Universidade do Minho

Escola de Psicologia

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Visual Representations of Well-Being in Northern and Southern Portuguese University Students: Relations with Place Identity and Mental Health

outubro de 2024

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UMinho | 2024

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Dissertação de Mestrado
Mestrado em Psicologia Clínica na Infância e Adolescência

Trabalho efetuado sob a orientação da

Professora Doutora Teresa
Professora Doutora Dionísia Tavares

outubro de 2024

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Aknowledgments

Tradition has it that the final year of a master's program is a blend of emotions: the happiness of nearing professional life, the frustration of setbacks we encounter along the way; and the bittersweet feeling of leaving behind the familiar academic environment for the uncertainties of the future.

As nothing is achieved alone if we want to go far, I must first thank my mentors. To Dr. Teresa Freire, thank you for consistently pushing me toward excellence with your insightful challenges. To Dr. Dionísia, your guidance was pivotal in helping me navigate this crucial stage with confidence and assurance.

A significant pillar of my journey has been my family, who endured my visits every three months. To my parents, who have supported my dream of becoming a therapist since I was 12, thank you for allowing me to leave the Algarve at 18 to pursue my studies across the country. Your patience with my moments of doubt, your love, and your unyielding belief in me have been my greatest sources of strength, no matter the circumstances. To my brother, for your teasing and humor that kept me grounded; to Ionela, for reassuring me that I'm on the right path; and to my uncles, especially my aunt Luísa, for your encouragement and light-hearted reminders that "one day, you'll be treating all these crazy people." To my grandparents, thank you for always wishing me the best and for the comforting cheese toasties during my visits. My family would not be complete without mentioning my loyal companions, Laika and Gatilde, who were with me through countless hours in front of the screen, sharing my highs and lows. And of course, a special thank you to my right hand, the best boyfriend who stands by me, Mário. Without your unwavering support, love, and presence, this journey wouldn't have been nearly as beautiful. Thank you for making Braga feel like my second home.

I also extend my thanks to the "Bróder Hude" group for the laughter and camaraderie throughout the semester. Your friendship made the challenges of this journey more bearable.

To my incredible friends, who I know will go far, especially Beatriz, Zé, Juliana, César, and Dario, thank you for the Friday afternoons filled with philosophical debates and refined comic conversations. Your companionship through every stage of this process has been invaluable.

With heartfelt sincerity, thank you.

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Universidade do Minho, 21 de outubro de 2024



(Beatriz Raposo)

Representações Visuais de Bem-Estar em Estudantes Universitários do Norte e Sul de Portugal: Relações com a Identidade de Lugar e Saúde Mental

Resumo

Com o surgimento da psicologia positiva, verificou-se uma mudança de foco do mal-estar para uma ênfase no bem-estar, traduzindo-se numa transição de um conceito assentado na doença para um conceito de funcionamento humano ótimo, que valoriza as forças e capacidades de cada pessoa. Alinhado a esta perspetiva, esta dissertação teve como objetivo (1) explorar como os estudantes universitários representam visualmente o bem-estar; (2) comparar as representações visuais de bem-estar de estudantes a estudar no norte e sul de Portugal; e (3) analisar se os níveis de identidade de lugar e saúde mental dependem do tipo de representações visuais de bem-estar e da localização geográfica. Esta dissertação reformula a técnica *"Draw-and-Write"*, recorrendo ao WbSquare adaptado do protocolo iSquare em estudantes universitários com idades entre os 18 e 29 anos da Universidade do Minho e da Universidade do Algarve. Os resultados indicam que os estudantes visualizam o bem-estar através de seis temas principais: "Lugares Significativos", "Equilíbrio de Vida", "Relações Interpessoais", "Eu", "Experiências Memoráveis" e "Paz", com uma ênfase particular em "Lugares Significativos". As representações visuais de bem-estar não diferiram com base na localização geográfica, mas a localização revelou-se um fator significativo na identidade de lugar, entre os estudantes da Universidade do Minho.

