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To Investigate the Relationship Between Time Perception and Subjective Wellbeing

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Abstract

The study aimed to examine the link between how individuals perceive time and their overall sense of well-being, seeking to understand the subtle ways in which views on time impact happiness. Through thorough exploration, the aim was to evaluate whether differences in time perception significantly influenced subjective well-being and, if so, how these influences played out in daily lives. By examining this connection, the research aimed to provide meaningful insights into the psychological and emotional dimensions of time, deepening understanding of the factors that shape well-being.

The study set out to test several hypotheses concerning the relationship between different time perception factors and subjective well-being. Research conducted by Zimbardo & Boyd (1999) suggested that past positive, present hedonistic, and future time perspectives were related to higher subjective well-being, while past negative and present fatalistic perceptions were related to lower subjective well-being. The future perspective was further investigated by Carelli et al. in 2015, where they also identified a future negative time perception owing to the disproportional anxiety and worry felt by people while thinking about their future, a factor not considered in the Zimbardo research. Using correlation, the study aimed to offer valuable insights into the relationship between specific time perception factors and subjective well-being.

1. Theory Intro

Time Perception

Within the fields of psychology, cognitive linguistics, and neuroscience, the study of time perception focuses on the individual's subjective sense of time, which is determined by how long they believe an event to be unfolding or indefinite. Perceived length is the amount of time that is perceived to have passed between two consecutive events. Even though it is impossible to directly experience or comprehend another person's perspective of time, perception can be objectively investigated and deduced through a variety of scientific studies. A few temporal illusions aid in illuminating the underlying brain processes that underlie time perception. The ancient Greeks recognized the difference between chronological time (chronos) and subjective time (kairos). Pioneering work on time perception, emphasizing species-specific differences, was conducted by Karl Ernst von Baer.

A myriad of elements combine to affect our subjective sense of time passing, making time perception a fascinating part of human cognition. Fundamentally, how we see time is closely linked to how we feel about ourselves. Our emotions, concentration, and memories can all affect how we see time. For example, time seems to go by more quickly when we're deeply involved in an interesting work or in a setting that is extremely stimulating, but it may also seem painfully sluggish while we're waiting or bored. In addition, our perception of time during the day is greatly influenced by our internal biological rhythms, such as circadian rhythms that are controlled by our body's internal clock. These biological elements are susceptible to the effects of age, heredity, and even outside stimuli such as light exposure. Environmental aspects are also very important; shifts in sensory input, surroundings, and outside stimuli can all affect how we perceive time. The way we perceive time is essentially shaped by the intricate interactions between our environment, biology, and psychology, which individually influence how we perceive the temporal aspect of life.

The way we view ourselves in connection to the past, the future, and other people, as well as how we act in the present, all depend on our time perspective (Lennings, 2000). Lewin (1951) was one of the first scholars to highlight the significance of time perspective (TP) in social science and to assert that TP has an impact on motivation, behavior, and emotion. According to the socioemotional selectivity hypothesis (Carstensen, 1995; Carstensen, Isaacowitz & Charles, 1999), emotion, cognition, and age-related motivational changes are all significantly impacted by how people perceive time, which is a crucial component of social goals. Zimbardo and Boyd (1999) assume in their theory of TP that our self-image, our world view and our interpersonal relations are influenced by cognitive processes related to TP. We acquire the ability to classify societal and personal experiences into the past, present, and future, which enables us to give these occurrences structure, meaning, and order. The three temporal frames-past, present, and future - are employed to generate expectations, goals, contingencies, and creative situations in addition to encoding, storing, and recalling experiences. As a basic process, TP is thought to be impacted by a variety of elements, including age, family modeling, education, socioeconomic class, culture, and religion. "People are rarely aware of its subtle operation, influence, or biasing powers because the operation of TP is so pervasive in people's lives and is multiply determined" 79 (Zimbardo & Boyd, 1999, p. 1272). Moreover, Zimbardo and Boyd (1999) state when one time frame dominates, a ‘biased TP’ occurs and becomes dysfunctional. In contrast, a ‘balanced TP’ gives the flexibility to switch between the different time frames, depending on the situation, our needs and our values.

There are five main subtypes of time perspective; (1) future, (2) past-negative, (3) past-positive, (4) present-hedonistic and (5) present-fatalistic. The majority future-oriented person prioritizes working toward future objectives and benefits, frequently at the price of enjoying the moment, postponing satisfaction, and resisting time-wasting temptations. Individuals who have potential TP are more likely to eat a healthy diet, floss their teeth, and schedule regular check-ups with the doctor. They also frequently have greater success than others. The third little pig was undoubtedly forward-thinking because he used bricks to construct his home and correctly assessed the wolf's threat. Living in the now, seeking pleasure, enjoying high-intensity activities, seeking thrills and novel sensations, and loving adventures are characteristics of the present-hedonistic individual. Children's primary orientation is present-hedonistic. Unfortunately, there may be drawbacks to this kind of behavior. Today's hedonists run the risk of caving in to temptation, which

can result in almost any addiction (such as drug and alcohol misuse), unsafe driving, mishaps and injuries, as well as failure in school and the workplace. On the opposite side, the Present-Fatalistic TP is linked to feelings of pessimism, powerlessness, and the conviction that powers outside of oneself - such as governmental or spiritual forces-control one's existence. The past TP is linked to an emphasis on history, family, tradition, and self-continuity over time. This could have a good or bad impact. The Past-Positive person cherishes keeping up ties with family and friends and has a pleasant, sentimental, and nostalgic view of the past. He or she enjoys hearing tales from bygone eras. The previous-Negative person concentrates on painful or unpleasant previous experiences, feeling plagued by them.

Which of these temporal perspective types is better for wellbeing, if you had to guess? For obvious reasons, the present-fatalistic and past-negative orientations are not taken into consideration. Many experts contend that healthy functioning and overall well-being are contingent upon having an eye toward the future. However, excessive future orientation has negative effects such as workaholism, disregard for friends and family, indulging in occasional self-indulgence, and neglecting hobbies. Numerous other academics believe that a time orientation that prioritizes the present is necessary for overall wellbeing. These include Schopenhauer, Maslow, and Csikszentmihalyi, who emphasize the importance of in-the moment experiences. But there are drawbacks to this mindset as well, such as a disregard for long-term effects and "the morning after" sensations. Contrary to expectations, recent research has found that present hedonistic orientation has a better relationship with positive affect but very modest associations with life satisfaction; this is not surprising given that present hedonistic orientation aims to maximize present feelings of joy and excitement. On the other hand, future TP does not show any associations with well-being whatsoever. The past-positive orientation turns out to be the time viewpoint that promotes wellbeing the most. People that are past-positive oriented have the highest self-esteem and are content with their lives, both past and present. Even so, there are some disadvantages to this extremely positive viewpoint, such as being overly cautious or conservative, resisting change and being 80 receptive to different experiences and cultures, maintaining the status quo even when it is not in one's best interests, and attempting to apply outdated solutions to contemporary issues.

The Circles Test (Cottle, 1967), the Experiential Inventory (Cottle, 1968), the Time Structure Questionnaire (Bond & Feather, 1988), and the Rappaport Time Line (Rappaport, Enrich & Wilson, 1985) are among the instruments that have been developed to measure time perception (TP). However, none of these instruments was found to be highly reliable or able to measure all three time dimensions, and the majority of them have scoring issues (Boniwell & Zimbardo, 2004; Kazakina, 1999). The Zimbardo Time Perspective Inventory (ZTPI) was created in response to this. The limitations of the current scales are addressed by this questionnaire. This theory-based tool takes into account the social, cognitive, emotional, and motivational processes that determine the TP (Zimbardo & Boyd, 1999). Five primary variables were identified via exploratory principal component factor analysis, each of which reflected a profile. A negative, unpleasant perspective of the past is included in the first factor, the Past Negative scale of the ZTPI. The second element, the Present-Hedonistic scale, measures a risk-taking, hedonistic attitude toward life and time with minimal regard for the implications down the road. High Present-Hedonistic scorers are focused on the here and now, embrace risk-taking, thrive in demanding pursuits, need excitement, and are receptive to new

friendships. Those who concentrate on future objectives and benefits are typified by the third factor, the Future factor. People who are future-focused prioritize the effects, backup plans, and results of their current choices and deeds. The fourth time element, Past-Positive, emphasizes preserving ties with family and friends and is associated with a pleasant, sentimental, warm, and nostalgic attitude toward the past. Present-Fatalistic, the final and fifth element, indicates a fatalistic, dismal, and helpless outlook on life and the future.

Subjective Well-Being

The phrase "subjective well-being," or "SWB," refers to how people view and evaluate different aspects of their lives. Over the past ten years, there has been a noticeable surge in the interest in statistics pertaining to self-reported wellbeing (SWB) from researchers, policymakers, national statistical agencies, the media, and the general public.1. The data is useful for monitoring population health, social conditions, and economic conditions; it can also be utilized to guide policy decisions in these domains (Krueger et al., 2009; Layard, 2006).

