how satisfied students are with their lives and whether other variables such as mental health, spending, working or spare time affect their satisfaction with life. It is also interesting to find out how student use their time; are they juggling many things at once or is there a tendency to do

only one thing at the time and furthermore, is there a relation between this tendency and satisfaction with life.

This study is contributing to the existing literature of life satisfaction, polychronic-monochronic time tendency and exploratory consumer behavior. Based on the literature review, it is likely that there are associations between these constructs. However, these three areas have not really been studied together.

1.2. Research objectives

As stated before, the purpose of this study is to contribute to the research on life satisfaction, use of time and buying behavior by investigating the relations between these three areas. I will seek to present the relations of life satisfaction, use of time, and buying behavior. The overall research objective of this study is to find out *what kind of associations can be found between life satisfaction, use of time and buying behavior. Furthermore, what other factors can explain life satisfaction, use of time and buying behavior.*

Research data gathered with online questionnaire will be analyzed with a set of quantitative methods. First, I will look in to the descriptive statistics and then develop a correlation matrix. After the correlations have been investigated, I will form three regression models, were life satisfaction (SWLS), use of time (PMTS), and buying behavior (ECBB) are the dependent variables. My research questions are:

1) *What kind of associations are there between life satisfaction, polychronic-monochronic time tendency, and buying behavior?*
2) *How are other variables such as income, spare time, and work related to life satisfaction, time use and buying behavior?*

This study is not aiming to provide profound explanations or causality between the emergent results. The purpose is rather to describe the findings that emerge from the quantitative data in an exploratory way, and provide a foundation for future research.

1.3. Data and methodology

Research data was gathered with an online questionnaire, as it was most convenient and best for this situation. This method is convenient for the respondents as well (Malhotra and Birks 2007). All the respondents are Bachelor's or Master's degree students at Aalto School of Business. Language of the questionnaire was English.

A link to the questionnaire was sent to all Aalto University School of Business students who had given a permission to use their email for questionnaire purposes. 835 students received a link, 186 opened it, and 132 completed the questionnaire.

Quantitative research methods are used to analyze the research data. Three existing scales form the foundation of this study: 1) Satisfaction with Life Scale (SWLS) (Diener et al. 1985), 2) Polychronic Monochronic Tendency Scale (PMTS) (Lindqvist and Kaufman-Scarborough 2007), and Exploratory Buying Behavior Scale (EBBT)(Baumgartner & Steenkamp 1996, Legoherel et al. 2009).

1.4. Results

Correlation matrix and three different regression models with Satisfaction with life (SWLS), Polychronic monochronic tendency (PMTS) and Exploratory Information Seeking (EIS) as dependent variables were conducted and independent variables were added to the regression model with stepwise method. Exploratory Acquisition of Products (EAP) had no statistically significant relations to any of the variables when using the stepwise method and consequently there was no model constructed.

Money spend on top of mandatory expenses, Time off from studies and work, Age, PMTS, and *Mental problems* explained life satisfaction (SWLS) in the first regression model. Polychronic-monochronic time use (PMTS) was explained by *Money spend on top of mandatory expenses* and *Hours worked per week outside studies.* And finally in the third regression model dependent variable Exploratory Information Seeking (EIS) was explained by *Gender* and *Money spend on top of mandatory expenses.* The results from regression analysis were in line with the result from the correlation analysis as they should be.

1.5. Outline of the study

In this introduction chapter, I have provided the background to my study, as well as the research questions. The following three chapters will review the existing literature and will include a more detailed overview of prior research on life satisfaction, time use and exploratory consumer behavior. Chapter 2 discusses the components of life satisfaction. Chapter 3 discusses history of time studies in marketing, perception of time and different ways to use time. The Polychromic Monochronic Tendency Scale used in this study will be also discussed. Chapter 4 reviews briefly the relationship of time use and exploratory consumer behavior. In Chapter 5, the literature review is summarized and the ground for the empirical study is founded.

Chapter 6 will explain the research methodology used in the present empirical study. Data collection and quantitative methods will be discussed. Finally, the validity and reliability of the study is evaluated. Research findings will be reported with initial analysis in Chapter 7, and in Chapter 8, a discussion of the key results follows. Furthermore, limitations of the study and suggestions for future research are also presented.

2. Life satisfaction

In scientific explorations, the term *subjective well being* (SWB) is used instead of *happiness* (Diener 1984). Subjective well being is widespread since it allows every individual to value their life based on their own standards (Diener et al. 1998). Furthermore, Diener et al. (1998) studied happiness and life satisfaction in 41 countries among college students and rated both concepts extremely important.

Happiness is predictable, measurable and comparable across contexts (Diener 1984, Diener et al. 1999, Gilbert 2006). Life satisfaction is related to a striking number of different outcomes (Erdogan 2012) and it has been researched in association with many disciplines. Usually, happiness is measured using multi-item scales by asking people how happy they are overall (Kahneman et al. 1999) or with particular situation (Raghunathan and Irwin 2001). In this research associations between life satisfaction, use of time and buying behavior will be examined. In the following, the constructs of happiness are explained briefly.

2.1. Components of subjective well-being (happiness)

Life satisfaction is the other component of subjective well being (SWB) (Linley et al. 2009, Diener 1984). Other half of the subjective well being is affect - positive or negative. The life satisfaction component has been conceptualized as "cognitive evaluation of one's life". The affect component refers to the affective and emotional aspects of the construct. Life satisfaction is instead related to the cognitive-judgmental aspects (Diener 1984).

2.1.1. Affect (positive and negative)

As mentioned before, affect balance consist of two different components; positive and negative. Affect balance focuses on peoples' feelings and mood in a given time. This component captures experience of well being not the evaluated i.e. the cognitive one (Diener 1984, 1985; Pavot and Diener 1993, 2008 and OECD 2011).

Until mid 1990s' affective components had received more attention from researchers, even though both affective and cognitive components of subjective well

being (SWB) are as important (Pavot and Diener 1993, 2008). Pavot and Diener (1993) list some tools to measure affective component: Mood and affective well being (Kammann & Flett, 1983), the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988), or the Memorial University of Newfoundland Scale of Happiness (MUNSCH; Kozma & Stones, 1980).

Studies show that components of SWB are not completely independent but still distinctive to some extent and can provide complementary information when assessed separately (Pavot and Diener 1993). Other satisfaction and affection components also exist but they appear to behave differently over time (Pavot and Diener 1993).

2.1.2. Life satisfaction

At the same time, life-satisfaction is the other component of happiness and one of the indicators of 'apparent' quality of life. Together with indicators of mental and physical health, it indicates how well people thrive. Data about life-satisfaction is used for several purposes (Saris et al. 1996).

Each individual assess the quality of their lives on the basis of their own unique set of criteria (Shin & Johnson, 1978, Pavot and Diener 1993). This is the judgmental process behind defining life satisfaction, which is a conscious cognitive judgment of one's life. A criterion for judgment is up to the person, thus it is not externally imposed. It is presumed that person compares perceived life circumstances with a self-imposed set of standards and depending on the degree that they match, reports high or low life satisfaction (Pavot and Diener 1993, 2008).

Factors that affect the construct of life satisfaction judgments can be divided in to two categories: 1) top-down and 2) bottom-up. As an example top-down factor can be personality disposition where as mood or immediate life circumstance are bottom up factors. There is a concern on what are the factors that actually influence life satisfaction judgments (Pavot and Diener 1993, 2008).

Andrews and Withey (1976) suggested view that, satisfaction with life is calculated on the basis of satisfactions with various aspects of life This is an example of bottom-

up approach. According to this, domains (i.e. job and marriage) of life are evaluated by comparing the reality of life with various standards of success. However, Pavot and Diener (2008) suggest that evidence available up to date shows that life satisfaction judgments represent a complex combination and summation of both top-down and bottom-up factors.

There are both individual differences and cultural norms that affect the formation of life satisfaction judgments. However, given the variability in influences, it is extremely hard to discover relation between *affects* and *life satisfaction* (Pavot and Diener 2008). In the following some of the components of 'good life' are discussed. Some of these may not be of importance to individual's life satisfaction depending on the one's standards. It appears that the levels of life satisfaction and the factors influencing these levels are related to factors connected with society as whole. Nonetheless, they could also be related to micro-level surroundings and to various socially related personal factors, including individuals' life phase, as well as personal values and interpretations (Martikainen 2008, Pavot and Diener 2008).

- **Social relationships**

    Social relationships are crucial influencers on happiness. Close and supportive family and friends are extremely important part of satisfaction with life. (Diener 2006). Genuine, not instrumental or intrinsically motivated sociality is one of the heaviest components of subjective happiness (Bruni and Stanca 2008). Consequently, those who do not have close friends and family are more likely to be dissatisfied. A loss of a close friend or family member can cause dissatisfaction with life, but the person with warm and close relation to friends and family will recover from the loss. (Diener 2006).

- **Work**

    Another factor that influences happiness and life satisfaction of most people is work. Work means also studying, or performance in an important role such as a mother, father or a grandparent. Crucial thing is the enjoyment and meaningfulness of doing whatever one does, whether it is paid or unpaid (Diener 2006). Furthermore, work contributes to individual's sense of productivity and self-esteem and in many cases is necessary to pay for living.

However, many people work more than it is required to provide these benefits (Layard, 2005).

Furthermore, work can draw individuals away from the sources of happiness. Focusing on money motivates one to work more, which is useful to know, when one has to put an extra hour to meet a deadline. However, working long hour does not translate in to happiness. On the contrary, people happiest when socializing and during intimate connecting activities and least happy when working and commuting. In addition, students' happiness levels were found to exceed their personal average while they were with friends and dropped below average, when they did school work (Mogilner 2010).

- **Income**
  There is constant and ongoing debate about: "Can money buy the happiness?" It is shown that, in a single country, on a moment in time, individuals with higher income were more likely to report happiness (Esterlin 1974). However, Esterlin (1974) suggest that it seems there is no significant association among countries between income and happiness. In other words, poorer countries do not always appear to be that much unhappier than the wealthier ones. Furthermore, even though the per capita income was rising in United States significantly between 1946 and 1970, the reports of average happiness showed absolutely no increase (Esterlin 1974). All in all, wealthier people tend to be happier, but the influence of income is relative. When the overall income level rises, happiness does not necessarily rise accordingly (Diener 1984).

- **Education**
  Small but significant correlations between education and subjective well being have often been found. Education may affect subjective well being by allowing individuals to make progress towards their goal or to adapt to changes (Diener, Suh, Lucas & Smith 1999).

- **Health**

  Life-satisfaction tends to be greater among those who are in good physical health and who have a lot of energy. The satisfied also share characteristics of good mental health and psychological resilience (Saris et al. 1996). Furthermore, there is evidence that mental illness or health can affect the life satisfaction of anyone. Scores on the Satisfaction with life (Diener 1985) have been shown to correlate with measures of mental health and to be predictive of future behaviors such as suicide attempts (Pavot and Diener 2008).