Palavras-Chave: Representações visuais, bem-estar, identidade de lugar, saúde mental, localização geográfica

Visual Representations of Well-Being in Northern and Southern Portuguese University Students: Relations with Place Identity and Mental Health

Abstract

With the emergence of positive psychology, there has been a notable shift from focusing on ill-being to emphasizing well-being, moving from a disease-based concept of human functioning to optimal functioning, by envisioning one's strengths and abilities. Aligned with this perspective, the current dissertation aimed to (1) explore how university students visually represent well-being; (2) compare visual representations of well-being of students studying in the northern or southern part of Portugal and (3) analyze if levels of place identity and mental health depend on the type of visual representations of well-being and geographical location. This thesis re-formulates the "Draw-and-Write" technique, creating the WbSquare, adapted from the iSquare protocol in university students aged 18 to 29 from the University of Minho and the University of Algarve. Findings reveal that students visualize well-being through six main themes: "Meaningful Places", "Life Balance", "Interpersonal Relationships," "Self," "Memorable Experiences" and "Peace", with a particular emphasis on "Meaningful Places". The way students visually represent well-being did not differ substantially based on their geographical location, but geographic location emerged as a significant factor in place identity, with students from the University of Minho.

Keywords: Visual representations, well-being, place identity, mental health, geographic location

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1. Introduction

Traditionally, well-being was conceived as the absence of negative conditions and feelings, while being the adjustment and adaptation to a challenging environment (Keyes, 1998). Since the advent of positive psychology, research has focused on how an individual's strengths and abilities contribute to their overall functioning (thriving), and less focus has been taken on fixing damages by using a disease-based concept of human functioning. With this change, the emphasis has shifted not only from ill-being but to well-being as well (Diener, 1984; Diener et al., 1999; Seligman, 2002). Well-being is an intricate construct of utmost importance as it acts as a buffer against various negative outcomes while fostering personal growth and optimal functioning (Park, 2004; Ruini & Ryff, 2016), serving as a pathway to a better, mentally healthy, and more productive life (Magyar & Keyes, 2019). Recognizing that individuals are not satisfied with solving their problems or avoiding what saddens them marked a shift, making it crucial to investigate the positive incentives underlying human beings (Diener et al., 1999).

1.1 Perspectives on Well-Being: Subjective, Psychological, and Social Dimensions

From scientific literature, two main perspectives emerge when investigating well-being: subjective well-being, or hedonia, and psychological well-being, or eudaimonia (Delle Fave et al., 2011; Freire & Tavares, 2011). The construct of subjective well-being (SWB) focuses on investigating how individuals evaluate their lives, including both cognitive dimensions, such as work, life satisfaction, and affective dimensions, for example, presence of positive emotions and absence of negative affect (Diener et al., 1998). The presence of positive affect, less negative affect, and life satisfaction are the three associated but independent elements that describe SWB (Diener, 1984; Myers & Diener, 1995). These authors claim that SWB underlies a hedonic perspective of immediate pleasure and avoidance of pain when giving a general appraisal of life satisfaction, where more positive emotions are present than negative emotions. This means that high SWB translates into mainly positive thoughts and feelings when looking at one's life. Other authors refer to this hedonic perspective as emotional well-being, since it also encompasses the degree of positive feelings, happiness, and life satisfaction (Magyar & Keyes, 2019; Park et al., 2023).

This perspective was considered incomplete in fully embracing the concept of well-being, since not all desires or valued outcomes when achieved, would translate into well-being (Ryan & Deci, 2001), giving rise to psychological well-being (PWB), falling within the eudaimonic perspective. According to Ryff and Keyes (1995) PWB encompasses how people perceive their lives to have meaning, if they are achieving their potential, the quality of their relationships with others, and whether they feel in control of their own lives. This perspective includes more challenging and lasting aspects of life, neglected aspects

of positive functioning, namely flourishing and realization of personal talents, and it is envisioned as a long-term process of development and self-actualization connected to the creation of meanings (Delle Fave et al., 2011; Ryff, 2013). Ryff and Keyes (1995) propose a theoretical model of PWB that incorporates the existence of 6 dimensions in a "well-lived life," namely autonomy, environmental mastery, personal growth, positive relationships with others, purpose in life and self-acceptance.