Researchers in the fields of sociology, psychology, and economics have found that although the components of SWB are not entirely independent, they do overlap. This continuum can be used to conceptualize these measurement constructs: general assessments of life satisfaction, purpose, or suffering are at one end (longest reference periods, or no reference period at all), and assessments of experience, emotional state, or sensations are essentially real-time assessments at the other end (shortest time unit).

Even with these temporal overlaps, every SWB component has its own characteristics, often correlates with different sets of variables, and reflects different aspects of the construct that are all important to track for various reasons. The nomenclature employed to delineate SWB has often been imprecisely applied, thereby obscuring the discourse and impeding the progress of the field. For example, the term "happiness" has been applied to both general life assessments and assessments of fleeting emotion. It is impossible 81 to understand the known coexisting intricacies because of this lack of accuracy. For example, a person who is engaged in stressful or difficult activities, such as working toward an education or a job promotion, may find substantial meaning or satisfaction with life overall; a person who is generally suffering or lacking hope may experience temporary reprieve in an enjoyable moment.

The type of policy or research issue being asked will determine the appropriate construct to assess SWB and may also suggest a method for gathering data. For example, if the dimension of interest is known to be sensitive on a very small time frame and responds to ordinary activities and events but is generally stable over extended periods of time, then a cross-sectional data collection conducted every two years might not be beneficial. Even though a high-frequency approach employs a much smaller sample size, in some circumstances it may produce the most revealing results. Comparably, if a measure fluctuates widely among people on any particular day but does not react strongly to exogenous events (financial shocks, changes in employment rates, etc.), it could not be very useful to track over time at the national level. Rather, it usually washes off at high aggregate concentrations. The phrase "subjective well-being" (SWB) refers to a wide range of subjective evaluations of an individual's emotional, cognitive, and evaluative dimensions of life. In essence,

SWB represents people's overall perceptions of fulfilment, happiness, and contentment in life. This holistic point of view recognizes that happiness is more than just the absence of negative emotions or financial prosperity, and it highlights the importance of personal experiences and opinions in assessing one's quality of life.

The frequency and intensity of both positive and negative affective experiences are included in SWB emotionally. While negative emotions like sadness, anger, and worry take away from SWB, positive emotions like joy, love, and happiness positively add to it. But emotional experiences are not the only factors that influence SWB; cognitive assessments are also quite important. People evaluate how well their current circumstances match their expectations, values, and aspirations in order to determine their overall level of life happiness. This cognitive aspect of SWB includes assessments of a range of life areas, such as relationships, employment, health, and personal accomplishments. Furthermore, a wide range of environmental and individual factors affect SWB. One's SWB can be shaped by external factors like financial level, social support networks, and cultural norms as well as internal features like resilience, coping techniques, and personality traits. For example, people who feel a strong sense of belonging and have strong social connections tend to report higher levels of SWB, while others who are dealing with ongoing stressors or financial difficulties may report lower levels of well-being. The study of SWB has significant implications for psychology, public policy, and social science research. It provides valuable insights into the factors that contribute to human flourishing and helps identify strategies for enhancing individual and societal well-being. By recognizing the subjective nature of well- being and incorporating diverse dimensions of human experience, SWB offers a more comprehensive understanding of what it means to lead a fulfilling and meaningful life. Thus, efforts to promote SWB extend beyond material wealth or economic growth to encompass fostering positive emotions, supporting personal development, and cultivating environments conducive to happiness and well-being for all individuals.

2. Studying the relationship between Time Perception and Subjective Well-Being

Investigating how subjective well-being (SWB) and time perception interact is an intriguing multidisciplinary field of study that seeks to understand how our perceptions of time impact our general sense of fulfilment, happiness, and life satisfaction. Ideas from psychology, neurology, sociology, and other pertinent disciplines are integrated into this field of study to comprehend the complex links between temporal events and wellness.

The main goal of this study is to investigate how individuals subjectively perceive time. This covers people's perceptions of time, such as how quickly or slowly they believe it is passing, as well as their attitudes toward time, such as their perspectives on the past, present, and future. The purpose of this research is to find out if people who think that time is abundant, flexible, or filled with worthwhile events often report higher levels of wellbeing than those who think that time is scarce, tightly regulated, or pointless. People who practice mindfulness and present-focus may feel happier with life overall because they are less preoccupied with thoughts of the past or the future and more appreciative of the richness of their experiences.

Researchers also look into how people's time management and usage practices impact their general wellbeing. Examining how people divide their time and establish priorities for various

pursuits, including as work, play, relationships, and personal objectives, is part of this. Studies look into whether persons who score higher on SWB participate in activities that align with their values, passions, and inner desires. Individuals who engage in activities that foster social relationships, personal growth, and positive emotions, for instance, might report greater levels of happiness and life satisfaction than those who work in jobs that are monotonous, taxing, or inconsistent with their goals.

Scholars also investigate how socioeconomic conditions and cultural norms influence people's conceptions of time and wellbeing. Different cultural perspectives and temporal orientations can have an impact on people's perceptions of time and SWB. Higher levels of well-being may be observed among members of cultures that prioritize work-life balance and leisure above productivity and material success, as opposed to those who place a greater emphasis on these things at the expense of personal time and well-being.

All things considered, studying the relationship between subjective well-being and perception of time offers crucial insights into the complex relationship between temporal experiences and thriving in humans. Understanding the connection between our sense of time and overall well-being can help researchers design therapies, policies, and practices that are intended to foster happiness, life satisfaction, and contentment in people and communities.

The relationship between subjective well-being and time perception is rooted in the significant influence that our experiences of time have on our general sense of contentment, life satisfaction, and happiness. This is the way these two ideas are related:

1) Temporal Framing of Experiences - Our experiences and interpretations of life's events are framed by our perceptions of time. People who view time as plentiful and adaptable could approach life with more openness and ease, which could result in more pleasant experiences and feelings. On the other hand, those who believe that they don't have enough time may become more stressed and anxious, which can have a bad effect on their wellbeing. Thus, the way we perceive and react to the world is shaped by our subjective experiences with time, which in turn affects how happy and fulfilled we feel in general.

2) Time Use and Well-Being Activities - Our well-being is significantly impacted by the way we spend our time. Subjective well-being can be improved by partaking in pursuits that are consistent with our values, interests, and objectives; that is, pursuits that offer a sense of purpose, enjoyment, and fulfilment. People who place a higher priority on relationships, personal development, leisure, and happy-making activities are more likely to be happier people overall. On the other hand, devoting time to activities that seem pointless, exhausting, or at odds with our desires can negatively impact our sense of well-being and contentment in life.

3) Temporal Perspectives and Mindfulness - Whether we concentrate on the past, present, or future, our temporal orientation affects how happy we are. People who practice mindfulness and live in the present tend to be happier and feel more satisfied with life overall. They might get more happiness and fulfilment from routine activities if they focus on the here and now and recognize the depth of their experiences. On the other hand, people who obsessively reflect on the past or worry about the future could feel more distressed and less happy.

4) Cultural and Societal Influences - Our experiences and the results of our well-being are also

shaped by societal views and cultural conventions surrounding time. Members of cultures that place a high importance on leisure, community relationships, and work-life balance may have higher levels of wellbeing. On the other hand, societies that place a higher value on busyness, production, and material success than on personal leisure and wellbeing may be linked to lower levels of pleasure and life satisfaction. Thus, a person's experience of time and general well-being are greatly influenced by their cultural background.

In conclusion, there is a close relationship between subjective well-being and time perception, since our perceptions of time impact our emotions, behaviours, and general life satisfaction. Comprehending this correlation offers significant understanding of the elements that lead to human flourishing and shapes approaches to fostering contentment and welfare in both individuals and communities.

3. Review of Literature

Satisfaction with time use and its relationship with subjective well-being, 2006 (Boniwell, I.)

Many studies on how people use their time have relied on suppositions about calendar and clock time. There is a dearth of information regarding people's perceptions of how they utilize their time, what factors contribute to their satisfaction with it, and the nature of the connection between time management and wellbeing. Two empirical studies and reviews of the literature on time usage and well-being were used in this thesis to address these issues.

In the first study, 21 carefully chosen people participated in semi-structured in-depth interviews, which were conducted using a qualitative approach. To analyze the data, interpretative phenomenological analysis (IPA) was employed. Four overarching categories were created from the ten super-ordinate themes that the data revealed as influencing how satisfied people were with their use of their time: motivation, organization, execution, and evaluation.

The second quantitative study set out to find out if the major themes found in the first study would hold true with a bigger sample size and to look at the connections between locus of control, subjective well-being, and satisfaction with time use. 173 randomly chosen Open University students answered mail questionnaires as part of the study's survey design. Four components emerged from a factor analysis of the time usage questionnaire: balance, achievement and responsibility, feeling good about one's work, time anxiety, and lack of control. Forty percent of the variation in time usage satisfaction was explained by these characteristics. Significant correlations were also identified between several measures of wellbeing and satisfaction with time utilization.