  Furthermore, Diener et al. (1999) argue that self-rated health measurements reflect not only one's actual physical condition but also individuals' level of emotional adjustment. Furthermore, even though people are disabled or in poor health, they use cognitive coping strategies that produce a positive image of their health.

2.2. Consumer well-being

Consumer research has examined the importance of consumer well being as a consequence of exchange relationships using both micro and macro perspectives. How consumption impacts well being has been interest inside and outside academic community (Sirgy and Dong-Jin 2006). The evolution of consumer well-being has not been a linear path, in regards to its conceptualization or measurement. Different perspective have been adopted over time and branches of this concept developed (Pancer and Handelman 2012).

Philip Kotler (1972, p. 54) was arguing that consumer well-being goes beyond a measure of the life satisfaction construct: "The dilemma for the marketer is that he cannot go on giving the consumer only what pleases him without considering the effect on the consumer's and society's well-being." According to Pancer and Handelman (2012) Kotler was one of the first ones to question reductionist approaches. Long run consumer welfare within societal context and consumer satisfaction together determines Kotler's original societal marketing concept.

Nicolao et al. (2009) suggest that the bigger picture of consumer research becomes increasingly blurred, when measuring the effects of particular consumption episodes instead of looking at where they could lead in the future. Furthermore, happiness provides a useful comprehensive construct to analyze the human welfare with (Nicolao et al. 2009).

2.3. Life satisfaction and materialism

Consumer researchers have tried and longed to understand the relationship between life satisfaction and materialism. The underlying question has been to what extent material possession makes people happier (Baker et al. 2013). Sirgy (1998) claims that materialists experience greater dissatisfaction with their standard of living than non-materialists. Furthermore, this affects to overall life causing dissatisfaction with life in general. Theories posit that life satisfaction is partly determined by standard of living (Sirgy, 1998). In addition, Burroughs and Rindfleisch (2002) suggest that high levels of material values are negatively associated with subjective well-being and in that sense to life satisfaction, since it is the cognitive component of subjective well being (Diener 1984, 1985). Materialists tend to inflate their standard of living goals and for that reason experience more dissatisfaction (Sirgy, 1998).

Many studies have found a negative association between materialism and life satisfaction, but they fall short from explaining the reason or reasons for the relationship and even beyond that - establishing causality between the two variables (Baker 2013). Materialism is generally viewed as the value placed on the acquisition of material objects (Burroughs and Rindfleisch, 2002), which is in line with suggestion that it matters whether the purchase is tangible or intangible. As an example, consumers will be happier if they spend their money on experiences such as travel as opposed to buying a material possessions (Nikolao, 2009).

2.4. Measuring life satisfaction

As stated before, individuals may have very different standards for "success" in each of these areas of their lives. Thus, it is necessary to assess an individuals' global

judgment of his or her life rather than only his or her satisfaction with specific domains.

Satisfaction with Life Scale (SWLS) (Diener et al. 1985) is one of the three key constructs of this study. It was developed to assess satisfaction with the individuals' life as a whole (Pavot and Diener 1993). This scale does not assess issues such as health or finance. Instead it allows individuals to integrate and weigh these domains according to their values and preferences. Since its introduction in 1985 the Satisfaction With Life Scale has been extensively used as a measure of the life satisfaction component of subjective well being (Pavot & Diener 2008).

Scores on the SWLS correlate moderately to highly with other measures of subjective well being. In addition scores correlate predictably with specific personality characteristics. It is proven that the SWLS suited for use with different age groups (Diener et al. 1985).

3. Time and consumer

As demonstrated in the introduction, in today's society time is and should be special concern in consumer behavior. Individuals strive to maximize their overall satisfaction by allocating time to activities as optimally as possible (Usunier and Valette-Florence 2007).

Time has been treated as a resource comparable to money in economics. It should be used in an optimal manner to maximize productivity and efficiency (Becker 1965, Feldman and Hornik 1981). Other disciplines, such as cultural anthropology have studied time perceptions collective cultural artifacts that are shared by people living in the same culture (Bender 2002). On the other hand, time has been examined in individual level in psychology focusing on measurement, perception and adaption of the cultural patterns (Pierro et al. 2010, Dunkel and Weber 2010).

3.1. Time studies in consumer behavior

Research around marketing related to time started in 1960s (Usunier and Valette-Florence 2007). An idea arouse that time should be accounted for in the cost that one faces when purchasing something (Becker 1965, Mincer 1963). This on the other hand relates to theories in economics. Time was viewed as money and it should be used accordingly. Next, researchers started to focus on time patterns and the allocation of time between different activities such as work, homework, and leisure (Becker 1976, Feldman and Hornik 1981). Then focus switched to consumer behavior. The way consumers used their time was thought to represent their values and lifestyle. Time had become commodity and was seen purely as economic resource and people started to make time allocation decisions by optimizing activities based on their needs (Feldman and Hornik 1981).

The next phase of time related marketing studies suggested that experience of time is subjective to each individual and that the complexity of its influence is higher than thought before (Hornik 1984). Furthermore, since time is not objective measure but on the contrary a subjective experience, studies should focus on consumers' perceptual patterns instead of concrete behavior such as observable use of time

(Hornik 1984). Consequently, individual time orientations and their implication to life style became the focus instead.

It is widely accepted that people experience time subjectively based on their cultural background and personal characteristics (Ancona et al. 2001). However, viewing time as a purely subjective experience does not allow predicting patterns of consumer behavior and decision-making (Cotte and Ratneshwar 2001). Consequently, studying time in consumer behavior should be a combination of perceptual and behavioral patterns relating to time (Cotte and Ratneshwar 2001).

Shortage of time is one interesting emerging theme in the study of time in consumer behavior (Suri and Monroe 2003, Leclerc et al. 1995, Alreck and Settle 2002). There are many studies that reveal that consumers are increasingly short of time. Among other things, shortage of time has created a stable market for goods and services, which will save time for busy consumers and make combining activities i.e. polychronic behavior easy. However, a counter phenomenon, which promotes slowing down, has emerged. Downshifting promotes concentrating on the simple joys of life and slowing down the daily activities (Juniu 2000, Chhetri et al. 2009).

3.2. Subjective experience of time

In the previous section the development of time related marketing studies was explained. In this section the factors explaining subjective experience of time are discussed.

3.2.1. Culture

Culture defines the distinctive way in which we understand time (Kluckhohn and Strodtbeck 1961, Graham 1981). Especially culture affect to whether one's attention is focused to the past, to the present or into the future. Furthermore, Graham (1981) has identified three cultural time perceptions; linear-separable time, circular-traditional time and procedural-traditional time.

Linear-Separable time, or Anglo-time, refers to a time perception shared by most Europeans and Americans. In this perception time is perceived as a line that

proceeds from past to the present and then to the future. *The circular-traditional time*, views time as a circle instead of a line. And finally, *procedural-traditional time*, emphasizes the activities performed rather than time as a limiting external factor (Graham 1981).

Many timestyle models are based on *linear-separable* time as are Satisfaction with life scale, Polychronic Monochronic tendency scale and Exploratory Consumer Buying Behavior scale that are used in this study. Satisfaction with life scale has been validated in 41 countries and seems to be free of cultural bias (Diener et al. 1998). Two other scales are not as widely tested. However, that should not be a problem since at least most of the present study's participants are likely to have linear-separable time perception due to a European background.

3.2.2. Individual differences

When people get older, their future becomes shorter, and the time and experiences they have had in the past increase. Consequently, as people age, they tend to orient themselves more strongly towards the past, whereas younger people have time ahead of them and are more likely to be future oriented (Guy et al. 1994*).* Aging affects temporal orientation of people (e.g. Usunier and Valette-Florence 2007).

It has been suggested that women's higher social orientation and multiple roles affect their perception of time (Usunier and Valette-Florence 2007). Due to these roles and demands women tend to avoid strict schedules and because of this have higher preference for non-organized time than men (Lindqvist and Kaufman-Scarborough, 2004).

In addition, personal history, social status and life stage may also influence how people perceive time, especially related to the temporal orientations (Cotte and Ratneshwar 2001). As an example, it is suggested that people with high employment status and education have the most favorable attitude towards polychronic time use (Kaufman et al 1991).

3.2.3. Situation and roles

People experience time in relation to the activities that are being performed (Ancona et al. 2001, Hornik 1984). Even though timestyle is a relatively stable it is also dynamic characteristic of a person, which is constantly matched to the demands and expectations related to the current situation, other people and the roles played by the consumer (Denton 1994). The perception of time is shaped by the immediate surrounding conditions. As an example, a person may be highly analytical, economic and monochronic at work, but act spontaneously and polychronically during a vacation (Cotte and Ratneshwar 2001)

3.3. Polychronic-monochronic behavior

Traditionally polychronicity has been defined as a form of behavior wherein a person engages in two or more activities during the same block of time, whereas monochronicity occurs when a person engages in one activity at a time. On the other hand, other polychronic behavior definitions suggest that a individual chooses activities, which fit together, so that he or she can switch from one to another based on the level of attention required for an activity at any given moment (Lindqvist and Kaufman-Scarborough, 2004). These concepts have become essential in discussions of 'time personality', work time in the home, and on how technology impacts time. Furthermore other relevant dimensions of polychronicity also exist, such as preferences and feelings towards whether to combine activities or not (Lindqvist and Kaufman-Scarborough's 2007).

According to Lindqvist and Kaufman-Scarborough (2007) polychronic and monochronic behavior were first named and conceptualized by Edward T. Hall (1959). He studied different countries and identified patterns of behavior. Hall (1959) conceptualized "time" as "silent language" and also suggested that low-context cultures tend to be more monochronic and high-context cultures are more polychronic. However, it was found by Palmer and Schoorman (1999) that polychronic or monochronic tendency is not dependent on context. Furthermore, Lindqvist and Kaufman-Scarborough (2007) suggest that person has a general polychronic-monochronic tendency.

There are many contradictory explanations for polychromic monochromic behavior. In the Timestyle Scale by Unusier and Vallette-Florence (2007) it is assumed that the level of activity reflecting polychronic or monochronic time use associates directly to the dimension of linearity and economicity of time (Usunier and Valette-Florence 1994, 2007). This means that people who plan their use of time rationally and time is seen as a scarce and valuable resource tend to act more monochronically engaging in one activity at a time, while people with a preference for non-organized time tend to be polychronic in their actions, preferring to undertake many tasks simultaneously.

On the other hand, earlier studies (Bluedorn et al. 1992, Kaufman et al. 1991) suggest that individuals may behave polychronically because they are busy and are trying to meet expectations set by multiple roles. In other words, it might be that people who view time in economic terms may engage in multitasking since they strive to minimize loss of time and therefore perform multiple tasks simultaneously. Polychronicity is often presented as a separate dimension of timestyles (e.g. Cotte and Ratneshwar 2001, Francis-Smythe and Robertson 1999).