Keyes (1998; 2003), expands the eudaimonic tradition by introducing social well-being, since as social beings, humans continue to be part of social structures and communities, while facing numerous social tasks and challenges. PWB focuses on personal criteria for evaluating positive functioning, whereas social well-being represents the public and social aspects through which individuals assess their overall functioning in life, addressing social dimensions, namely coherence, integration, actualization, contribution, and acceptance (Keyes, 1998). Hence, individuals are mentally healthy when they perceive social life as meaningful, view society as having potential for growth, when they experience they belong to their communities, can accept all parts of society, and perceive their lives as contributing positively to society. Social well-being is linked, but does not overlap with indicators of happiness and life satisfaction (Keyes, 1998; 2003). Emotional/subjective well-being prompts individuals to feel good about life overall, while psychological and social well-being are more associated with well-functioning in life (Magyar & Keyes, 2019).

1.2 Exploring the Relation of Place Identity and Mental Health With Well-Being

Humans develop connections with the landscapes around them, indicating that places encompass not only physical and spatial parameters but also psychological aspects, historical and religious connotations (Knez & Eliasson, 2017). Physical spaces are part of our daily life, shaping our experiences, as we recall scenarios and physical contexts associated with memories and emotions (Freire, 2012). These spaces integrate our identity and existential journeys, since the way we interact with our environment shape our thoughts and who we are, consequently impacting our well-being (Russel et al., 2013). As per Lewicka (2008), “place” is the core concept in environmental psychology, and people form bonds with those places through place attachment, place identity, sense of place and place dependence. According to Proshansky (1978), place-identity encompasses the individual's sense of self in relation to their physical surroundings. It involves a combination of conscious and unconscious elements such as thoughts, beliefs, preferences, emotions, values, aspirations, behavioral tendencies and skills that are relevant to that particular environment. The environment of our everyday lives influences the development of our identity (Schubach et al., 2016). Later, Peng and colleagues (2020) added less tangible elements

such as meanings, memories, and information from others, from the past and the future. These elements reflect one's distinct socialization experiences within the physical setting, while also encompassing shared experiences that are universal to all individuals of that environment. Place identity serves as a channel to integrate physical reality and social cognition (Peng et al., 2020). This study explores place identity through the theoretical framework proposed by Williams and Vaske (2003), where place identity constitutes a distinct dimension of a general construct of place attachment.

Place identity influences students' experiences and well-being within the educational setting (Khaidzir & Kamal, 2023). The transition from home to university can impact one's place identity (Chow & Healey, 2008), thus, placing oneself in a geographical space, is an important aspect of identity development during these years (Schubach et al., 2016).

According to Russel et al. (2013), our thoughts are rooted in our direct lived experience with the world and, therefore, with the environment that surrounds us. Different cultures diverge in their conceptualization of well-being (Martela & Sheldon, 2019), raising questions about whether within the same country, different geographical regions, and their intrinsic characteristics (e.g., coastal versus mountainous landscapes) exert any influence on how individuals represent well-being, and if there's a relation with place identity.

Mental health is a fundamental component of overall well-being (Liu et al., 2019), allowing individuals to cope with life's challenges, contribute to their communities, realize their potential, learn and work well (World Health Organization, 2022). Mental health is essential for well-being, but on its own, it is not enough (Wren-Lewis and Alexandrova, 2021). Keyes (2002) describes mental health as a continuum between languishing and flourishing, where social, emotional and psychological well-being are indicators of mental health. Mental health is not simply defined by the lack of mental illness, but also by adequate levels of emotional, psychological, and social well-being. The absence of mental illness does not translate into high levels of well-being, and low levels of well-being do not imply presence of mental illness (Keyes & Michalec, 2010). Sometimes authors use well-being and mental health alternately (Keller, 2020; Wren-Lewis & Alexandrova, 2021), while related, they are distinct concepts and not mutually exclusive.

1.3 Well-Being in University Students

From the lifespan perspective, each age phase brings forth its own set of priorities, distinct challenges, and opportunities, resulting in shared developmental patterns, but also intraindividual and interindividual differences (Baltes et al., 1988; Berk, 2007). This study focuses on emerging adults,