The studies brought to light a number of previously unnoticed or inadequately studied factors that influence how satisfied people are with how they use their time. These factors include motivation for time-consuming activities, the perception of balance in time allocation, accepting responsibility for one's time, and a sense of accomplishment. According to the findings, time use interventions that concentrate more on the psychological components of time use and less on time management strategies may be more beneficial in terms of improving satisfaction with time usage.

The relationship between time perspective and subjective well-being of older adults, 2012, (Fien Desmyter and Rudi De Raedt)

The literature provides a comprehensive understanding of how temporal orientations impact psychological well-being in later life by examining the complex relationship between time perspective (TP) and subjective well-being (SWB) in older persons. TP is conceptualized as a fundamental component of human cognition and motivation, drawing on foundational theories such as Lewin's (1951) emphasis on the importance of TP in behavior and socioemotional selectivity theory (Carstensen, 1995), which highlights the role of TP in determining social objectives. One of the most widely used instruments for measuring time perception (TP) is the Zimbardo Time Perspective Inventory (ZTPI), which identifies five different dimensions: past-negative, present-hedonistic, future, past-positive, and present fatalist. Within the context of SWB, which includes both positive and negative affect, life 85 satisfaction, and depressive symptoms, resilient levels of positive affect and life satisfaction are frequently observed in older persons, even in the face of age-related obstacles such physical decline and loss. But a small percentage of this population suffers from depression, which emphasizes how crucial it is to comprehend the variables that lead to SWB in this demographic. Research on the relationship between TP and SWB reveals complex relationships, with past-positive orientation regularly linked to higher levels of life satisfaction and past-negative orientation correlated with higher levels of depressive symptoms. Increased positive affect is predicted by a present-hedonistic orientation, whereas higher levels of despair are associated with a present-fatalist perspective. Future orientation makes a substantial contribution to SWB overall and is linked to optimism and positive functioning. A greater understanding of aging trajectories and the promotion of successful aging outcomes are ultimately fostered by this body of literature, which emphasizes the complexity of temporal orientations in influencing psychological well-being among older adults and the potential for customized interventions to enhance SWB in later life.

This study looked at four hypotheses in a sample of 149 people ranging in age from 65 to 96 to determine how time perspective (TP) and subjective well-being (SWB) relate to one another in older adults. The findings supported the relationships between TP and SWB, showing that attitudes toward the past, present, and future had an impact on depressive symptoms, life satisfaction, and both positive and negative emotions. A Past-Positive viewpoint was linked to higher life satisfaction, but the Present-Hedonistic and Future orientations were linked to higher positive affect. On the other hand, higher levels of depression were associated with Present-Fatalistic and Past-Negative orientations. Notably, there was a consistent pattern throughout age groups with no significant differences seen between older and younger old people. The study emphasizes how TP shapes older persons' well-being and offers possible therapies to encourage optimistic views on the past, present, and future. More research on TP's function in successful aging is necessary, as measures for improving the quality of life in older populations can be informed by an understanding of the intricate interplay between TP and SWB.

Time counts: Future time perspective, goals, and social relationships, 2002 (Lang, F. R., & Carstensen, L. L. Lang, F. R., & Carstensen, L. L)

People who understand that time is of the essence appear to gain advantages in their social environments when they concentrate on objectives associated with optimizing their emotionally

significant experiences. Quality and quantity of social relationships are associated with improved physical and psychological functioning, making them essential for a successful aging process. Researchers focusing on life spans highlight how proactive each person can be in managing these resources. People use their surroundings and aspirations to shape their lives, but little is known about how relationships affect and reflect aspirations. This is particularly important in later adulthood when emotionally close social partners are maintained despite the tendency for personal networks to contract in size.

Supporting this statement, Lang and Carstensen (2002) examined the relationship between future time perspective (FTP) and social motivation, and the composition and perceived quality of personal networks. Through card-sort tasks and questionnaires on 86 personal networks and social satisfaction, German participants (aged 20 to 90; n= 480) expressed partner preferences, goal priorities, and perceptions of their future time. The study is inspired from the socioemotional selectivity theory, according to which, people make goal decisions based on whether they believe the future will be limited or unrestricted. Goals that maximize the future are prioritized when time is viewed as infinite. These goals are frequently connected to knowledge acquisition, societal roles, and professional interests. Age differences in goal selection vanish when younger people imagine a world where their time is limited, or when older people imagine a world in which their time is unlimited.

Nevertheless, no empirical study has examined the generalizability of socioemotional selectivity theory on the basis of a heterogeneous sample of mostly healthy adults spanning a wide age range from early to late adulthood, using a continuous measure for FTP. The study found that older individuals generally perceived their future time as more limited compared to younger participants. Those perceiving limited future time tended to prioritize emotionally significant goals such as generativity and emotion regulation, while those with open-ended futures prioritized instrumental or knowledge-related goals. The prioritization of different goal domains correlated with personal network size, composition, and perceived quality depending on FTP. Notably, individuals perceiving limited futures who prioritized emotion regulatory goals reported greater social satisfaction and reduced strain with others. The findings underscore the role of FTP in regulating social relationships and associated subjective experiences (Lang & Carstensen, 2002). Furthermore, FTP was strongly associated with chronological age, suggesting that it captures much of the psychological information associated with age differences. Unravelling the role of socio-emotional competencies between future time perspective and subjective wellbeing across adulthood (Teresa Maria Sgaramella , Laura Foresta)

Social and emotional learning is an important aspect of human education and development, helping individuals acquire social and emotional competence. It involves the development of skills, attitudes, and values necessary for emotional management, motivation, self-awareness, and understanding others. The challenges faced by adults in different stages of their lives are diverse, ranging from transitioning to adult identity to fulfilling various roles and responsibilities. The main objective of the study is to examine how social and emotional skills vary across different stages of adult life. Additionally, the study aims to understand the relationships between social and emotional skills, subjective wellbeing, and future time perspective. The study surveyed 212 participants in the North East of Italy, categorizing them into three age groups: emerging adults, young adults, and middle-aged adults. Regression based mediation models were used to analyze the relationships

between the variables. The results highlight the mediating role of social and emotional skills in the relationship between future time perspective and psychological wellbeing. The study emphasizes the importance of socioemotional skills in understanding the complex relationship between future time perspective and subjective wellbeing. It also suggests that social and emotional learning should be integrated into adult education and lifelong learning programs. The study found that social and emotional skills mediate the relationship between future time perspective and psychological wellbeing .The results highlight the predictive effect of time perspective on social and emotional competencies, which in turn influence psychological wellbeing .The study confirms the specificity of social and emotional competencies across different stages of adult development .The findings emphasize the critical role of socioemotional skills in understanding the complex relationship between future time perspective and subjective wellbeing . These conclusions underscore the importance of fostering social and emotional skills to enhance subjective wellbeing and overall quality of life across adulthood

Limitations of the study: The study was conducted with a relatively small sample size of 212 participants from the North East of Italy, which may limit the generalizability of the findings . The research focused on adults in specific age groups (emerging, young, and middle-aged adults), and the findings may not be applicable to other age groups or cultural contexts . The study relied on self-report measures for assessing socioemotional skills, future time perspective, and subjective wellbeing, which may be subject to biases and inaccuracies . The cross-sectional design of the study limits the ability to establish causal relationships between variables and only provides a snapshot of the relationships at a specific point in time
. The study did not explore other potential factors that could influence the relationship between future time perspective, socioemotional skills, and subjective wellbeing, such as socioeconomic status or cultural factors. Further research with larger and more diverse samples, longitudinal designs, and consideration of additional variables is needed to strengthen the understanding of the complex relationships examined in this study.

Future suggestions: Conducting further research with larger and more diverse samples to enhance the generalizability of the findings. Exploring the role of socioemotional skills, future time perspective, and subjective wellbeing in different age groups and cultural contexts. Utilizing longitudinal designs to establish causal relationships between variables and examine changes over time. Considering additional factors such as socioeconomic status and cultural influences that may impact the relationship between future time perspective, socioemotional skills, and subjective wellbeing. Investigating the effectiveness of interventions or programs that promote social and emotional learning in adult education and lifelong learning settings.

Associations Among Individuals' Perceptions of Future Time, Individual Resources, and Subjective Well-Being in Old Age (Christiane A. Hoppmann , Frank J Infurna)

Perceptions of future time are important for understanding subjective well-being in old age. There is a wide variation in future time perceptions among older adults, which is only moderately associated with age. The paper examines the associations between future time perceptions, age, and subjective well-being in two studies. The first study uses data from the Berlin Aging Study and links subjective nearness to death and age to subjective well- being. The second study uses data from the Health and Retirement Study and examines the association between subjective future life expectancy, age, and subjective well-being.

Consistently across both studies, perceptions of limited time left are associated with poorer subjective well-being. Individual resources, such as better health, moderate the association between future time perceptions and subjective well-being. The findings are discussed in the context of the Model of Strength and Vulnerability Integration. Perceptions of limited time left are associated with poorer subjective well-being in older adults, and this association is moderated by individual resources, such as better health. Future time perceptions account for a relatively small portion of the variance in subjective well-being, indicating the need to consider other variables that are linked to well-being. The paper utilizes data from two studies: the Berlin Aging Study (BASE) and the Health and Retirement Study (HRS).