Polychronic individuals are comfortable performing multiple actions at the same time and combining activities. Monochronic individuals instead prefer concentrating in one thing at a time and are characterized as task-oriented and valuing punctuality (Bluedorn et al. 1992). In addition, they are likely to have a preference for economic time and to follow a predetermined schedule (Usunier and Valette-Florence 2007). Polychronic people, on the other hand, are not schedule followers but instead tend to place more emphasis on involvement and completion of tasks (Hall 1976). It is suggested that polychronic people usually have a preference for non-organized time, are more easily interrupted than monochronic people and are more relationship oriented (Hall 1976). Furthermore, individuals with a positive attitude towards polychronic time use are less likely to report feelings of role overload than those with monochronic attitude (Kaufman et al. 1991).

Kaufman et al. (1991) point out, that people can be categorized as either polychronic or monochronic. These two are opposite poles of one construct instead of two separate constructs. In other words, people cannot be polychronic and monochronic

at once, even though many people use both strategies depending on the situation.

3.4. Polychronic–monochronic studies

According to Lindqvist and Kaufman-Scarborough (2004) the chronological research path of polychronicity may be traced through five significant periods of development: 1) conceptualization of a monochronic/polychronic continuum as a cultural construct; 2) time as an economic resource in time budget studies and the tie to polychronic tendency; 3) evidence of polychronicity in studies of time pressure and convenience; 4) development of scales measuring various types of time strategies; and 5) the current multidisciplinary examination of polychronicity as a key construct.

In 1991 Kaufman et al. developed a scale for measuring individual attitude towards polychronic time use. Polychronic Attitude Index (PAI) does not measure specific activities, but instead concentrates on general attitudes toward combining activities by multitasking. PAI consists of four statements that the respondents are asked to rate on a Likert scale ranging from 1(agree) to 5 (disagree). The authors found that people, who score high on polychronic attitude, also tend to behave polychronically.

In 2007 Lindqvist and Kaufman-Scarborough came up with a scale, on which they measure polychromic-monochronic tendency. This scale is predecessor for Polychronic Attitude Index, (PAI) by Kaufman et al. (1991). Lindqvist and Kaufman-Scarborough's (2007) Polychronic-Monochronic Tendency Model and Scale (PMTS) is chosen as one of the three key components of the framework of this study.

This study aims to find the possible relations between polychronic and monochronic time usage, life satisfaction and exploratory buying behavior (Baumgartner & Steenkamp 1996) among business students and is uses the PMTS to measure the polychromic-monochronic tendency of the respondents. The five questions constituting the PMTS are included to the questionnaire (see Appendix 1).

4. Exploratory consumer behavior

This chapter discusses briefly relationship of time and exploratory consumer behavior. Also the third and final component of the framework of this study is presented.

4.1. Exploratory behavior

Phenomenon of exploratory behavior became the interest to consumer researchers when it was noticed that people (and animals) might engage in biologically insignificant activities that were interesting and perceived to be intrinsically rewarding without external incentive. Reasons to engage in these activities were to get exciting experiences, to get variation and change, and to satisfy curiosity (Berlyne, 1978, Baumgartner et al. 1996).

There is general agreement that such activities as risk taking and innovative behavior in product purchase, variety seeking and brand switching, recreational shopping and information search, and interpersonal communication about purchases may be regarded as manifestations of exploratory tendencies in the consumer buying process (Raju, 1980).

4.2. Relationship between exploratory behavior and time

Cotte et al. (2006) found exploratory behavior to be linked to seeking hedonic benefits, which was in turn linked to spontaneous planning style. Accordingly it can be assumed that people with a *preference for non-organized time*, will engage in exploratory behavior. Additionally, as mentioned in section 3.3 people with polychronic tendency usually have a preference for non-organized time (Hall 1976). This suggests that people with polychronic tendency would engage in exploratory behavior.

On the other hand, individuals with *economic time view* can be expected to be more concerned about schedules and their behavior is assumed to be less exploratory. According to Usunier and Valette-Florence (2007), people with preference for economic time are also more likely to use their time and do the tasks

monochronically.

4.3. Measuring exploratory consumer behavior

In 1980 Raju et al. developed Exploratory Tendencies in Consumer Behavior Scales (ETCBS). Exploratory tendency behavior is observed as modifying stimulation from the environment. Scale is consists of 39 items that measure seven exploratory tendency behaviors (repetitive behavior process, innovativeness, risk taking, exploration through shopping, interpersonal communication, brand switching, and information seeking). Later Baumgartner and Steenkamp (1996) used Raju's (1980) Exploratory Tendencies in Consumer Behavior Scales as a base when they created a new tool to measure the exploratory buying behavior.

New scale was a two-dimensional representation of exploratory consumer buying behavior (ECBB), where exploratory acquisition of products (EAP) is distinguished from exploratory information seeking (EIS). Pool of 89 items, which of 35 were from Raju's (1980) ETCB scales, was originally generated for two dimensions. Panel of expert judges reduced the number of questions to 69. With factor, item and reliability analyses using three large samples EAP and EIS got their form. Numerous amount of studies were made to validate ECBB scale, thus EAP-EIS structure has been validated (Baumgartner and Steenkamp, 1996).

- **Exploratory Acquisition of Products (EAP)**

  EAP reflects the tendency to seek sensory stimulation in product purchase through risky and innovative product choices. Consequently, high EAP scorers enjoy unfamiliar products and seek variety in their purchases (Baumgartner et al. 1996).

- **Exploratory Information Seeking (EIS)**

  EIS on the other hand measures the tendency to out of curiosity to obtain cognitive stimulation through the acquisition of consumption-relevant knowledge (Baumgartner et al. 1996).

Legoherel et al. (2009) used, validated and consequently reduced Exploratory

Buying Behavior Scale (Baumgartner and Steenkamp, 1996) to four exploratory acquisition of products (EAP) items and three exploratory information seeking (EIS) items. This reduces scale is used in this study.

5. Summary of the literature review

Previous three chapters have set foundation for the empirical part of the study by reviewing existing literature on life satisfaction, time use, and exploratory behavior. In order to understand life satisfaction the components subjective well being were briefly discussed in Chapter 2. It was concluded that life satisfaction is the cognitive component of subjective well being and as positive and negative affect are the other half. Furthermore, each individual assesses the quality of their lives on the basis of their own unique set of criteria. Furthermore, the effects of consumption to an individual were assessed in chapter of consumer well being and the relationship between materialism and life satisfaction were touched upon in the next section. Finally measurement of life satisfaction is discussed and the scale used to measure life satisfaction in this study (Satisfaction with Life scale, SWLS) was discussed in more detail.

In Chapter 3 an overlook of time studies in consumer behavior was provided. This gives better understanding on how perception of time has changed over time. Previously time was seen as economic resource but it has been replaced with a paradigm of subjective experience of time. The manner how culture, individual differences and situation and roles affect individuals' experience of time was also discussed. Finally, polychronic monochronic tendencies and the instrument (Polychonic-monochronic Tendency Scale, PMTS) to measure it in this study were introduced.

Last part, Chapter 4 introduces exploratory behavior. The reasons to engage in exploratory behavior are to get exciting experiences, to get variation and change, and to satisfy curiosity (Berlyne, 1978). Furthermore, how this became of interest in the consumer behavior research was discussed. Also the relationship between time and exploratory behavior was discussed and the evolution on measuring exploratory consumer behavior was presented.

There are three main components in the theoretical framework in this study. These are presented in figure 1. This study assesses the associations between these three variables in a context of business students. The relationships of other variables on

the main three variables are also explored. The other variables are mental health, working while studying, amount of spare time and spending.
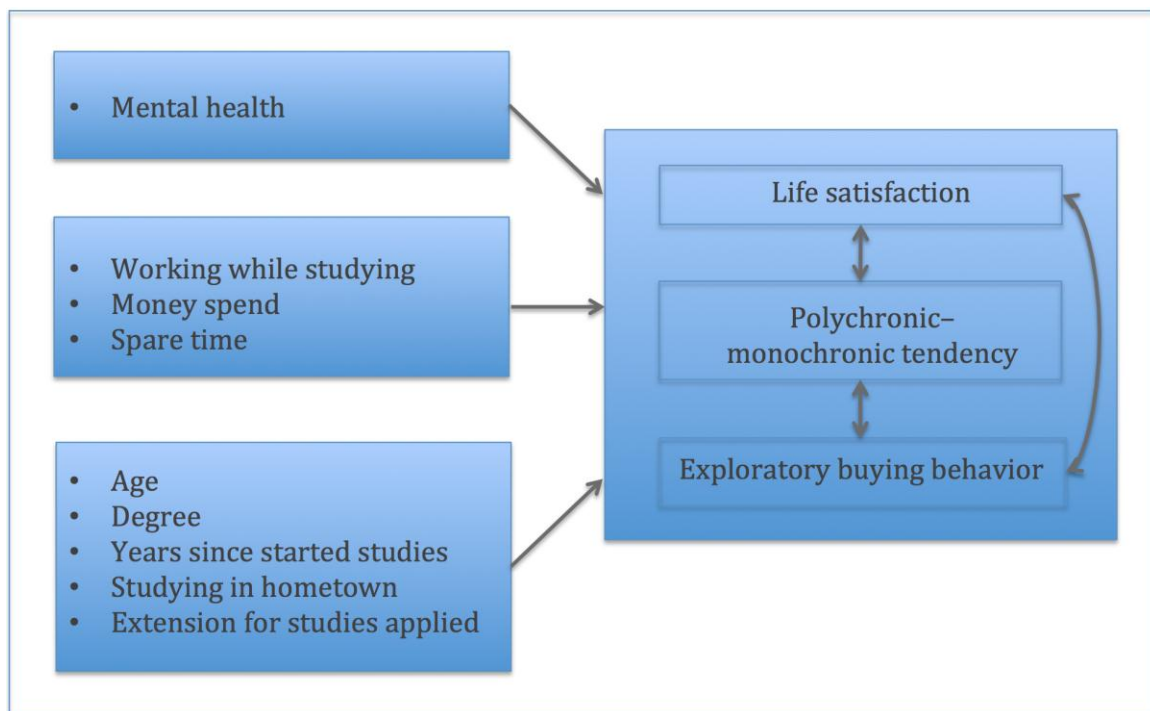
Figure 1: Theoretical framework

6. Research design and methodology

The previous chapters presented existing literature on life satisfaction, time use and buying behavior. That laid a foundation for the empirical part of this study. This chapter is going to present the research design and methodology used in this study.

First the collection of the data is discussed and the dependent and independent variables are introduced. Furthermore, quantitative methods used will be presented and finally the reliability and validity of the study is evaluated.

This study investigates relations between polychronic–monochronic time use tendencies, life satisfaction and buying behavior among Aalto University School of Business students. In addition, use of money, amount of spare time, whether they work or not, progression in the studies, whether they study in their hometown or not and mental health are investigated. Quantitative methods are used since they are better suitable when a wider number of items is analyzed (Malhotra and Birks 2007).

The quantitative research methods I used in this study are correlation analysis and regression analysis. Correlation analysis is used to find the associations between life satisfaction, use of time, exploratory buying behavior and other variables such as working during studies, spare time, money spend and mental health. The dependencies revealed by the correlations analysis will be more closely examined with regression analysis.