particularly university students. According to Arnett (2000) after reaching the age of 18, most adolescents experience a significant shift away from the normative aspects associated with their earlier years. This transition into the age range of 18-25 marks the stage of emerging adulthood, characterized by multiple transitions and responsibilities. This period often involves completing education, initiating employment, forming long-term relationships or marriage, and pursuing other endeavors that contribute to establishing a trajectory towards a successful and fulfilling adult life (Arnett, 2007; Arnett, 2015; Stroud et al., 2015). Current research extends this period by including an age range from 18-29 years old (Arnett et al., 2014; Nelson, 2021), since for most individuals the late twenties are still a period of entering into a more stable adult life, of longer education, of later entry to parenthood and marriage, as compared to previous generations (Arnett, 2015). This period is distinct both demographically and subjectively from adolescence, embracing significant identity explorations and personal development, and exists in cultures where a prolonged period of an independent role is allowed, leaving the dependency of childhood and adolescence (Arnett, 2000). Understanding the well-being of individuals during this crucial period is essential, given its capacity to buffer the impact of stress (Howell et al., 2007; Slimmen et al., 2022), in a period of increasing challenges and responsibilities (Ahuja, 2024; Hernández-Torrano et al. 2020; Tan et al. 2023). Once students begin university, as opposed to pre-university levels, there is more strain on PWB, indicating that university is a period characterized by heightened psychological distress, through academic performance, financial concerns, post-graduation plans, pressure to succeed, among others (Bewick et al., 2010; Emmerton et al., 2024; Liu et al., 2019; Worsley et al., 2021). In a cross-country survey by Bersia et al. (2024), 50% of the Portuguese student sample showed high levels of generalized anxiety and moderate overall well-being.

1.4 Importance of Visual Representations

Every day, human beings naturally interpret, generate, and utilize images without significant conscious effort, often relying on learned social norms and conventions (Weber, 2008). This reliance on visual cues is pronounced in modern society, considered the age of the visual, where information is primarily transmitted through visual means (Arcavi, 2003; Josephson et al. 2020). Images are constantly present in the flow of experience, aiding in the understand and assignment of meaning to life (Reavey, 2020).

The human ability to mentally represent the surrounding world plays a fundamental role in survival as a species. The mind can mentally break down the world into smaller, understandable parts, allowing individuals to think and assign meaning to them (Gilbert, 2008). Visual representations serve a

symbolic function, allowing the representation and conceptualization of abstract ideas, objects, and concepts (Uttal & O'Doherty, 2008). In fields beyond psychology, visual representations also play significant roles, in chemistry, they aid problem-solving through ball-and-stick models and draw wedge-dash structures (Gaytán-Hernández et al., 2023; Rau et al., 2017), while in music, musical notation is a key visual tool (Cruz et al., 2018; Schmidt-Jones, 2018).

Zieba (2020) studied visual representations of SWB, specifically happiness, through stock photography. Themes of early adulthood, family life and teamwork emerged, representing happiness as a goal rather than a process. In Sternudd et al. (2023) study, participants used photographs to visually represent situations of well-being, emerging themes of control and balance.

1.5 Visual Representations and the Draw-and-Write Technique

Visual methodologies express representations of individuals' experiences of health and well-being, while simultaneously exploring what these representations mean and how they can contribute to change (D'Amico, et al., 2018). Visual Representations can be expressed through drawings (Ainsworth & Scheiter, 2021), and the draw-and-write technique exemplifies this. It uses a visual, empirical research method, combining the systematic and rigorous qualities of traditional qualitative methods and the artistic and creative aspects of the arts (Hartel, 2014). This technique involves participants drawing a specific concept or an illustrative response to a question (Hartel, 2019), followed by writing or speaking about their drawing through captions, surveys, stories, interviews, or focus groups. It creates a dual corpus of visual and textual data, that may extend or challenge conventional knowledge produced by words, such as questionnaires, scales, interviews, and tests which often lack the ability to capture participant comments and descriptions, due to their defined structure (Delle Fave et al., 2011; Reavey, 2020). Initially used with children, the draw-and-write technique became adequate for populations at any life stage and various topics (Hartel, 2019).

The iSquare protocol, is a re-formulation of the draw-and-write technique developed by Hartel et al. (2018). Originally created to study the visual dimension of information in information science, this protocol has proven to be adaptable to various constructs within the social-scientific paradigm (Hartel et al., 2018; Hartel, 2019). Ramos (2019) adapted the iSquare protocol into the hSquare, to explore happiness. This study demonstrated its effectiveness in measuring psychological constructs and providing valuable insights, enriching theoretical frameworks. This protocol allows the visualization of intangible phenomena, focusing on the individual's visual representation, rather than considering the artistic technique or creativity of the subject (Hartel, 2019). As stated by Hartel (2019), drawing can express

what is not easily written, providing a new perspective on how human beings attribute meaning to their surroundings.