In the BASE study, data from 516 older adults (Mage = 85 years) was used, and subjective nearness to death was linked to subjective well-being. The HRS study included data from 2,596 older adults (Mage = 77 years), and the association between subjective future life expectancy and subjective well-being was examined. Descriptive statistics and intercorrelations were analyzed to understand the associations between memory, health, and subjective well-being in the very old sample .Regression analyses were conducted to examine the relationship between subjective nearness to death and subjective well-being, while also considering individual resources such as episodic memory, self-rated health, and functional limitations. Perceptions of limited time left were associated with poorer subjective well- being, including lower life satisfaction, more negative affect, and depressive symptoms . Individual resources, such as better health, moderated the association between future time perceptions and subjective well-being, suggesting that those with better health exhibited reduced negative effects on well-being from perceiving limited time left.

Memory and health had significant associations with subjective well-being, indicating that participants with more cognitive and health-related resources tended to report higher subjective well-being . The HRS single item used to capture perceptions of future time showed associations with sociodemographic and health indicators similar to other measures of future time perceptions, supporting the validity of this measure. The availability of cognitive resources, particularly memory, influenced the association between subjective nearness to death and positive affect as well as depressive symptoms, highlighting the importance of cognitive functioning for emotional well-being in very old age. Perceptions of limited time left were associated with poorer subjective well-being in older adults, including lower life satisfaction, more negative affect, and depressive symptoms. Individual resources, such as better health, moderated these associations, with those of better health exhibiting reduced future time perception-subjective well-being associations. Perceiving one's future as extended rather than limited was associated with higher subjective well-being in old age, even after taking into account age, health and cognitive resources, and other covariates. Health and

cognitive resources partially moderated these associations. Subjective nearness to death was negatively related to subjective well-being in old age. Health-related resources, such as self-rated health and functional limitations, were positively associated with subjective well-being and also moderated the association between future time perceptions and subjective well-being.

Limitations of the study: The study only examined a limited aspect of future time perceptions and caution against overinterpreting the findings due to the narrow operationalization of future time perceptions. Future time perceptions may be influenced by stable trait-like characteristics, and the study did not explore these individual difference factors extensively. The measure of future time perception in the Health and Retirement Study (HRS) may have different meanings for individuals of different ages, which could impact the results. The study did not directly address the mechanisms through which future time perceptions influence subjective well-being, such as the prioritization of socioemotional goals. Future time perceptions accounted for a relatively small portion of the variance in subjective well-being, suggesting that other variables with established links to subjective well-being should also be considered

Future suggestions: Future research could explore other measures of future time perceptions beyond the limited operationalizations used in this study, such as the Future Time Perspective Scale or multifactorial time-perspective inventories. Further investigation is needed to understand the individual difference factors that may influence future time perceptions, such as stable trait-like characteristics. It would be valuable to examine the meaning and implications of future time perceptions across different age groups, as the measure used in the study may have different meanings for individuals of different ages. Future studies should aim to identify the mechanisms through which future time perceptions influence subjective well-being, such as the prioritization of socioemotional goals. Considering that future time perceptions accounted for a relatively small portion of the variance in subjective well-being, future research should also explore other variables that are known to be linked to subjective well-being.

Age Differences in Subjective Well-Being across Adulthood: The Roles of Savoring and Future Time Perspective (Meagan A Ramsey, Amy L Gentzler)

The study aimed to investigate age differences in subjective well-being and savoring, as well as the mediating role of future time perspective. Prior research has shown age differences in subjective well-being during adulthood, but research on age differences in savoring is lacking. The study used an online survey with 218 adults aged 18-77 to gather data. Results indicated a nonlinear effect of age on subjective well-being, suggesting that subjective well-being changes with age in a non-linear manner. Savoring was found to be associated with subjective well-being, but age was not directly associated with savoring. However, future time perspective, which refers to the perceived amount of time left to live, mediated the association between age and savoring. Younger adults reported more perceived time left in life, and those perceiving more time left in life reported greater savoring.

The study examined age differences in subjective well-being and savoring, finding a nonlinear effect of age on subjective well-being and a positive association between savoring and subjective well-being. Future time perspective mediated the association between age and savoring, with younger adults perceiving more time left in life and reporting greater savoring. Savoring was not

found to be a direct explanatory mechanism for age differences in subjective well-being, but future time perspective played an important role in indirect associations between age and savoring.

The study used an online survey with a sample size of 218 adults aged 18-77. The survey included measures of subjective well-being, savoring, and future time perspective. Subjective well-being was assessed using measures such as the Subjective Happiness Scale(SHS) and the Satisfaction with Life Scale (SWLS). Savoring was measured using various methods to maintain and enhance positive emotions. Future time perspective, which refers to 90 the perceived amount of time left to live, was also assessed. Statistical analyses, such as regression models, were conducted to examine the associations between age, subjective well- being, savoring, and future time perspective.

The study found a nonlinear effect of age on subjective well-being, indicating that subjective well-being varies across different age groups. Savoring was positively associated with subjective well-being, suggesting that individuals who engage in savoring techniques experience higher levels of well-being. However, savoring was not found to be a direct explanatory mechanism for age differences in subjective well-being. Instead, future time perspective, which refers to the perceived amount of time left to live, played an important role in mediating the association between age and savoring. Younger adults who perceived more time left in life reported greater savoring. The study also highlighted that different measures of savoring captured slightly different constructs or aspects of savoring, indicating the complexity of this process.

Limitations: The data for this study was collected online using MTurk, which may not fully represent the broader population of older adults. The study used correlational design, which limits the ability to establish causal relationships between variables of interest. The cross-sectional nature of the study prevents the identification of age changes and introduces the possibility of confounding cohort effects. The study relied solely on self-report measures, which may be subject to self-serving biases and overestimation of savoring capabilities or responses. Future research should consider using more refined methodologies, such as experimental manipulations of future time perspective or behavioral measures of savoring, to further investigate the relationships identified in this study.

Future suggestions: Future research should further examine the nuances of different measures of savoring to better understand their associations with subjective well-being. Experimental manipulations of future time perspective could be used to investigate its impact on savoring and subjective well-being. Future studies could employ longitudinal designs to examine age changes in subjective well-being and savoring over time, allowing for a better understanding of the causal relationships between these variables. It would be beneficial to explore other potential mediators or moderators of the relationship between age and savoring, such as personality traits or social support. Researchers could consider using more diverse samples, beyond online surveys, to ensure the generalizability of findings to a wider population.

Time Perspective Biases Are Associated With Poor Sleep Quality, Daytime Sleepiness, and Lower Levels of Subjective Well-Being Among Older Adults (Micheal Ronnlund , Maria Carelli)

Sleep quality is an important aspect of sleep and is associated with various factors, including dispositional factors such as dimensions of personality and time perspective. The study aims to examine the association between individual differences in time perspective and sleep quality,

daytime sleepiness, and subjective well-being among older adults. Self-reported sleep tends to exhibit stability over time and has moderate heritability, suggesting a potential 91 association with dispositional factors. The study was conducted with the approval of the regional ethic board in Umea, Sweden, and involved participants from the Betula prospective cohort study. The findings suggest that certain time perspective biases, such as a focus on negative aspects of the past and future, are associated with higher levels of daytime sleepiness, lower levels of subjective well-being and poor sleep quality among older adults. Exploratory factor analysis (Principal Axis Factoring with Promax Rotation) was used to examine the dimensionality of the included KSQ items.

Missing values for the KSQ items were imputed using the Expectation-Maximization algorithm. Regression analyses were conducted to examine the relationship between time perspective dimensions and sleep factors, with demographic variables entered as predictors in a hierarchical fashion. A mediational model was set up to examine the hypothesis that sleep factors mediate the relationship between time perspective biases and subjective well-being. Indicators of poor sleep quality and daytime sleepiness were identified based on item loadings in previous analyses. The study was carried out in accordance with the recommendations of the regional ethic board in Umea, Sweden, and participants provided written informed consent. The study found that time perspective biases, particularly negative orientations towards the past and future, are associated with poor sleep quality, daytime sleepiness, and lower levels of subjective well-being among older adults . The analyses suggested that poor sleep quality and daytime sleepiness partially mediate the relationship between time perspective biases and subjective well-being .The findings highlight the importance of considering sleep quality when evaluating the relationship between time perspective and adverse health outcomes . Interventions aimed at fostering a more balanced time perspective, such as mindfulness-based interventions, may be effective in reducing sleeping problems in older adults.