6.1. Data collection and description of the data

A structured online questionnaire was used to gather the data for this research since it was the most convenient one for this purpose. It was chosen as a method because: 1) the intention was to collect a relatively large set of data from a larger number of respondents, 2) questionnaire survey is easy for the respondent as well, which will result in a better response rate, and 3) information collected is in an easy to process format (Malhotra and Birks 2007).

The structured online questionnaire was created with Webropol. Language of the questionnaire was English even though most of the students in the Aalto University School of Business speak Finnish as their mother tongue. However, the English language skills being so good, it made more sense to choose English, in order for non-Finnish speakers to be able to take part to the questionnaire as well.

The link to the questionnaire was sent via email to all Bachelor's and Master's degree students, who had given the permission to use their contact information for questionnaire purposes. Altogether 835 students received the questionnaire, 186 opened the questionnaire and 132 completed it. This gives a response rate of 15.8%. Data was collected in between October 29th and November 13th 2013. The questionnaire was sent only once to every respondent.

	Aalto University School of Economics students	%
Questionnaire sent to	835	100
Opened	186	22.3
Completed	132	15.8

Table 1: Questionnaire response rates

The questionnaire included questions mapping the demographics, progress in studies, spare time, use of money, work status, life satisfaction, buying behavior, and mental health. Reasons for using Polychromic Monochronic Tendency Scale (PMTS) (Lindqvist and Kaufman-Scarborough 2007), Satisfaction with Life Scale (SWLS) (Diener et al. 1985) and Exploratory Buying Behavior Scale (EBBT)(Baumgartner & Steenkamp 1996, Legoherel et al. 2009) are explained in Chapters 2, 3, and 4 and the questionnaire is presented in Appendix 1. How the scales were used in this study is explained in the following sections.

Polychronic Monochronic Tendency Scale (PMTS)

Lindqvist and Kaufman-Scarborough's (2007) Polychronic-Monochronic Tendency Model and Scale (PMTS) is one of the three key components of the framework of this study. Lindqvist and Kaufman-Scarborough (2007) came up with a scale, which measures the polychronic-monochronic tendency (see Appendix 1, Q9, and

Appendix 2).

The respondents are asked to rate themselves from 1 (disagree) to 7 (agree) on a Likert scale. Lindqvist and Kaufman-Scarborough (2007) suggest that summated scale should be used to represent the model. The strong theoretical foundations of the model and the very consistent results of the statistical analysis and validity outcomes support this. Accordingly, scores were summed and divided by the number of question in the analysis.

Satisfaction with Life Scale (SWLS)

The Satisfaction with Life Scale has 5 questions and the answer vary from 1 (agree) to 7 (disagree) on a Likert scale. Although it contains only 5 items (see Appendix 1, Q8) this scale has demonstrated good psychometric characteristics (Pavot and Diener 1993). Item scores were summed together and divided by the number of questions to create a sum variable.

SWLS is designed to measure the cognitive judgments of satisfaction with one's life. People who score high on life satisfaction tend to have close and supportive family and friends. Work or school, or performance in an important role and satisfaction with the self, religious or spiritual life, learning and growth, and leisure are also relevant (Diener 2006).

Exploratory Buying Behavior Scale (EBBT)

As mentioned before, Exploratory Buying Behavior scale is actually two-dimensional: a) Exploratory Acquisition of Products (EAP), b) Exploratory Information Seeking (EIS). The original scale by Baumgartner and Steenkamp had 20 questions, ten questions in each scale. Legoherel et al. reduced the number of EAP questions to 4 and EIS questions to 3 and this study is using the shrunken scale (see Appendix 1, Q11) by Legoherel et al. (2009). EAP reflects the tendency to seek sensory stimulation in product purchase through risky and innovative product choices. Consequently, high EAP scorers enjoy unfamiliar products and seek variety in their purchases. EIS on the other hand measures the tendency to obtain cognitive stimulation through the acquisition of consumption-relevant knowledge out of

curiosity (Baumgartner et al. 1996).

Respondents were asked to rate themselves on the Likert scale ranged from 1(agree) to 5 (disagree). Scores in each dimension are summed together and then divided by the number of questions for the analysis. EAP scores required reverse scoring.

Mental health variables

In the questionnaire, all five mental health questions (see Appendix 1) had two possible outcomes. 1 indicated that respondent had mental health issues now or in the past and 2 indicated no mental health issues at any point in life. However, these items were reversed in order to simplify the interpretations of the results. After recoding, 1 means *no* mental health issues whereas 2 indicates that respondent had or had had issues with mental health.

Descriptive statistics

The gender distribution was close to even. 53.8 percent were female and 46.2 percent were male. The largest age group (59) of the respondents is 22-25 year old students. That equals 44.7 percent of respondents. This is the expected result. 18 to 21 year olds and 26-29 year old groups are equally as big with 20.5 percent each. Only 14.4 percent of the respondents were over 30 years old.

More than half (54.4 %) of the respondents are studying Master's degree even though more than half of the respondents have studied in this University for 0-2 years and only 4.5 percent have applied extension for their studies.

Demographics and progress in studies		Number of respondents (N=132)	%
Gender			
	Female	71	53.8
	Male	61	46.2
Age			
	18–21	27	20.5
	22–25	59	44.7
	26–29	27	20.5
	≥30	19	14.4
Degree			
	Bachelor's	60	45.5
	Master's	72	54.5
Years since started studies in Aalto University	0–2	69	52.3
	3–5	46	34.8
	6–8	10	7.6
	≥9	7	5.3
Extension for studies applied	Yes	6	4.5
	No	126	95.5

Table 2: Demographics and progress in studies

Descriptive statistics on work, use of money, spare time and mental health are presented in table 3. One third (34.1 %) of the respondents do not work on top of their studies at all. One fourth (25.0 %) works 1-10 hours a week and another (24.2 %) works 11-24 hours a week. 16.7 percent of the respondents work more than 25 hours a week.

Almost half of the respondents (46.4 %) spend 100-300 euro per month on top of their mandatory expenses. 24.2 percent live with extra 100 euro or less per month, when 18.2 percent spend 300-500 euro and 11.4 percent have more than 500 euro to spend on top of their mandatory expenses such as rent, bills and food.

4.5 percent of the respondent report that they do not have any time for themselves. On the contrary, third (32.6) have spare time every day whereas 39.4 percent have time off from work and studies in 3-4 days and on weekends. 23.5 percent have time for themselves only on weekends.

Finally, 25.8 percent of all the respondents report, that they have had some mental health problems i.e. depression, anxiety, addictions (alcohol, drugs, gambling etc.) and eating disorders.

		Number of respondents (N=132)	%
Hours worked per week outside studies	0	45	34.1
	1–10	33	25.0
	11–24	32	24.2
	≥25	22	16.7
Money spend on top of mandatory expenses	≤100 euros	32	24.2
	100-300 euros	61	46.2
	300-500 euros	24	18.2
	≥500 euros	15	11.4
Time off	Every day	43	32.6
	3-4 days	52	39.4
	Only on weekends	31	23.5
	No spare time	6	4.5
Mental problems	Yes	34	25.8
	No	98	74.2

Table 3: Descriptives (Hours worked, Money Spend, Time off, Mental problems)

6.2. Quantitative research methods

This section describes the quantitative research methods used to analyze the data collected. The purpose and suitability of the methods will be discussed and described without going in to details of the findings, which will be discussed in the next chapter. IBM SPSS statistics software was used for all the calculations in this study correlation analysis and regression analysis being the main focus.

6.2.1. Correlation analysis

The most common measure of correlation is the Pearson's correlation. The correlation coefficient (r) can vary between -1.0 and +1.0 and is used for analyzing the strength of the relationship between two variables. (Malhotra and Birks 2007) A value close to -/+1 indicates strong relation and high possibility to predict one variable based on the other variable. A negative sign means that two variables are inversely correlated. In other words, as one variable increases the other decreases. Value close to zero indicates low relation and association. (Malhotra and Birks 2007)

Spearman's correlation is recommended if variable is not normally distributed. Table 4 indicates that some distributions of the variables are not normal. When skewness is more than +/-1.96 times its standard error distribution of the values is not normal. This is the case with some variables (Life Satisfaction, Years since Started studies, extension applied, Time off, Money spend and with all the mental health variables). In addition, for normally distributed variables Sperman will give the same result as Pearson. Furthermore, if Likert scales and categorical scales are used, Spearman's rho is more suitable for determining the correlations. This is the reason Spearman is used in this study (Pallant 2007).

	Skewness	
		Std. Error
SWLS	-0.79	0.21
PMTS	-0.23	0.21
EAP	0.03	0.21
EIS	0.08	0.21
Gender	0.15	0.21
Age	0.41	0.21
Years since started studies in Aalto	1.27	0.21
Studying in hometown	0.03	0.21
Degree	-0.19	0.21
Extension for studies applied	-4.42	0.21
Hours worked per week outside studies	0.29	0.21
Time off from studies and work	0.43	0.21
Money spend on top of mandatory expenses	0.54	0.21
Mental problems	1.12	0.21
Professional help	1.43	0.21
Counseling	1.54	0.21
Psyche medication	2.88	0.21
Diagnosed mental illness	4.04	0.21

Table 4: Skewness of the variables

In this study correlations between all the variables were investigated in order to determine the relationships between PMTS, life satisfaction, exploratory buying behavior and other variables such as working while studying and the state of mental health. Table 11 and Appendix 4 shows all the correlations and the findings will be discussed in depth in Chapter 8.

6.2.2. *Regression analysis*

Second method used in this study is regression analysis, which is one of the most common ways to identify relationships between dependent and independent variables. Multiple regression is based on correlation. However, it allows more sophisticated exploration of the interrelationship among a set of variables (Pallant 2007). After doing correlation analysis, it might be clear that there are relations between some variables. Regression analysis can be used to determine these relations but most of all it is used to measure the strength of them and predict the behavior of the dependent variable (Malhotra and Birks 2007).

Regression models are based on correlations and it is important to notice that existence of the relationship does not necessarily mean causality. Nothing can really confirm or deny the direction of the relationship (Pallant 2007, Malhotra and Birks 2007). Furthermore, as always common sense should be applied - as an example age and gender could affect life satisfaction, not the other way around.

In this study stepwise regression is used to select the variables that explain most of the variation in the dependent variable. Three stepwise regression models will be done and the dependent variables are SWLS, PMTS and EIS (and EAP). All the other variables will be used as independent variables and the stepwise method chooses the most relevant ones are selected.

All the three variables used as dependent variables are tested for skewness. SWLS had skewness of -0.79 (SE=0.21), which is more than -/+1.96 times its standard error. In addition, the visual inspection of histograms, Q-Q plots and box plots showed that the scores were not normally distributed. Since there is negative skew in the SWLS variable, the data needed to be reflected (Pallant 2007). After that, scores were transformed with log10 function in SPSS to meet the normal

distribution more closely. This is important to take into consideration when interpreting the results of the regression model where SWLS is the dependent variable.