With the adaptation of this protocol to study well-being, the present study has the potential to supplement conventional methodological approaches to comprehend how individuals represent well-being, offering new insights.

1.6 Aim of the Study

The present dissertation aims to investigate three main objectives: (1) Explore how university students visually represent the concept of well-being (2) Compare visual representations of well-being of students studying in the northern or southern part of Portugal (3) Analyze if levels of place identity and mental health depend on the type of visual representations of well-being and geographical location

2. Methodology

This exploratory study adopts a mixed-methods approach with a cross-sectional research design. Data collection is conducted at a single point in time, enabling analyses at the inter-subjective level.

2.1 Participants

The sample consisted of 320 bachelor's degree students from two universities in Portugal: the University of Minho, in the North (n=167) and the University of Algarve, in the South (n=153). Participant's ages ranged between 18 to 29 years old (M =20.18, SD = 2.02), with 241 females, 71 males and 8 identified as "others". In this study, 85.9% of the students (n=275) perceived themselves as having an average socioeconomic status, while 9.4% (n=30) as above average, and 4.7% (n=15) as below average.

At the University of Minho, there were 77 students from Psychology, 41 from Visual Arts, and 49 from Applied Mathematics. At the University of Algarve, there were 72 students from Psychology, 43 from Visual Arts, and 38 from Mathematics.

Exclusion criteria included (a) individuals below 18 years old or above 29 years old and (b) non-natives of Portugal.

2.2 Materials / Instruments

WbSquare Protocol: To study visual representations of well-being, this study created the WbSquare protocol (where 'wb' denotes well-being), which is derived from the iSquare protocol, a re-formulation of the draw-and-write technique developed by Hartel et al. (2018). This protocol uses square pieces of white art paper measuring 11 by 11 cm, and on the front side, there's an indication to "Draw

well-being". The reverse side is composed by the statement "Describe your drawing", to enhance the comprehension of the drawing. The size of the squares is relevant as it guides the participants towards a brief visual expression within a short period of time. The surface texture of this paper is porous, allowing for quick absorption of black ink from the pens without smudging. These papers were distributed with black ink pens to control data variability, such as color, line thickness and ink fill (Hartel et al., 2018).

Sociodemographic Questionnaire: Questions regarding gender, age, marital status, place of birth, nationality, year of enrollment, place of residence, place of residence during academic term, course, university and perception of socioeconomic status.

Place identity (Williams and Vaske, 2003): Measured using the Place Attachment Scale from these authors, using the items related to place identity, creating a translated version for research purposes. It encompasses six items, on a 5-point scale ('1' = 'strongly disagree', '5' = 'strongly agree', with '3' as neutral). High scores indicate higher levels of place identity. Cronbach's alpha ranged from α= 84 to α= 94 across locations examined.

The Mental Health Continuum-Short Form (MHC-SF) by Keyes (2005): Validated for the Portuguese population by Fonte et al. (2020), is a self-report questionnaire designed to measure mental health through three key aspects of well-being: SWB, PWB and social well-being. It includes 14 items, with 3 assessing SWB, 6 for PWB, and 5 for social well-being. It inquires how frequently individuals have experienced each of the facets of well-being in the past month, on a 6-point Likert scale ('1' = 'never', '6' = 'every day'. Cronbach's alpha for each scale and the total MHC-SF scale were respectively, α=.90 (emotional well-being), α=.85 (social well-being), α=.89 (PWB), and α=.93, showing good internal consistency and psychometric properties (Fonte et al., 2020).

2.3 Procedure

This study, approved by the Ethics Committee for Research in Social and Human Sciences of the University of Minho (CEICSH 027/2024), was promoted through the communication channels of the University of Algarve and University of Minho, to obtain required approvals. After approval, the Wbsquare protocol was implemented in classrooms with university students of each University.