Limitations of the study: The data in this study were cross-sectional, limiting the ability to establish causal relationships between time perspective biases, sleep variables, and subjective well-being. Longitudinal data would be needed to provide a better understanding of these relationships. The study relied on self-report data for sleep measures, which may be subject to biases and inaccuracies. Objective recordings of sleep, such as actigraphy or polysomnography, would provide more reliable data. The amount of variance in sleep measures accounted for by the variables in the study was modest, suggesting that additional factors may influence individual differences in sleep quality and daytime sleepiness. Further research should consider other variables to provide a more comprehensive understanding of sleep outcomes. The study did not consider the influence of chronotype, which is variations in morningness to eveningness continuum, on sleep outcomes. Future research should explore the association between time perspective biases and chronotype to gain a more complete understanding of sleep patterns.

Future suggestions: Future research should conduct longitudinal studies to establish causal relationships between time perspective biases, sleep variables, and well-being. Objective sleep measures, such as actigraphy or polysomnography, should be included in future studies to provide more reliable data on sleep quality. Future studies should consider the influence of chronotype, which is variations in morningness to eveningness continuum, on sleep outcomes in relation to time perspective biases. Additional sleep factors, beyond sleep quality and daytime sleepiness, should be considered in future research to provide a 92 more comprehensive understanding of sleep outcomes.

Interventions aimed at fostering a more balanced time perspective, such as mindfulness-based interventions, should be explored as potential strategies to improve sleep quality in older adults.

Time Perspective in Late Adulthood: Aging Patterns in Past, Present and Future Dimensions, Deviations from Balance, and Associations with Subjective Well-Being, 2017 (Michael Rönnlund, Elisabeth Åström, and Maria Grazia Carelli Rönnlund, M., Åström, E., & Carelli, M. G.)

With younger adults primarily living for the future and older adults primarily living in the past, the temporal perspective of aging paints a complex picture. According to Butler (1963), accepting one's mortality triggers a natural developmental process that includes life review and reflection. Research, however, has refuted this claim, indicating that memories' purpose and content may evolve over time. According to socioemotional selectivity theory (SST), as people age, they tend to become more focused on the here and now as their prospects for the future get smaller. The question of whether age-related shifts in one's perspective on time are linked to improved well-being or other favourable consequences remains, though. The relationship between time perception and subjective well-being is different in older age due to the difference in how they cope with overall changes in life. In Rönnlund et al.'s (2017) study, they observed that while certain aspects of time perception like "Past Positive, Present Hedonistic, and Future Positive" remained relatively stable with age, "Past Negative and Future Negative" displayed significant negative associations with age, and "Present Fatalistic" showed a clear age-related increase. These findings were based on a cross-sectional analysis of older adults (60–90 years; N = 447) using the Swedish version of the Zimbardo Time Perspective Inventory.

They also explored alternative methods to assess time perspective balance (DBTP, S BTP, and DBTP-E) and their links to subjective well-being (SWB). The lack of a significant correlation between age and Future Positive in the study suggests that older adults can be optimistic about the future even when their future time horizon is getting smaller. On the other hand, older adults prioritize temporally proximal socioemotional goals, whereas younger adults pursue future-oriented goals. The study also looked at the connection between the balance of one's time perspective and their well-being as one ages, and it found that an individual's time perspective organization and subjective well-being are strongly correlated. The rise in present fatalism with age might be due to cognitive and physical health challenges becoming more common in older age groups. As individuals confront health issues and cognitive decline, they may become more present-focused and less optimistic about the future. Moreover, the decline in the significance of negative future views among very old individuals (80–90 years) could reflect a shift towards a self-transcendent future time perspective. In old age, people might prioritize existential concerns and concentrate on aspects of well-being beyond personal goals, which could reduce the emphasis on negative future outlooks regarding SWB.(Rönnlund et al., 2017).Having Too Little or Too Much Time Is Linked to Lower Subjective Well-Being, 2021 (Marissa A. Sharif, Cassie Mogilner, and Hal E. Hershfield)

The article explores how people perceive and utilize their discretionary time, examining the impact on subjective well-being based on the amount and type of discretionary time spent. It delves into the relationship between productivity, time allocation, and overall happiness. Participants were

asked to imagine having varying amounts of discretionary time and to describe how they would spend it over different time frames. The study found that perceived productivity and subjective well-being were influenced by the amount and type of discretionary time allocated.

Results indicated that spending discretionary time productively led to higher subjective well-being compared to non-productive use, especially with a high amount of discretionary time. The research excluded participants who failed attention checks or provided nonsensical responses, focusing on a final sample of 4,046 participants for analysis.

The study suggests that most individuals, regardless of age, employment status, or other demographics, benefit from having a moderate amount of discretionary time. Having too little or too much discretionary time can negatively impact subjective well-being. For those with excessive discretionary time, engaging in purposeful activities like productive tasks or social interactions is recommended for improved well-being.

The article provides a detailed methodology of how participants were prompted to imagine and vividly describe their discretionary time, ensuring consistency and accuracy in responses. This approach helped in understanding the impact of different amounts of discretionary time on subjective well-being over an extended period. The use of a mental simulation manipulation in Study 3 allowed for a controlled experimental design, enhancing the reliability of the findings.

The article provides valuable insights into how discretionary time and its productive use impact subjective well-being, supported by detailed research methodology and data analysis. It offers a comprehensive examination of the relationship between different levels of discretionary time and subjective well-being, contributing to the existing literature on time management and well-being. The experimental design of Study 3, which involved assigning participants to experience varying amounts of discretionary time, adds a robust experimental element to the research, enhancing the credibility of the findings.

Limitations of the article - The observed effect of discretionary time on subjective well-being is small, which implies that the quantity of hours spent on discretionary activities may not have a significant impact on well-being. Other time-related variables, such as how individuals spend their time and their mindset during those hours, also play a role in subjective well-being. The study acknowledges that the effect size of discretionary time on well-being is limited, considering various factors that influence overall well-being. The heavy-handed manipulation for unproductive versus productive uses of time in Study 4 may have limited the generalizability of the findings to real-life scenarios. The inability to assign very small or very large amounts of discretionary time in people's actual daily lives due to limited resources may have impacted the practical applicability of the study results.

Socio-demographic Correlates of Subjective Well-being in Urban India (Jyotsna Agrawal, Pratima Murthy, Mariamma Philip, Seema Mehrotra, K. Thennarasu, John P. John, N. Girish, V. Thippeswamy & Mohan Isaac Agrawal, J., Murthy, P., Philip, M., Mehrotra, S., Thennarasu, K., John, J. P., Girish, N., Thippeswamy, V., & Isaac, M. (2010).

Due to the cultural barrier across the world, it is imperative to understand the subjective well-being of our participant’s demographic cohort and factors that may be related to the said group.

Agrawal et al. (2010) in a study conducted in Bangalore observed the subjective well-being (SWB) in an urban Indian sample A total of 1,896 potential responders were contacted; 1,099 (58%) of them finished the survey, and 40 (2%) of them sent in partially completed forms. Of the 711 respondents, 64.7 percent answered in English, while the remaining respondents spoke mostly Kannada, a regional language. The study-specific questionnaire yielded mean scores of 40.9 for positive affect, 276 for negative affect, and 24 for life satisfaction, indicating above-average levels of self-efficacy. As people age, SWB appears to get better even after accounting for the potential for concurrent income growth. There have been reports of declining negative affect (NA) (faster in men) and stable or rising life satisfaction (stable in women, rising in men) as men age.

Our study's improved SWB could be explained by potential long-term improvements in education, goal achievement, family satisfaction, and improved emotional regulation and situational flexibility. A significant influence may have also come from the existence of family support, the value placed on older members of society, and the Eastern cultures' philosophical orientation toward reducing desires and finding satisfaction in life. Men showed a greater improvement in SWB than women did, both in terms of NA and LS; women appear to do better at first but perform worse in the end. This could be due to a number of factors, such as the numerous social pressures and stresses that women face both generally and specifically in Indian society. In this particular context, one plausible hypothesis is that, although men's improved SWB only occurs after their personal aspirational needs are satisfied, women's aspirational needs are satisfied early on through marriage, supported by similar studies in the past (Easterlin 2001).

Socioeconomic correlations such as age, marital status, education level, income, and full-time employment all appeared to increase life satisfaction and reduce negative effects. Negative affect was also substantially correlated with religion. Married individuals reporting higher levels of SW compared to those who are never married or have experienced divorce or separation. Unmarried women have higher NA, reflecting the emphasis on marriage and settling down in Indian society. Separated or divorced women have the lowest NA, as they are typically widowed and living within a support system. The effects of co-habitation and divorce on SWB are related to tolerance and social support available in different cultures.

Family income significantly impacts SWB, with higher income leading to higher PA in men. Happy individuals tend to be healthier, more active, and more social, leading to economic success. According to step-wise regression analysis, age, income, employment status, and religion were better indicators of NA than positive affect, with only education and income being significant predictors of positive affect. Age, education, and income all predicted life satisfaction. There were some differences in the significant correlations of SWB 95 between genders and overall it was concluded that sociodemographic factors generally have little bearing on SWB (Agrawal et al., 2010).