Assumptions of multiple regression

There are some requirements the data has to meet in order it to be suitable for regression analysis. These requirements concern 1) sample size, 2) multicollinearity and singularity, 3) outliners and 4) normality, linearity, homoscedasticity and independence of residuals (Pallant 2007).

1. With small samples a result may not be generalized. Different authors tend to give different numbers of cases required for multiple regression. One example is to have 15 participant per independent variable, Tabachnick and Fidell (2007) suggest that n>50+8m (m=independent variables used). This study has 132 respondents and the number of independent variables used for multiple regression analysis is 17. However, with the stepwise method used, the actual number chosen in three models varied from two to five.

2. Multicollinearity refers to independent variables and multicollinearity exists when the independent variables are highly correlated (r=0.9). It is not the case in this study. Singularity occurs if independent variable is sum variable of other independent variable (Pallant 2007). This is not the case in this study either.

3. Multiple regression is very sensitive to very high or very low scores. (Pallant 2007) Extreme scores have been eliminated in the initial data screening process by creating a categorized variable of the *Years since started studying* data (see table 2). In the original data, most of the scores were from 0 to 10 but one extreme score 22 was found.

4. Normality, linearity, homoscedasticity and independence of residuals were generated as a part of each multiple regression procedure. Some of the scores

did not meet the requirement and might be affecting the reliability of the regression model.

6.3. Validity and reliability of the study

In this section validity and reliability of the research is briefly discussed. Potential errors in the research data will be identified. Validity refers to whether the used instrument truly measures what it is supposed to. In other words, to what extent the observed differences in the responses reflect true differences in the measured characteristics (Aaker et al. 1998). Furthermore, the methodology might not fit to reveal the result due to some flaws in the way the data or results are obtained. As an example, the result might not be comparable if respondents interpret the questions differently in questionnaires. Reliability, on the other hand refers to the repeatability of the research and to the extent measures are free from random error. For instance, if several researchers end up with the same conclusions, the result can be defined reliable. (Aaker et al. 1998)

The validity and reliability of the Polychronic Monochronic Tendency (*PMTS),* Satisfaction with Life (*SWLS*) and Exploratory Buying Behavior (*ECBB)* scales have been demonstrated in previous research. All the scales have been replicated multiple times in multiple studies in different cultural contexts. Consistency of the results indicates good reliability for all the scales. If results are consistent across time and repetitions, the reliability of the scale is good (Malhotra and Birks 2007).

It also necessary to point out that the questionnaire design may affect the validity and reliability of the study (Aaker et al. 1998). Some of the wording of the Polychronic Monochronic Tendency Scale in particular can be quite confusing and even though there are only subtle differences in the wordings of the questions they measure entirely different things i.e. "I *prefer* to do..." "I *like* to juggle..." (see Appendix 2).

There were also personal questions about mental health in the questionnaire. These were places last in the questionnaire since the sensitive questions are better to place at the end of the questionnaire to avoid scaring anyone. However, last questions might not get the same level of attention as the first ones (Czaja & Blair 2005).

7. Findings

Chapter 6 described the collection of the data, the quantitative research methods, and the validity and reliability of the study. Chapter 7 focuses on the findings from these analyses. First, the descriptive statistics will be observed. Second, the relationships between 18 variables derived from the questionnaire are examined with the correlation analysis. Third, the results from regression analysis will be reported. In Chapter 8, the findings will be discussed as this whereas focuses on reporting the findings of the quantitative analyses.

7.1. Descriptive statistics

This section will explore the descriptive statistics and the differences in the data on a level of single dimension. In section 6.1 descriptive statistics are already explored to some extent but in this part they will be explored in more detail to provide additional insight into the data.

7.1.1. Work, use of money and spare time

Only one third of the respondents did not work at all. 25 percent worked for 1-10 hours a week and 24.2 percent worked 11-24 hours a week. 16.7 percent worked more than 25 hours a week, which is more than 3 full days, which is plenty if one is studying full time.

Most of the students (46.2 %) spend 100-300 euro per month on leisure activities, hobbies, shopping, eating out, or other things apart from your monthly mandatory expenses. 24.2 had less than 100 euro for the same cause per month. 18.2 percent spend 300-500 euro and 11.4 had more than 500 euro to spend on top of mandatory payments.

Third of the respondents had some spare time every day. Almost 40 percent had time of 3-4 days a week and on weekends. 23.5 percent dedicated some time for themselves, family or friends only on weekends and 4.5 percent had gotten themselves to a situation where they do not have any time off from studying or working.

		Number of respondents (N=132)	%
Hours worked per week outside studies	0	45	34.1
	1–10	33	25.0
	11–24	32	24.2
	≥25	22	16.7
Money spend on top of mandatory expenses	≤100 euros	32	24.2
	100-300 euros	61	46.2
	300-500 euros	24	18.2
	≥500 euros	15	11.4
Spare time	Every day	43	32.6
	3-4 days	52	39.4
	Only on weekends	31	23.5
	No spare time	6	4.5

Table 5: Descriptives (Hours worked, Money spend and Time off)

7.1.2. SWLS

132 valid answers were given to the set of five questions about life satisfaction. The mean of the sum variable created was 5.01 and standard deviation was 1.25. The lowest score was 1,6 and highest was 7. Score 4-5 is an average score whereas 5-6 is a high score (Diener 2006). In other words, the average scores were just on the edge of average to high.

Average score (4-5) can mean that individuals are mostly satisfied with most areas of their lives but see the need for some improvement in each area. It can also be an implication of satisfaction with most domains in life, but still there are one or two areas where large improvements are expected. It is normal that respondent in this range has areas of life that needs improvement. However, these individuals are willing to make effort or changes in order to be even more satisfied. This is the average of life satisfaction in economically developed nations (Diener 2006).

High score (5-6) on the other hand means that individuals like their lives and think that things are going well. Obviously, their lives are not perfect, but things are mostly good. Even though the person is satisfied, it does not mean she or he is complacent. Quite the opposite, growth and challenge might be partly the reasons

for satisfaction. In most cases in this high-scoring range life is enjoyable – work or school, family, friends, leisure, and personal development are going well. The areas of dissatisfaction can be the source of motivation.

Satisfaction with life Scale (SWLS)	
Valid N	132
Missing	0
Mean	5.01
Standard Deviation	1.25
Min	1.6
Max	7

Table 6: Descriptives (SWLS)

7.1.3. PMTS

Polychronic–Monochronic Tendency Scale consists of five questions. Higher scores indicate polychronic tendency and lower are the indication of monochronicity. The lowest score was 1 and highest 7. This indicates that there are people, who like to concentrate only on one thing at the time. On the other hand, there are respondents that juggle with multiple things and tasks at the same time. 131 valid responses have mean of 4,49 and standard deviation of 1,46. The mean is very close to the slightly agree and means that on average respondents are more polychronically oriented.

Polychronic Monochronic tendency Scale (PMTS)	
Valid N	131
Missing	1
Mean	4,49
Standard Deviation	1,46
Min	1
Max	7

Table 7: Descriptives (PMTS)

7.1.4. EAP and EIS

Exploratory Customer Buying Behavior Scale (ECBB) consists of two different scales. In this study, a shrunken version of this scale is used. Exploratory Acquisition of Product (EAP) scale has four questions, whereas Exploratory Information Seeking

(EIS) scale consists of three questions. EAP scale measures the tendency to seek sensory stimulation in product purchase through risky and innovative product choices. The Likert scale from 1 to 5 was used and answers varied from 1 to 5 with an average of 3.02. High EAP scorers enjoy unfamiliar products and seek variety in their purchases.

EAP	
Valid	131
Missing	1
Mean	3.02
Standard Deviation	0.87
Min	1.00
Max	5.00

Table 8: Descriptives (EAP)

EIS, on the other hand, measures the tendency to obtain cognitive stimulation through the acquisition of consumption-relevant knowledge out of curiosity (Baumgartner et al. 1996). Answers varied from 1 to 5 with an average of 2.73. This is slightly towards the slightly disagree option. High EIS individuals like to go browsing and window-shopping and they are interested in talking with other consumers about their consumption experience.

EIS	
Valid N	131
Missing	1
Mean	2.73
Standard Deviation	1.14
Min	1.00
Max	5.00

Table 9: Descriptives (EIS)

7.1.5. Mental health

25.8 percent of the respondents report that they have had or have mental problems. Furthermore, 21.2 percent have considered or are considering getting professional help. 19.7 percent have actually faced their problem in counseling and 9.1 percent have been or are under psyche medication. 5.3 percent reported that they have been diagnosed with mental illness.

		Number of respondents (N=132)	*%*
Mental health problems	Yes	34	25.8
	No	98	74.2
Planned to get professional help	Yes	28	21.2
	No	104	78.8
Counseling			
	Yes	26	19.7
	No	106	80.3
Psyche medication	Yes	12	9.1
	No	120	90.9
Diagnosed mental illness	Yes	7	5.3
	No	125	94.7

Table 10: Descriptives (Mental health variables)

7.2. Correlation analysis

Correlation analysis was performed in order to understand the relationships between SWLS, PMTS, EAP, EIS and other 14 variables derived from the questionnaire. The results of the correlation analysis are presented in the table 11.

	1.	*2.*	*3.*	*4.*	*5.*	*6.*	*7.*	*8.*	*9.*	*10.*	*11.*	*12.*	*13.*	*14.*	*15.*	*16.*	*17.*	*18.*
1. SWLS	1																	
2. PMTS	**.231****	1																
3. EAP	0.039	-0.019	1															
4. EIS	0.035	0.058	0.023	1														
5. Hours worked per week outside studies	**.180***	**.386****	0.071	0.066	1													
6. Time off from studies and work	**-.265****	0.113	0.121	-0.105	0.114	1												
7. Money spend on top of mandatory expenses	**.311****	**.397****	0.069	0.166	**.341****	-0.095	1											
8. Gender	-0.068	-0.02	0.156	**-.362****	-0.022	0.115	0.007	1										
9. Age	**-.229****	0.122	0.059	-0.075	**.225***	0.054	0.155	0.011	1									
10. Years since started studies in Aalto	-0.121	0.033	0.138	-0.126	**.240****	0.028	0.081	0.029	**.441****	1								
11. Studying in hometown	-0.025	-0.13	0.075	-0.062	-0.114	0.039	-0.14	-0.08	**-.198***	**-.185***	1							
12. Degree	-0.116	0.123	**.175***	-0.001	0.14	0.042	0.101	0.162	**.543****	**.448****	0.074	1						
13. Extension for studies applied	0.103	-0.06	0.079	-0.025	-0.126	0.027	0.074	-0.02	-0.095	-0.162	-0.08	0.053	1					
14. Mental problems	**-.180***	-0.008	0.006	0.101	-0.144	0.131	0.057	-0.05	0.065	0.064	0.122	-0.02	0.036	1				
15. Professional help	**-.204***	-0.098	0.072	0.019	-0.162	0.039	0.092	0.064	0.053	0.147	0.059	0.064	0.063	**.582****	1			
16. Counseling	-0.083	-0.025	0.039	-0.052	-0.071	0.072	0.015	0.046	0.111	**.186***	0.062	0.07	0.073	**.446****	**.674****	1		
17. Psyche medication	-0.158	-0.095	0.125	-0.042	**-.200***	0.119	0.092	0.083	0.043	0.046	-0.15	-0.03	0.07	**.536****	**.479****	**.438****	1	
18. Diagnosed mental illness	**-.251****	-0.163	0.111	-0.056	-0.124	0.102	0.072	0.056	0.001	0.073	0.027	0.012	0.052	**.401****	**.372****	**.307****	**.630****	1

Correlations

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

c Listwise N = 130

Table 11: Correlation Matrix

▪ **Satisfaction with life scale**

Polychronic Monochronic Tendency, Hours worked per week, Time off, Money spend, Age, Mental problems, Professional help and Diagnosed mental illness had significant correlations with SWLS. There is a positive correlation between PMTS and SWLS (r=0.231, p=0.008). This means that when tendency to act more polychronically increases the satisfaction with life also increases.