Following protocol instructions (Hartel, 2018), a brief explanation of the study was presented, emphasizing its voluntary nature, and no prior information was provided about the drawing task to ensure spontaneous responses. During debriefing, this was explained to the participants. Informed consents were obtained, and confidentiality and anonymity ensured. Participants were encouraged and supported,

especially those feeling they cannot draw or lack artistic talent. The drawing activity lasted 10 minutes, with 2 minutes for instructions and material distribution, and 7 minutes for the task itself. Two researchers were present for classes with more than 20 students.

Afterward, the sociodemographic questionnaire, Mental Health Continuum-Short Form (MHC-SF) by Fonte et al. (2020), and the Place Identity Scale by Williams and Vaske (2003), were administered via *Qualitrics,* within 15 minutes. To ensure students' anonymity, a code was generated to link the answers to the respective drawing.

2.4 Data Analysis Strategy

To explore how university students visually represent the concept of well-being, thematic analysis was used following Braun and Clarke (2006) guidelines and Hartel et al. (2018) iSquare protocol. It comprises of: (a) Familiarization with the data; (b) Generating initial codes; (c) Searching for themes; (d) Reviewing themes; (e) Defining and naming themes; and (f) Producing the final report. An inductive approach was employed, coding the data without imposing pre-existing frameworks, providing a robust and flexible foundation for identifying, analyzing, and reporting patterns/themes within the dataset (Braun & Clarke, 2014). Drawings were analyzed based on their visual elements and the accompanying descriptions provided on the reverse side, as needed. An independent researcher categorized the drawings into the final themes, resulting in a Cohen's Kappa of 0.73, indicating substantial agreement (McHugh, 2012). When consensus was not achieved, discussions were held until a final decision was reached.

All statistical analyses were performed using IBM SPSS Statistics version 28, with a significance level set at 5% ($\alpha = 0.05$), and involved descriptive statistics, Chi-Square and MANOVA's.

3. Results

3.1 How University Students Visually Represent Well-Being

The resulting main themes for well-being visual representations were "Meaningful Places", "Life-Balance", "Self", "Interpersonal Relationships", "Memorable Experiences" and "Peace". Some of these themes encompass sub-themes which will be elaborated in the following sections.

Well-being as Meaningful Places (*n*=102). Refers to drawings of specific locations categorized into four sub-themes, reflecting different environments. **Beach (*n*=43),** features elements like sand, beach towels, ocean waves, sun, beach umbrellas, and sunscreen. 'Beach' has two sub-themes

Beach Alone (*n*=16), focus on solitary experiences at the beach, such as sitting alone on the sand, admiring the ocean, or sunbathing (see figure 1), and **Beach with others (*n*=27)**, depict the beach as a social space, where individuals enjoy time with family, friends, pets, or significant others (see figure 2). Common elements include groups of people and activities like playing in the water or having a picnic. The second sub-theme is **Nature (*n*=44),** and centers on natural settings like forests, gardens, and parks, with common elements such as trees, grass, birds, flowers, butterflies and sun. 'Nature' has two sub-themes **Nature Alone (*n*=26),** finding solace and relaxation in nature, often depicted walking through forests, sitting on grassy fields, or admiring flowers and butterflies (see figure 3), and **Nature with others (*n*=18),** when drawings showcase interactions with other people in natural settings, like hiking, having a picnic, or playing with pets (see figure 4) The third sub-theme is **Home (*n*=14)**, the drawings depict home as a place of well-being with two other sub-themes associated **House alone (*n*=8)**, emphasizing the tranquility and comfort of being alone in one's own space, whether it be a bedroom, living room, or entire house (see figure 5)., and **Home with others (*n*=6),** includes sharing one's home with family members, friends and/or significant others. The depictions often include communal areas like the living room or garden, highlighting moments of togetherness (see figure 6). The final sub-theme is **Pool (*n*=1),** consisting of a single drawing depicting an individual alone at a pool, representing a moment of relaxation alone (see figure 7).