The Structure and Predictors of Subjective Wellbeing among Millennials in India, 2019 (Damodar Suar, Amrit Kumar Jha, Sitanshu Sekhar Das & Priya Alat Suar, D., Jha, A. K., Das, S. S., & Alat, P.)

The early years of the millennial generation, who are digital natives with access to the internet via computers, smartphones, and online social networks, corresponded with the widespread use of information technology in India during the 1990s. This one is better educated, happier, more genuine,

cooperative, and optimistic than previous generations. They prefer defined responsibilities, cherish commitment, and uphold relationships. They encounter psychological, social, financial, and physical obstacles as they forge their social and economic identities during the emerging adult phase. (Hershatter & Epstein, 2010). Millennials are highly socialized and seek social affiliation, leading to meaningful interactions and higher satisfaction with personal relationships. They prioritize belongingness needs, which are essential for survival. In India's technical institutions, satisfaction with relationships is crucial for survival needs. These relationships are based on quality social relations, interpersonal support, and reduced vulnerability to distress. In India, these relationships reinforce societal values and beliefs. Among all the generations, they are the most stressed out, experiencing anxiety, depression, and insecurity. With 62% of working millennials in management globally and 85% in India, millennials are having an impact on people's lives all over the world.

A study conducted by Suar et al. (2019) explores the structure of subjective well- being (SWB) of millennials in India, assessing their contentment and good life, and identifying social and personality predictors to improve their quality of life in the face of transitions and stress. Because they have better skills and make wiser decisions, educated people are more likely to have better lives and to be cognitively mature (Kingston, Hubbard, Lapp, Schroeder, & Wilson, 2003). The four aspects of subjective well-being that are examined in this study are whether they form a causal structure, a hierarchical structure, a composite structure, or a feeling of contentment with life. It also looks at the personality and social traits influencing millennials' subjective well-being in India. Participating were 1779 millennials, aged 16–27, who were enrolled in technical schools in India. Measures of relationships, health, education, and income were conducted using both objective and subjective indicators. A list of Big-Five personality traits was evaluated. Compared to other structures, the hierarchical structure formed subjective well-being better because its components were interrelated. Emotional stability was the personality predictor and satisfaction with personal relationships was the most significant positive social predictor of the hierarchical structure of subjective well-being. Activities that foster emotional stability and personal relationships can improve the subjective well-being among millennials. (Suar et al., 2019).

4. Methodology

Aim - To investigate the relationship between time perception and subjective wellbeing.

Hypothesis 1 - People with higher Present Hedonistic Time Perception Factor will have a high subjective wellbeing.
Hypothesis 2 - People with higher Present Fatalistic Time Perception Factor will have a low subjective wellbeing.
Hypothesis 3 - People with higher Past Positive Time Perception Factor will have a high subjective wellbeing.
Hypothesis 4 - People with higher Past Negative Time Perception Factor will have a low subjective wellbeing.
Hypothesis 5 - People with higher Future Positive Time Perception Factor will have a high subjective wellbeing.

Hypothesis 6 - People with higher Future Negative Time Perception Factor will have a low subjective wellbeing.

5. Operational definitions

Subjective wellbeing: Subjective well-being is defined as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity and mental health as a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to contribute to his or her community. (Kinderman et al., 2010)

Time perception: Time perception is defined as a fundamental dimension in the construction of psychological time, emerges from cognitive processes partitioning human experience into past, present, and future temporal frames. (Zimbardo & Boyd, 1999)

Methodology

A cross sectional observation study was conducted to assess people`s perception of time and their subjective well-being. Many scientific and practical factors influence the decision to choose a cross-sectional study design to investigate the connection between time perception and subjective well-being. A cross-sectional design works best when it comes to taking a momentary picture of people's subjective well-being and sense of time. Since different contextual factors were expected to impact both subjective well-being and time perception, analysing them simultaneously offered a thorough knowledge of their connection.

Moreover, a cross-sectional design's effectiveness allowed it to be used to examine relationships between subjective well-being and temporal perception without requiring extensive data collection over an extended period of time. This is especially important to keep in mind given the practical limitations of longitudinal research, which could require a lot of time and resources.

Researchers are students from the Bachelor of Arts, Psychology program offered by SVKM`s Mithibai College of Arts and the research will be done as a requirement and important element for the completion of the curriculum.

The participants were asked for written consent through the medium of google forms before starting with the questionnaires to participate in the study. Once the participants had given their consent, they will be asked basic demographic details. Participants approached for the research were from the age group of 20 to 34 and were further divided for data interpretation using the WHO Scale for age group division. Participants were from across genders and were free to choose their pronouns from the options mentioned in the form. The target population consisted of Indian population from various cities across the country. The personal information section further asked the participants their marital status and if they were currently employed or unemployed. These questions were asked to observe if they influenced the variables assessed in any way.

Once the basic details about the participants were filled, they further filled the questionnaires. Two scales were administered and prior permission to use those scales was gained. The scales used

in the research were the `Short version of the Zimbardo Time Perspective Inventory (ZTPI-short) with and without the Future Negative scale, verified on nationally representative samples`, by Jaroslav Kostal et al. this scale assessed the time perspective factor of the individual, there are (18 future neg included) items in this respective section. ZTPI 15-item scale (3 items each domain), 18 when future neg is added, Czech and Slovak sample, correlation between original and short scale is 0.992, reliability of both 15 and 18 items is 0.996. The short version for Zimbardo`s scale for the research since it helped us to control any time constraints and exhaustion the participants may experience completing the 56-item original version of the scale. Permissions to use both scales was gained through emails. Once this section was completed the next part included the BBC Subjective Wellbeing Scale (BSC) developed by the University of Connecticut, which assessed the individual`s subjective wellbeing. The BBC scale was selected because of the domains that the scales assessed like goal pursuit, life satisfaction, positive affect, quality of life and sense of meaning, etc. these domains helped us get a significantly representative picture of the individual`s subjective wellbeing. The total 24-item scale had good internal consistency (α = .935) and correlated significantly with key demographic variables and measures of concurrent validity.

The results from both scales were obtained and correlations were examined using Pearson's Correlation Coefficient. Once the data was obtained interpretations were made on the Time perspective factor of the individual as obtained by the ZTPI- short version and their scores on the subjective wellbeing as obtained on the BBC wellbeing scale. Data sets were interpreted, and correlations were examined using the Pearson's Correlation Coefficient. Subsequently the hypotheses were checked to be retained.

In the past scenario, 240 complete sets of data were gathered with the aim of achieving a statistical power of 90% to detect a correlation. This means that with the sample size of 240, there was a high probability (90%) that the study would be able to detect a true correlation if it existed in the population. The desired correlation coefficient to be detected was set at 0.35, and the significance level was 5%.

The collected data were then entered into Jamovi , a statistical software, for analysis. Specifically, Pearson's correlational coefficient was employed to examine the linear relationship between variables. This coefficient measures the strength and direction of a linear relationship between two continuous variables. Additionally, nonparametric correlation
100 coefficients were utilized. These coefficients, such as Spearman's rank correlation coefficient or Kendall's tau, are used when the assumptions of normality and linearity required for Pearson's correlation are not met or when dealing with ordinal or ranked data.

By employing both Pearson's correlational coefficient and nonparametric correlation coefficients, researchers aimed to thoroughly explore the associations within the data. This approach allows for a comprehensive understanding of the relationships between variables, providing insights into potential patterns or trends present in the dataset.

6. Analysis

Data analysis found that the sample's mean subjective well-being was 85.42 and the standard deviation was 15.12. The mean past negative time perception was 10 and SD was 2.77. Past positive time perception had a mean of 10.92 and a standard deviation of 2.19. In the present time perspective, the fatalistic perception had a mean of 7.56 and SD of 2.74 whereas the hedonistic perception has a mean of 11.172 and SD of 1.93. The mean of future negative time perception was 9.37, SD being 1.55 and that for future positive time perception was 10.35, SD being 2.54. (refer appendix)

The study aimed to find a correlation between subjective well-being and the different types of time perception. Per existing research, it was hypothesized that past positive, present hedonistic and future positive time perceptions would have a positive relationship with SWB and that past negative, present fatalistic and future negative time perceptions would have a negative relationship with SWB. The study employed Pearson r correlation to test these hypotheses. The correlational analysis indicated that past negative time perception and SWB have a weak negative relationship, r= -0.27, p0.75 and the relationship between present hedonistic time perception and SWB is weak positive, r= 0.18,p

7. Discussion

The analysis of the data reveals interesting insights into the relationship between subjective well-being (SWB) and different types of time perception.

The data analysis reveals insights into the reported subjective well-being (SWB) and various dimensions of time perception within the studied sample. The test used to analyse the data was the Pearson correlation test. On average, participants reported relatively high levels of SWB, with a mean score of 85.42 and a standard deviation of 15.12, indicating some variability in reported well-being levels. Examining the different dimensions of time perception, participants tended to report moderate levels across past negative and positive time perceptions, with means of 10 and 10.92, respectively. Interestingly, there was greater variability in past positive time perception compared to past negative. Even the paper - The relationship between time perspective and subjective well-being of older adults (Fien, 2012) confirms that there is a great variability in past positive time perception as compared to past negative.