Hours worked per week and SWLS have weak positive relation to each other (r=0.180, p=0.04). Interestingly this correlation suggests that more you work the more satisfied you are with your life. *Time off from studies and work* also correlate with SWLS, but the correlation is negative (r=-0.265, p=0.002). This indicates that less spare time you have the more satisfied you would be. This in line with the previous correlation between *Hours worked per week* and SWLS. *Money spend on top off mandatory expenses* has also moderate positive correlation to SWLS (r=0.311, p<0.005). This means that more money one spends the more satisfied she is.

Age and SWLS have negative relation to each other (r=-0.229, p=0.009). This indicates that older you get less satisfied you will be with your life. However, in this sample most of the respondents are under 30 years old. Crisis that many people face around thirties might have an affect on this as well. Also, when getting older people tend to get more conscious of life.

Finally, as expected mental health problems and SWLS are related. However, the negative correlations are only weak to moderate. Perceived *Mental problems* and SWSL (r=-0.180, p=0.004), *Professional help* and SWLS (r=-0.204, p=0.02) and diagnosed mental illness and SWLS (r=-0.251, p=0.004) had all negative correlations. This indicates that when SWLS increases mental health decreases and vise versa. EAP or EIS had no significant correlations with SWLS.

- **Polychronic Monochronic Tendency Scale**

  As stated above, SWLS and PMTS have weak positive relation. PMTS also correlates with *Hours worked per week* (r=0.386, p<0.005). This basically means that when hours worked increases the polychromic tendency increases as well. Finally, PMTS and *Money spend in month* have moderate positive correlation (r=0.397, p<0.005). This indicates that more money you spend, the likely you are to use your time polychronically.

- **Exploratory Consumer Buying Behavior (EAP and EIS)**

  Surprisingly, Exploratory Acquisition of Products (EAP) and Exploratory Information Seeking (EIS) do not have any moderate or strong correlation to other variables in this study. EAP and *Degree* have weak positive correlation (r=0.175, p=0.046). This indicates that Masters degree students are more likely to do risky and innovative product choices. On the other hand, EIS correlates with *Gender* variable (r=-0.362, p<0.005). This suggests that female respondents are more likely to go browsing and window-shopping and they are interested in talking with other consumers about their consumption experience.

- **Hours worked, Money spend and Time off**

  Relations of these variables to SWLS, PMTS, EAP and EIS are already stated above. *Hours worked per week* and *Money spend* have moderate positive correlation (r=0.341, p<0.005). This is rather self-explanatory - the more you work the more you have money to spend. However, the correlation is only moderate, which means there are many more things explaining spending and working.

  Age and *Hours worked per week* correlate positively (r=0.225, p=0.01). This indicates that older students work more than younger ones. Correlation between *Years since started studies* and *Hours worked* (r=0.240, p=0.006) is in line with the correlation between *Hours worked per week* and *Age*. Older students are more likely to have studied for longer. According to this, they also tend to work more.

Psyche medication and *Hours worked per week* seem to have weak negative correlation (r=-0.200, p=0.022). This seems slightly random since Hours worked per week does not correlate to any other mental health variable.

- **Age, Degree, Years since started studies, Studying in hometown, Extension for studies applied**

  There is an obvious correlation between *Age* and *Years since started studies* (r=0.441, p<0.005). Furthermore, *Age* and *Studying in hometown* correlate negatively (r=0.198, p=0.024). Not surprisingly *Age* also correlates strongly with *Degree* (r=0.543, p<0.005). This means the older you are more likely you are a Master's Degree student.

  Years since started studies and *Study in hometown* have negative weak correlation (r=-0.185, p=0.035). On the other hand, there is a strong positive relation between *Years since started studies* and *Degree* (r=0.448, p<0.005). This means that the longer you have studied the more likely you are to study Master's degree. Finally, *Years since started studies* has weak positive correlation to *Counseling* (r=0.186, p=0.034). This could indicate that studies might be delayed because of some mental problems.

- **Mental health**

  Understandably, mental health variables correlate strongly and positively with each other. Correlations are presented in the Table 12.

	1.	2.	3.	4.	5.
1. Mental problems	1				
2. Professional help	.584**	1			
3. Counseling	.449**	.675**	1		
4. Psyche medication	.537**	.481**	.440**	1	
5. Diagnosed mental illness	.402**	.373**	.308**	.631**	1
**. Correlation is significant at the 0.01 level (2-tailed).					
*. Correlation is significant at the 0.05 level (2-tailed).					

Table 12: Correlations (Mental health variables)

7.3. Regression analysis

The results of the regression analysis demonstrate, how much of the variance in the dependent variable independent variables explain. In this section three different regression models will be presented. The dependent variables are SWLS, PMTS and EIS. All other variables (17) are used as independent variables in each of the regression analysis. In all the models, the *stepwise* method is used. The purpose of the stepwise regression is to choose, from a large number of predictor variables, a small subset of variables that count for the most of the variation of the dependent variable (Malhotra 1996). Furthermore, independent variables enter or leave the regression model one at the time when stepwise method is used. First independent variable to enter the regression equation is the highest predictor of the dependent variable. The second independent variable entered is the next highest predictor of the dependent variable. This procedure is repeated until a non-significant predictor is found. Independent variables are entered if significance level is ≤0.05 and removed if significance level is ≥0.1 (Malhotra 1996). The results are presented in the following sections.

7.3.1. SWLS as Dependent variable

The results of the first stepwise regression model, where SWLS is the dependent variable are presented in table 14. The selected variables were selected in this order: 1) *Money spend on top of mandatory expenses,* 2)*Time off from studies and work,* 3) *Age,* 4) *PMTS,* and 5) *Mental problems.* The first independent variable chosen has the strongest relation to dependent variable. Stepwise method selected only these independent variables, since there were no more statistically significant predictors of SWLS in the independent variables.

R-square is the coefficient of multiple determinations and it indicates how big part of the dependent variable is explained by the set of independent variables selected in the regression equation (0.0 or 0% is low and 1.0 or 100% is high). Adjusted R-Square is a modification of R-square that is generally considered to be a more accurate goodness-of-fit measure than R-square. R-square increases, when a new variable is added to a model.

In this regression model, there is a significant increase in adjusted R-square as more variables are added to the model. When explaining the SWLS with only *Money spend on top of mandatory expenses*, the adjusted R-square is very low - only 0.088. However, when adding *Time off from studies and Hours worked per week, Age, PMTS* and *Mental problems* the adjusted R-square increases to 0.263, which is relatively high and indicates that the chosen variables explain 26.3 percent of the SWLS.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	urbin-Watson
1	.308a	0.095	0.088	0.17444	
2	.405b	0.164	0.151	0.16826	
3	.468c	0.219	0.2	0.16336	
4	.513d	0.263	0.24	0.15927	
5	.540e	0.291	0.263	0.15685	1.963
a Predictors: (Constant), Money spend on top of mandatory expenses					
b Predictors: (Constant), Money spend on top of mandatory expenses, Time off from studies and work					
c Predictors: (Constant), Money spend on top of mandatory expenses, Time off from studies and work, Age					
d Predictors: (Constant), Money spend on top of mandatory expenses, Time off from studies and work, Age, PMTS					
e Predictors: (Constant), Money spend on top of mandatory expenses, Time off from studies and work, Age, PMTS, Mental problems					
f Dependent Variable: RLifeSatisfaction_log10					

Table 13: Regression model summary (SWLS)

Durbin-Watson test, which reports serial correlation, got a value of 1.963 when all the variables were added into the regression model. This is acceptable, since the value should be on a range of 1.5-2.5. This indicates that the variables are independent (table 13).

ANOVA measures the statistical significance of the model on each step. However, the fifth step in this model is the most important one. Model F-value describes whether the regression model is statistically significant or not (Pallant 2007). At the fifth step F-value is 10.184 and it is statistically significant (p<0.005, see table 14).

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.408	1	0.408	13.422	.000b
	Residual	3.895	128	0.03		
	Total	4.303	129			
2	Regression	0.707	2	0.354	12.493	.000c
	Residual	3.596	127	0.028		
	Total	4.303	129			
3	Regression	0.94	3	0.313	11.747	.000d
	Residual	3.363	126	0.027		
	Total	4.303	129			
4	Regression	1.132	4	0.283	11.16	.000e
	Residual	3.171	125	0.025		
	Total	4.303	129			
5	Regression	1.253	5	0.251	10.184	.000f
	Residual	3.051	124	0.025		
	Total	4.303	129			

a Dependent Variable: SWL
b Predictors: (Constant), Money spend on top of mandatory expenses
c Predictors: (Constant), Money spend on top of mandatory expenses, Time off from studies and work
d Predictors: (Constant), Money spend on top of mandatory expenses, Time off from studies and work, Age
e Predictors: (Constant), Money spend on top of mandatory expenses, Time off from studies and work, Age, PMTS
f Predictors: (Constant), Money spend on top of mandatory expenses, Time off from studies and work, Age, PMTS, Mental problems

Table 14: ANOVA (SWLS)

Table 15 reports the standardized beta weights associated with this stepwise regression model (step 5). Standardized coefficients refer to how many standard deviations the dependent variable, in this case SWLS, will change per standard deviation increase in the predictor variable. The model explains 26.3 percent of the life satisfaction. Furthermore, as an example, if polychronic-monochronic tendency rises by its standards deviation and other independent variables do not change, satisfaction with life rises with 0.248.

If tolerance value is <0.1, it indicates that the correlation with other variables is high, which suggest multicollinearity. Collinearity statistics (table 15) show that multicollinearity is not a concern in this model. The smallest tolerance value is 0.757 and the largest VIF= 1.321. VIF value is inverse of the tolerance value (1 divided by tolerance). VIF values of >10 would be a concern and indication of multicollinearity. There are no high correlations in the correlation matrix either (Table 11 and Appendix 4).