Present time perspective yielded intriguing findings: participants reported a lower mean score for fatalistic perception (mean=7.56) compared to hedonistic perception (mean=11.172), indicating a tendency towards greater focus on pleasure and enjoyment in the present rather than feelings of powerlessness or fatalism.

Looking towards the future, participants reported slightly lower mean scores for future negative time perception (mean=9.37) compared to future positive (mean=10.35), suggesting a relatively balanced perspective on future events, though with a slight lean towards positivity. Another example of this could be seen in - Time Perspective in Late Adulthood: Aging Patterns in Past, Present and Future Dimensions, Deviations from Balance, and Associations with Subjective Well-

Being, 2017 (Ronnlind, 2017) where it checks the connection between the balance of one's time perspective and their well-being as one ages, and it found that an individual's time perspective organization and subjective well-being are strongly correlated. And it is found that negative thoughts are declining with age.

Consistent with prior hypotheses, past negative time perception exhibits a weak negative correlation with SWB (r= -0.27, p0.75), implying that feelings of powerlessness or fatalism about the present may not significantly influence well-being. In contrast, hedonistic perception in the present shows a weak positive correlation with SWB (r= 0.18, p However, in the present time perspective, while there is a weak negative correlation between fatalistic perception and SWB, this relationship is statistically insignificant (r= -0.01, p>0.75), implying that feelings of powerlessness or fatalism about the present may not significantly influence well-being. In contrast, hedonistic perception in the present shows a weak positive correlation with SWB (r= 0.18, p<0.01), indicating that prioritizing pleasure and enjoyment in the present is associated with slightly higher levels of well-being. Looking towards the future, SWB demonstrates a weak negative correlation with future negative time perception (r= -0.16, p<0.05) suggesting that excessive worry or pessimism about the future may lead to slightly lower levels of well-being. Both the research papers - The relationship between time perspective and subjective well-being of older adults. (Desmyter, 2012) and Time Perspective in Late Adulthood: Aging Patterns in Past, Present and Future Dimensions, Deviations from Balance, and Associations with Subjective Well-Being, 2017 confirm that while fatalistic present perception has a negligible impact on well-being, hedonistic present perception correlates weakly positively with subjective well-being (SWB). Additionally, future negative time perception has a weak negative correlation with SWB, suggesting that excessive worry about the future may slightly lower well-being.

Conversely, there is a stronger weak positive correlation between SWB and future positive time perception (r= 0.34, p<0.001), indicating that optimism and positive anticipation about the future are associated with slightly higher levels of well-being, an example of that could be seen on the paper called -The relationship between time perspective and subjective well-being of older adults. These findings provide valuable insights into the complex interplay between different dimensions of time perception and subjective wellbeing, underscoring the importance of considering temporal orientations in understanding individual well-being.

The paper - Time Perspectives and Subjective Well-Being: A Dual-Pathway Framework (Kerry, 2014) shows exactly how different time perceptions change or impact out subjective well-being.

Furthermore, the insignificance of the correlation between present fatalistic time perception and subjective well-being suggests that within the studied sample, there is no discernible relationship between these two variables. This lack of significance could stem from various factors, including limited variability in responses, measurement shortcomings, or the presence of unaccounted-for influencing factors. It's plausible that the instrument used to measure present fatalistic time perception may not have fully captured the nuanced aspects of this construct, leading to unreliable assessments.

Additionally, other variables such as personality traits or external circumstances might have played a role in shaping individuals' perceptions of time and well-being , as stated in the paper - Socio-demographic Correlates of Subjective Well-being in Urban India (jyotsna, 2010), thus confounding the direct relationship between present fatalistic time perception and subjective well-being. Moreover, the sample size might have been insufficient to detect a significant correlation if the effect size was small or if random chance obscured any underlying relationship. Overall, the lack of significance underscores the complexity of understanding how present fatalistic time perception relates to subjective well-being and highlights the need for further research to elucidate this aspect of temporal orientation and its implications for well-being.

The paper presented - Having Too Little or Too Much Time Is Linked to Lower Subjective Well-Being (Marissa, 2021) states that having too little or too much discretionary time can negatively impact subjective well-being.

8. Conclusion

In this study, we set out to investigate the intricate relationship between time perception and subjective well-being, guided by six hypotheses regarding different dimensions of time perception. Through the administration of validated scales and rigorous data analysis, we have gained valuable insights into how individuals' perceptions of time influence their subjective well-being. Our findings provide compelling evidence supporting several of our hypotheses. Notably, individuals with a positive outlook on the past tended to report higher levels of subjective well-being, while those dwelling on negative past experiences exhibited slightly lower levels of well-being. This aligns with existing literature and emphasizes the importance of one's attitude towards past events in shaping overall well- being. Our results suggest that a hedonistic orientation towards the present is associated with slightly higher levels of subjective well-being, whereas fatalistic perceptions about the present showed no significant correlation with well-being. This nuanced understanding highlights the complexities involved in how individuals perceive and engage with the present moment. Looking towards the future, our study found that optimism and positive anticipation correlated positively with subjective well-being, while excessive worry or pessimism about the future was associated with slightly lower levels of well-being.

It's also important to acknowledge the limitations of our study, including the use of a cross-sectional design and the reliance on self-reported measures. Additionally, the sample size and composition may have influenced the generalizability of our findings. Future research could benefit from longitudinal designs and more diverse samples to further explore the nuances of the relationship between time perception and subjective well-being. Overall, our study contributes to the growing body of literature examining the interplay between temporal orientations and subjective well-being. By elucidating the complex relationship between different dimensions of time perception and well-being, our findings offer valuable insights that may inform interventions aimed at enhancing individuals' overall sense of well- being and quality of life.

9. Limitations

The study's cross-sectional design limited the establishment of causal relationships between time perspective biases, sleep variables, and subjective well-being. Longitudinal data would be necessary for a better understanding of these relationships. Reliance on self-report data for sleep measures may introduce biases and inaccuracies. Objective recordings of sleep, like actigraphy or polysomnography, would offer more reliable data. The study's focus on a modest amount of variance in sleep measures accounted for by the variables suggests that additional factors influencing individual differences in sleep quality and daytime sleepiness were not fully explored. The study did not consider the impact of chronotype on sleep outcomes, indicating a gap in understanding. Future research should explore the association between time perspective biases and chronotype to gain a more comprehensive understanding of sleep patterns. The study did not account for the potential influence of personality traits or social support on individuals' perceptions of time and well-being, which could have impacted the results. Including a more diverse sample beyond online surveys could enhance the generalizability of the findings to a wider population. The sample size might have been insufficient to detect significant correlations if the effect size was small or if random chance obscured any underlying relationships.

Appendix

sum	2500	2729	1889	2793	2343	2588	21357
mean	10	10.916	7.556	11.172	9.372	10.352	85.428
SD	2.771049	2.190923	2.7373044	1.9280262	1.545045	2.5388737	15.121357

past negative	Pearson's r	−0.274***
	df	248
	p-value	< .001
	N	250
past postive	Pearson's r	0.306***
	df	248
	p-value	< .001
	N	250
present fatalistic	Pearson's r	−0.010
	df	248
	p-value	0.871
	N	250
present hedonistic	Pearson's r	0.182**
	df	248
	p-value	0.004
	N	250
future negative	Pearson's r	−0.157*
	df	248
	p-value	0.013
	N	250
future postive	Pearson's r	0.343***
	df	248
	p-value	< .001
	N	250

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

Figure 1 - Scatter plot for correlation between subjective well-being and past negative

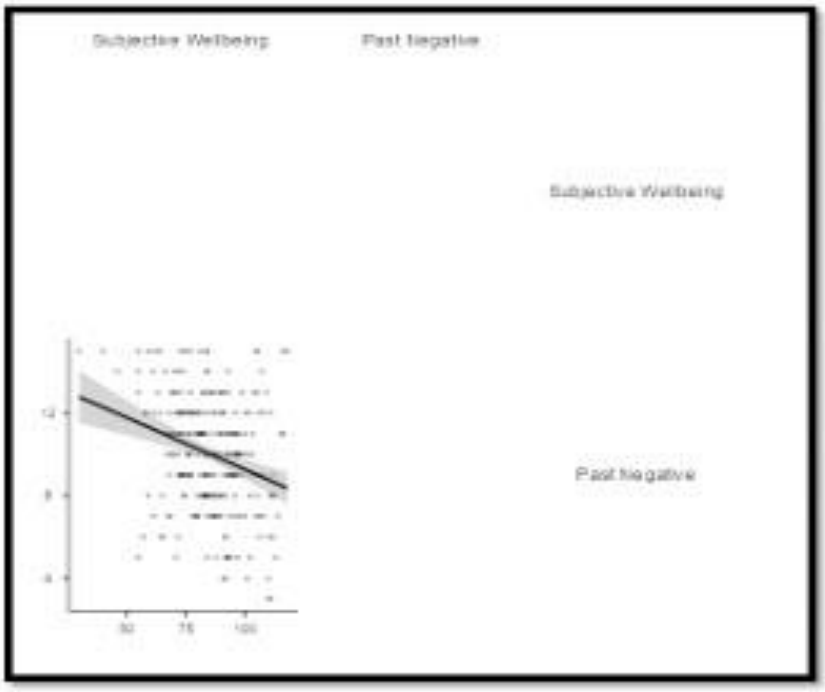

Figure 2 - Scatter plot for correlation between subjective well-being and past positive