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	SE	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
(Constant)	0.556	0.081		6.898	0	0.396	0.715					
Money spend	0.04	0.017	0.2	2.301	0.023	0.074	0.006	0.31	0.20	0.17	0.76	1.32
Time off	-0.065	0.017	-0.306	-3.897	0	-0.032	-0.098	-0.29	-0.33	-0.30	0.93	1.08
Age	-0.044	0.015	-0.232	-2.987	0.003	-0.015	-0.073	-0.20	-0.26	-0.23	0.95	1.05
PMTS	0.031	0.011	0.248	2.878	0.005	0.053	0.01	0.27	0.25	0.22	0,.7	1.30
Mental problems	-0.07	0.032	-0.17	-2.211	0.029	-0.133	-0.007	-0.16	-0.20	-0.17	0.97	1.03
Dependent Variable: SWLS												

Table 15: Beta weights and collinearity

7.3.2. PMTS as Dependent variable

The results of the second stepwise regression model, where PMTS is the dependent variable, are presented in table 16. The selected variables are *Money spend on top of mandatory expenses* and *Time off from studies*. Stepwise method selected only these independent variables since there were no more statistically significant predictors of PMTS in the independent variables.

In this regression model, there is a moderate increase in adjusted R-square as another variable is added to the model. When explaining the PMTS with only *Money spend on top of mandatory expenses*, the adjusted R-square is 0.189. However, when adding *Hours worked per week,* the adjusted R-square increases to 0.245, which is relatively high and indicates that the chosen variables explain 24.5 percent of PMTS (table 16).

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.442a	0.196	0.189	1.29925	
2	.507b	0.257	0.245	1.25391	2.166
a Predictors: (Constant), Money spend on top of mandatory expenses					
b Predictors: (Constant), Money spend on top of mandatory expenses, Hours worked per week outside studies					
c Dependent Variable: PMTS					

Table 16: Regression model summary (PMTS)

Durbin-Watson test got a value of 2.166 (table 16), when all the variables were

added into the regression model. This is acceptable, since the value should be inside a range of 1.5-2.5. This indicates that the variables are independent. F-value is 10.184 and it is statistically significant p<0.005 (table 17).

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	52.565	1	52.565	31.14	.000b
	Residual	216.07	128	1.688		
	Total	268.635	129			
2	Regression	68.953	2	34.476	21.927	.000c
	Residual	199.682	127	1.572		
	Total	268.635	129			
a Dependent Variable: PMTS						
b Predictors: (Constant), Money spend on top of mandatory expenses						
c Predictors: (Constant), Money spend on top of mandatory expenses, Hours worked per week outside studies						

Table 17: ANOVA (PMTS)

Beta weights and collinearity statistics are presented in the table 19. The smallest tolerance value is 0.88 and largest VIF= 1.361. There are no high correlations on the correlation matrix either (see table 11 or Appendix 4). This indicates that there is no concern of multicollinearity in this model.

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	SE	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
(Constant)	2.532	0.319		7.944	0	1.90	3.16					
Money spend	0.555	0.129	0.351	4.306	0	0.30	0.81	0.44	0.36	0.33	0.88	1.14
Time off	0.347	0.107	0.263	3.228	0.002	0.13	0.56	0.39	0.28	0.25	0.88	1.14
Dependent Variable: PMTS												

Table 18: Beta weights and collinearity (PMTS)

7.3.3. EIS (and EAP) as Dependent variable

The attempt creating multiple regression model with stepwise method where EAP is dependent variable failed, since no significant correlations were found. The results of the stepwise regression model, where EIS is the dependent variable, are presented in table 19. The selected variables are *Gender* and *Money spend on top of mandatory expenses.*

In this regression model EIS is first explained with *Gender.* The adjusted R-square is 0.127. When *Money Spend on top of mandatory expenses* is added the adjusted R-

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square increases to 0.154, which means this model explains 15.4 percent of EIS.

Durbin-Watson test, which reports serial correlations, got a value of 2.014 when all the variables were added into the regression model. Again this is acceptable, since the value should be on a range of 1.5-2.5. This indicates that the variables are independent.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.366a	0.134	0.127	1.0683	
2	.408b	0.167	0.154	1.05204	2.014
a Predictors: (Constant), Gender					
b Predictors: (Constant), Gender, Money spend on top of mandatory expenses					
c Dependent Variable: sum_EIS					

Table 19: Regression model summary (EIS)

The model F-value describes whether the regression model is statistically significant or not. This model's F-value is 12.71 and it is statistically very significant p<0.005 (see table 20).

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.615	1	22.615	19.816	.000b
	Residual	146.082	128	1.141		
	Total	168.697	129			
2	Regression	28.135	2	14.067	12.71	.000c
	Residual	140.563	127	1.107		
	Total	168.697	129			
a Dependent Variable: sum_EIS						
b Predictors: (Constant), Gender						
c Predictors: (Constant), Gender, Money spend on top of mandatory expenses						

Table 20: ANOVA (EIS)

8. Discussion and conclusions

The purpose of this study is to contribute to the research on life satisfaction, time use and buying behavior by exploring the associations between life satisfaction, use of time and buying behavior. Furthermore, what other factors can explain life satisfaction, use of time and buying behavior. Research questions are:

1) *What kind of associations are there between life satisfaction, polychronic-monochronic time tendency, and buying behavior?*
2) *How are other variables such as income, spare time, and work related to life satisfaction, time use and buying behavior?*

8.1. Summary of the research

In the first chapters of the study, the existing literature of life satisfaction, time and consumer, and exploratory buying behavior were reviewed. It was concluded that life satisfaction is the cognitive component of subjective well being and positive and negative affect form the other half. Furthermore, each individual assesses the quality of their lives on the basis of their own unique set of criteria (Shin & Johnson, 1978, Pavot and Diener 1993). This judgmental process behind defining life satisfaction is up to the person, thus it is not externally imposed (Diener 1985).

It was also concluded that time is a construct that is experienced subjectively. This experience is influenced by the surrounding culture, individual differences and situation. Furthermore, the reasons to engage in exploratory behavior are to get exciting experiences, to get variation and change, and to satisfy curiosity (Berlyne, 1978). There was a relationship between exploratory buying behavior and the way consumers use their time.

After reviewing the literature, the research methods were introduced. The data for this study was collected using online survey. Correlation and regression analyses were used to analyze the empirical data. In the following the key results from the analyses conducted are discussed and the research questions are answered.

8.2. Key results of the study

In this section the research questions are answered by discussing the key findings of the study in the light of previous research.

What kind of associations are there between life satisfaction, polychronic-monochronic time tendency, and buying behavior?

Only moderate or not significant relationships between life satisfaction, polychronic-monochronic tendency, and buying behavior were found in this research. There is a moderate positive relationship (r=0.231, P=0.008) between life satisfaction and polychronic-monochronic tendency. This means that if you feel satisfied with your life, there is a slight preference for polychronic behavior and time use. When the relation was tested with stepwise regression analysis five independent variables were selected. If polychronic-monochronic tendency rises by its standard deviation and other independent variables do not change, satisfaction with life rises with 0.248.

All together, there is very little literature on the relation of life satisfaction and time use. Consequently, relationship between polychromic–monochronic tendency and life satisfaction has not been studied before. This study contributes to the research of life satisfaction judgments. Polychronic-monochronic tendency could be seen as top-down factor.

Even though correlations show that there is a relation between two factors, the causality of life satisfaction and polchronic-monochronic time use remains undetermined. However, the speculations on whether the satisfaction in life causes people to act more polychronically or if behaving polycronically increases satisfaction with life are interesting. SWLS was not chosen to the regression model where PMTS was the dependent variable. On the other hand, PMTS was included in the regression model explaining SWLS. This might suggests causality. In other words, polychronic – monochromic tendency explains life satisfaction. Not the other way around.

Neither component of Exploratory Consumer Buying Behavior (ECBB) correlated

with life satisfaction or polychronic-monochronic tendency. However, regression model where the other component of ECBB (Exploratory Information Seeking, EIS) was a dependent variable revealed that gender and money spend in a month on top of students mandatory expenses explains 15.4 per cent of the variance of the EIS. This means that female respondents are more likely to go browsing and window-shopping and they are interested in talking with other consumers about their consumption experience. This answered partially to the second research question, which is:

How are other variables such as income, spare time, and work related to life satisfaction, time use and buying behavior?

In addition to associations between life satisfaction, polychronic-monochronic tendency and exploratory buying behavior, 14 more variables' relations to the main variables and also to each other were analyzed.

A moderate positive relationship between life satisfaction and money spend per month by students was found. This suggests that the more money you spend the more satisfied you are with your life or other way around. Among others Pavot and Diener (2008) suggests that wealthier people tend to be happier. This study shows the same kind of tendency. However, the actual income is not a variable in this study. Instead, the respondents were asked to approximate the amount of money they spend on top of their mandatory expenses. However, this variable can be interpreted to income.

Furthermore, relationship between life satisfaction and hours worked per week on top of studies is positive. This association is not strong but still in line with the previous research. According to Layard (2005) work contributes to individual's sense of productivity and self-esteem and is necessary to pay for living. Furthermore, there is a close to moderate negative relationship between life satisfaction and time off from studies and work. This can be interpreted as that less spare time you have the happier you are. It is rather surprising, since the question asked for this variable especially stated that the time off would be dedicated to self, to family or friends or to hobbies. This is rather interesting and surprising in a light

of previous research, if assumption would be made that work is taking the extra time on top of studies. According to Mogilner (2010) working long hours does not translate in to happiness. On the contrary, people are happiest when socializing and during intimate connecting activities and least happy when *working* and commuting.

Numerous studies all over the world have considered differences in life-satisfaction across age. The differences tend to be small (Saris et al. 1996). However, in this study age and life satisfaction have negative weak relationship, which indicates that older students are unhappier than the young ones.

Finally, the mental health issues seem to have negative correlation with life satisfaction. In other words, when person has mental health issues the life satisfaction decreases. According to Diener (1985). There is evidence that mental illness or health can affect the life satisfaction of anyone. Scores on the Satisfaction with life scale (Diener 1985) have been shown to correlate with measures of mental health.

8.3. Limitations

There are some limitations to this study that should be noted when analyzing the results. First of all, the sample size is not very big, even though the amount of respondents is not especially low either. However, with a bigger sample size the results would be more statistically significant.

Second, it may be assumed that the non-responded students may have more time limitations. As a consequence, the most extreme cases i.e. people with no spare time might have been excluded from this study. On the other hand, the respondents might vary in other qualities as well from the non-respondent ones. It may be that the responded students enjoy working and answered the questionnaire because they are ready to make an extra effort. This could also explain why the results indicate that individuals working more are happier. Furthermore, the sample choice could be seen as a limitation. This study will provide only data on certain type of consumers. Results cannot be generalized.

Third, there are some limitations related to the regression models constructed for

this research. SPSS, which was used to conduct the regressions, expects all the variables to be continuous. However, three of the independent variables (Money spend, Time off and Hours worked) were not. This may have had some sort of an effect on the results, but it is not likely that the effect has been very notable.