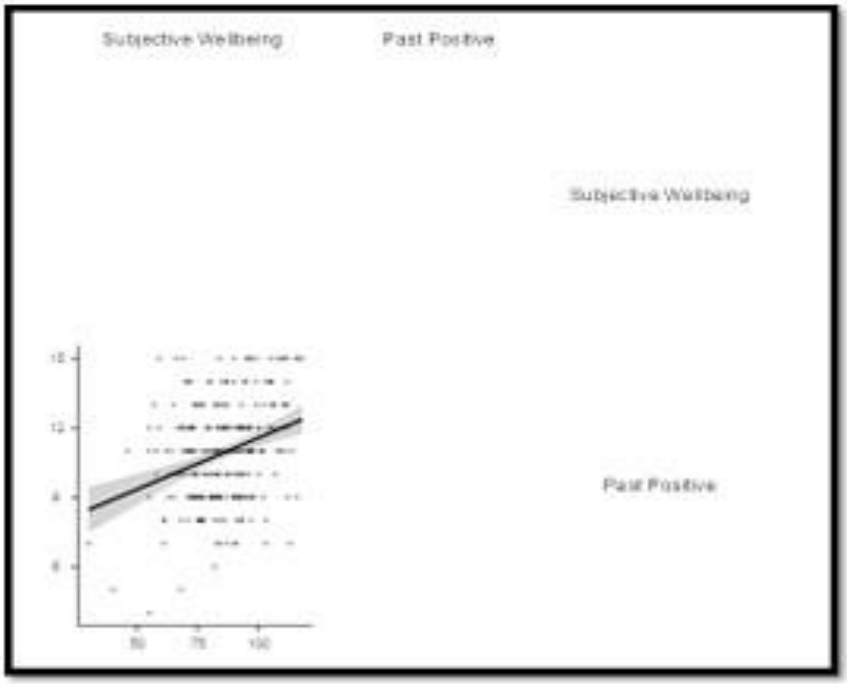

Figure 3 - Scatter plot for correlation between subjective well-being and present fatalistic

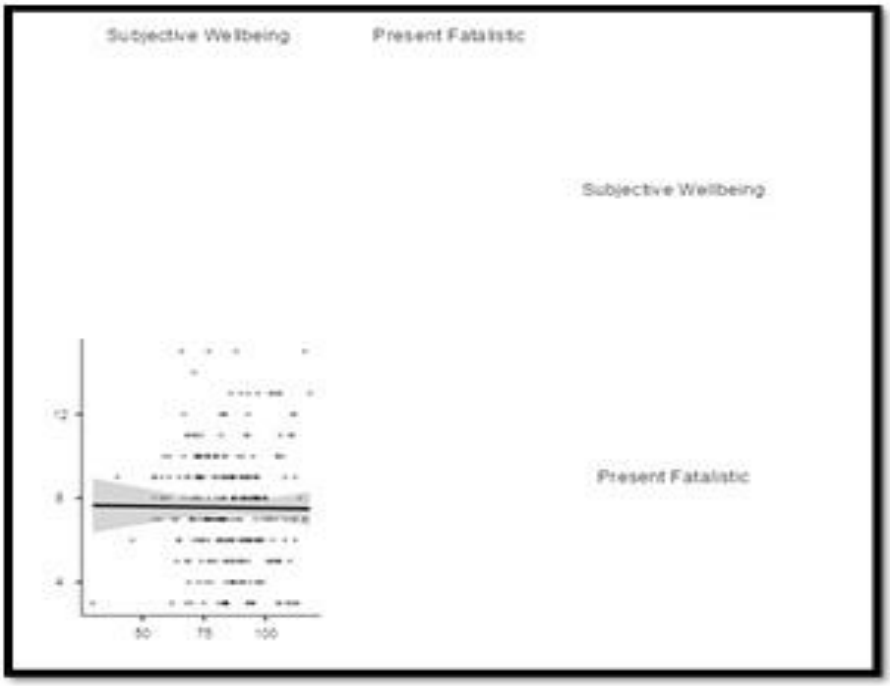

Figure 4 - Scatter plot for correlation between subjective well-being and present hedonistic

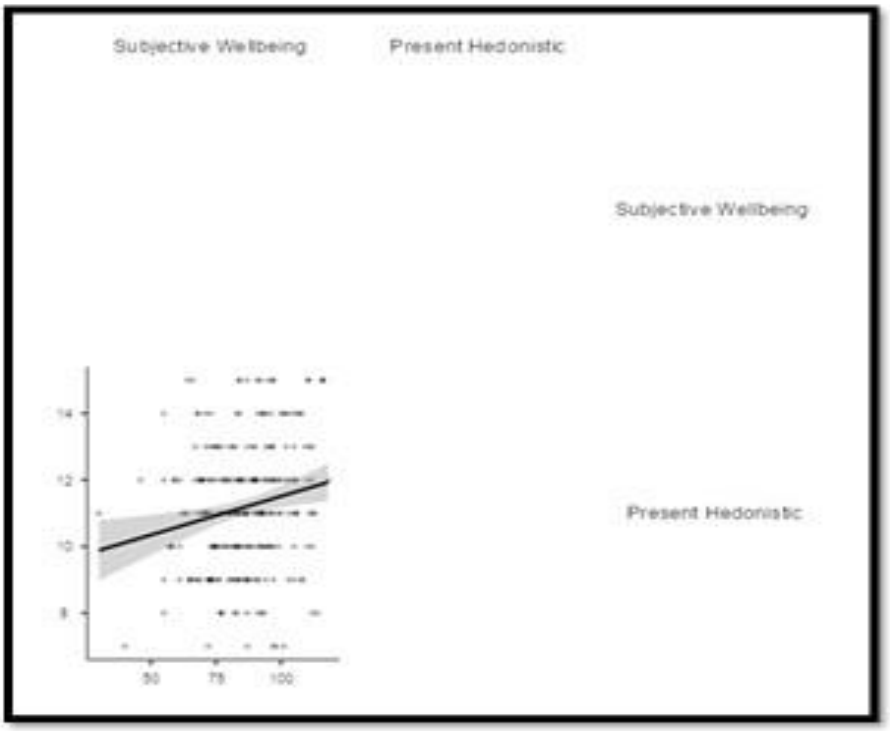

Figure 5 - Scatter plot for correlation between subjective well-being and future negative

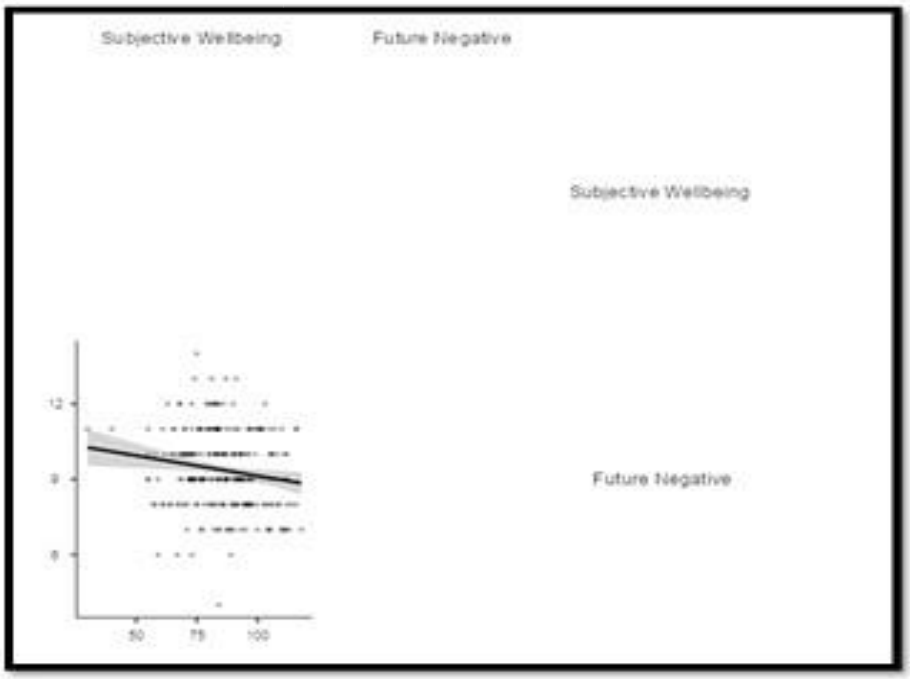

Figure 6 - Scatter plot for correlation between subjective well-being and future positive