Fourth, as Lindqvist and Kaufman-Scarborough (2007) have pointed out, there is a concern whether the comfort and enjoyment items of PMTS really reveal if actions towards monochronic or polychronic time use are voluntary or forced. In addition, person might engage in non-preferred behavior to achieve certain outcomes, even she or he is not enjoying the process at all. The misinterpretations of some questions (see Appendix 2) might have affected to the results.

Finally, regression models are based on correlations and it is important to notice that existence of the relationship does not necessarily mean causality. Nothing can really confirm or deny the direction of the relationship (Pallant 2007, Malhotra and Birks 2007).

8.4. Suggestions for future research

Most of the suggestions for future research are based on the limitations of this study. First, the association between life satisfaction and polychronic-monochronic tendency could be further explored by extending the research to the whole population to get a bigger sample size. Bigger sample size and extending the research to other demographic groups would provide more widely applicable results. In addition, this could potentially provide useful information for marketers. As an example, the shortage of time, which closely relates to polychronicity is an interesting emerging theme in the study of time in consumer behavior (Suri and Monroe 2003, Leclerc et al. 1995, Alreck and Settle 2002). Among other things, the shortage of time has created a stable market for goods and services, which will save time for busy consumers and make polychronic time use easy.

Second, relationship between life satisfaction and downshifting, which was discussed briefly in the literature review, should also be further researched. This study suggests that less spare time you have the happier you are, whereas downshifting has developed because people were short of time and did not have

time for the things that really mattered to them. Additionally, research in this area could bring interesting insight and ideas on what type of products or services support life satisfaction.

Appendices

Appendix 1: Thesis questionnaire

Information will be used as a part of bigger data set and individual answers cannot be identified.

Q1: What is your gender?

1. Female
2. Male

Q2: How old are you?

1. 18-21
2. 22-25
3. 26-29
4. 30 or more years

Q3: What year did you start your studies at Aalto University?

Q4: Are you studying in your hometown?

1. Yes
2. No

Q5: What degree are you studying?

1. Bachelor's degree
2. Master's degree

Q6: Have you applied extension for your studies?

1. Yes
2. No

Q7: How many hours you work outside studying per week?

1. 0 hours/week
2. 1-10 hours/week
3. 11-24 hours/week
4. 25 or more hours/week

Q8: How the next statements about life satisfaction apply to you?

Below are five statements with which you may agree or disagree. Using the 1-7 scale indicate the number that best describes your agreement with each statement. Even though you don't find the option that expresses your thoughts precisely choose an answer that most closely describes them. (1 = Strongly Disagree, 2 = Disagree, 3 = Slightly Disagree, 4 = Neither Agree or Disagree, 5 = Slightly Agree, 6 = Agree, 7 = Strongly Agree)

1. In most ways my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with life.
4. So far I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.

Q9: How the next statements about use of time apply to you?

Below are five statements with which you may agree or disagree. Using the 1-7 scale indicate the number that best describes your agreement with each statement. Even though you don't find the option that expresses your thoughts precisely choose an answer that most closely describes them. (1 = Strongly Disagree, 2 = Disagree, 3 = Slightly Disagree, 4 = Neither Agree or Disagree, 5 = Slightly Agree, 6 = Agree, 7 = Strongly Agree)

1. I prefer to do two or more activities at the same time.
2. I typically do two or more activities at the same time.
3. Doing two or more activities at the same time is the most efficient way to use my time.
4. I am comfortable doing more than one activity at the same time.
5. I like to juggle two or more activities at the same time.

Q10: I have time off from studies and work, which I dedicate to myself, friends, family or to my hobbies

1. Every day
2. 3-4 days from Mon to Fri and on weekends
3. Only on weekends
4. I don't have any time off from studies and work

Q11: How the next statements about buying behavior apply to you?

Below are five statements with which you may agree or disagree. Using the 1-7 scale indicate the number that best describes your agreement with each statement. Even though you don't find the option that expresses your thoughts precisely, choose an answer that most closely describes them. (1 = Strongly Disagree, 2 = Disagree, 3 = Slightly Disagree, 4 = Neither Agree or Disagree, 5 = Slightly Agree, 6 = Agree, 7 = Strongly Agree)

1. Even though certain food products are available in a number of different flavors, I tend to buy the same flavor.(*)
2. I would rather stick with a brand I usually buy than try something I am not very sure of. (*)
3. When I go to a restaurant, I feel it is safer to order dishes I am familiar with. (*)
4. If I like a brand, I rarely switch from it just to try something different. (*)
5. I like to go window-shopping and find out about the latest styles.
6. I like to browse through mail-order catalogs even when I don't plan to buy anything.
7. I like to shop around and look at displays.

Q12: How much money you spend on leisure activities, hobbies, shopping, eating out, or other things apart from your monthly mandatory expenses?

1. Less than 100 euros
2. 100-300 euros
3. 300-500 euros
4. 500 euros or more

Q13: Have you had or are you having any mental problems?

(Mental health issues can include for example depression, anxiety, addictions (alcohol, drugs, gambling etc.) and eating disorders.)

1. Yes
2. No

Q14: Have you planned or are you planning to get professional help?

1. Yes
2. No

Q15: Have you received or are you receiving counseling?

1. Yes
2. No

Q16: Have you taken or taking medicines for mental issues? (i.e. depression)

1. Yes
2. No

Q17: Do you have a diagnosed mental illness?

1. Yes
2. No

Appendix 2: PMTS - Measures and indicators

	1.	2.	3.	4.	5.
Statements evaluated by the respondent from 1-7 on Likert scale.	I prefer to do two or more activities at the same time.	I typically do two or more activities at the same time.	Doing two or more activities at the same time is the most efficient way to use my time.	I am comfortable doing more than one activity at the same time.	I like to juggle two or more activities at the same time.
What is measured?	Preference to behave more monochronically or more polychronically.	To what extent a person reports typically behaving as preferred.	Whether they see behaving in preferred way as the most efficient way to use their time.	Whether they like to juggle two or more activities at a time.	Whether they are comfortable behaving this way.
Indicators	Polychronic–monochronic behavior preference.	Reported polychronic–monochronic behavior.	Whether they see behaving in preferred way as the most efficient way to use their time.	Liking to juggle simultaneous activities.	Comfort with polychronic–monochronic behavior.

Appendix 3: Descriptive statistics

| | N | | | | | | | Skewness | | Kurtosis | | | |
	Valid	Missing	Mean	Median	Mode	Std. Deviation	Variance		Std. Error		Std. Error	Min	Max
SWLS	132	0	5.01	5.4	5.6	1.25	1.57	-0.79	0.21	0.00	0.42	1.6	7
PMTS	131	1	4.49	4.6	4.20a	1.46	2.13	-0.23	0.21	-0.60	0.42	1	7
EAP	131	1	3.02	3	2.25	0.87	0.76	0.03	0.21	-0.74	0.42	1	5
EIS	131	1	2.73	2.67	1.00a	1.14	1.31	0.08	0.21	-1.05	0.42	1	5
Gender	132	0	1.46	1	1	0.50	0.25	0.15	0.21	-2.01	0.42	1	2
Age	132	0	2.29	2	2	0.95	0.91	0.41	0.21	-0.70	0.42	1	4
Years since started studies in Aalto	132	0	1.66	1	1	0.84	0.70	1.27	0.21	1.11	0.42	1	4
Studying in hometown	132	0	1.49	1	1	0.50	0.25	0.03	0.21	-2.03	0.42	1	2
Degree	132	0	1.55	2	2	0.50	0.25	-0.19	0.21	-2.00	0.42	1	2
Extension for studies applied	132	0	1.95	2	2	0.21	0.04	-4.42	0.21	17.76	0.42	1	2
Hours worked per week outside studies	132	0	2.23	2	1	1.10	1.20	0.29	0.21	-1.26	0.42	1	4
Time off from studies and work	132	0	2.00	2	2	0.86	0.75	0.43	0.21	-0.64	0.42	1	4
Money spend on top of mandatory expenses	132	0	2.17	2	2	0.93	0.86	0.54	0.21	-0.46	0.42	1	4
Mental problems	132	0	1.74	2	2	0.44	0.19	-1.12	0.21	-0.75	0.42	1	2
Professional help	132	0	1.79	2	2	0.41	0.17	-1.43	0.21	0.03	0.42	1	2
Counseling	132	0	1.80	2	2	0.40	0.16	-1.54	0.21	0.38	0.42	1	2
Psyche medication	132	0	1.91	2	2	0.29	0.08	-2.88	0.21	6.38	0.42	1	2
Diagnosed mental illness	132	0	1.95	2	2	0.22	0.05	-4.04	0.21	14.50	0.42	1	2

a Multiple modes exist. The smallest value is shown

Appendix 4: Descriptive Statistics and Correlations

Correlations																		
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.
1. SWLS	1																	
2. PMTS	.231**	1																
3. EAP	0.039	-0.019	1															
4. EIS	0.035	0.058	0.023	1														
5. Hours worked per week outside studies	.180*	.386**	0.071	0.066	1													
6. Time off from studies and work	-.265**	0.113	0.121	-0.105	0.114	1												
7. Money spend on top of mandatory expenses	.311**	.397**	0.069	0.166	.341**	-0.095	1											
8. Gender	-0.068	-0.02	0.156	-.362**	-0.022	0.115	0.007	1										
9. Age	-.229**	0.122	0.059	-0.075	.225*	0.054	0.155	0.011	1									
10. Years since started studies in Aalto	-0.121	0.033	0.138	-0.126	.240**	0.028	0.081	0.029	.441**	1								
11. Studying in hometown	-0.025	-0.13	0.075	-0.062	-0.114	0.039	-0.14	-0.08	-.198*	-.185*	1							
12. Degree	-0.116	0.123	.175*	-0.001	0.14	0.042	0.101	0.162	-.543**	-.448**	0.074	1						
13. Extension for studies applied	0.103	-0.06	0.079	-0.025	-0.126	0.027	0.074	-0.02	-0.095	-0.162	-0.08	0.053	1					
14. Mental problems	-.180*	-0.008	0.006	0.101	-0.144	0.131	0.057	-0.05	0.065	0.064	0.122	-0.02	0.036	1				
15. Professional help	-.204*	-0.098	0.072	0.019	-0.162	-0.039	-0.092	-0.064	0.053	0.147	-0.059	0.064	-0.063	.582**	1			
16. Counseling	-0.083	-0.025	0.039	-0.052	-0.071	-0.072	-0.015	0.046	0.111	.186*	-0.062	0.07	-0.073	.446**	.674**	1		
17. Psyche medication	-0.158	-0.095	0.125	-0.042	-.200*	0.119	0.092	0.083	0.043	0.046	-0.15	-0.03	0.07	.536**	.479**	.438**	1	
18. Diagnosed mental illness	-.251**	-0.163	0.111	-0.056	-0.124	0.102	-0.072	0.056	0.001	0.073	-0.027	0.012	0.052	.401**	.372**	.307**	.630**	1

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

c Listwise N = 130

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