Figure 1

Examples of Drawings on "Beach Alone"

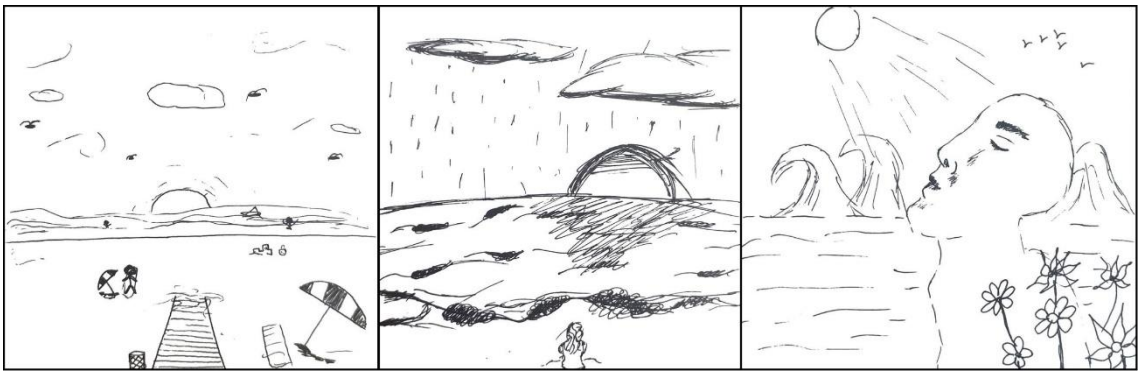


Figure 2

Examples of Drawings on "Beach with Others"

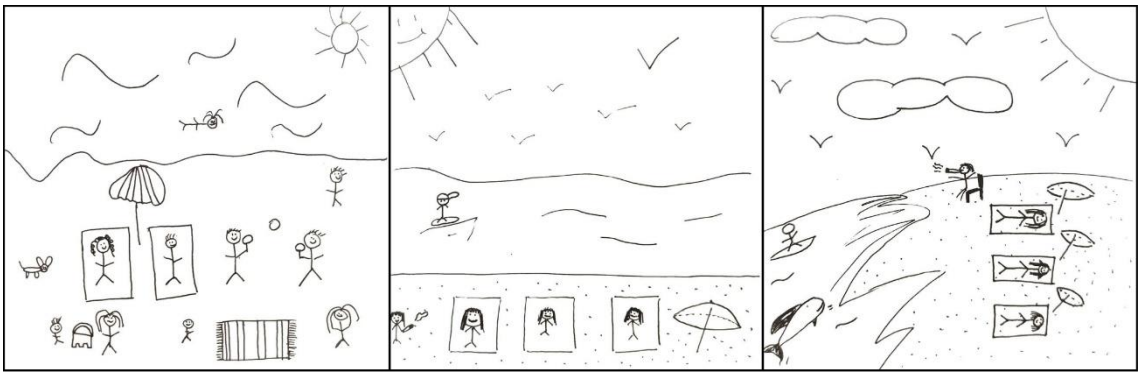


Figure 3

Examples of Drawings on "Nature Alone"



Figure 4

Examples of Drawings on "Nature with Others"

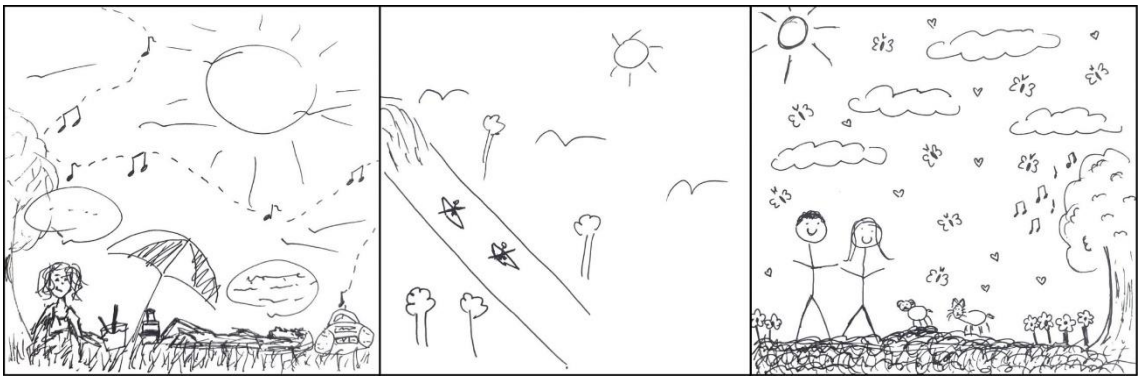


Figure 5

Examples of Drawings on "Home Alone"

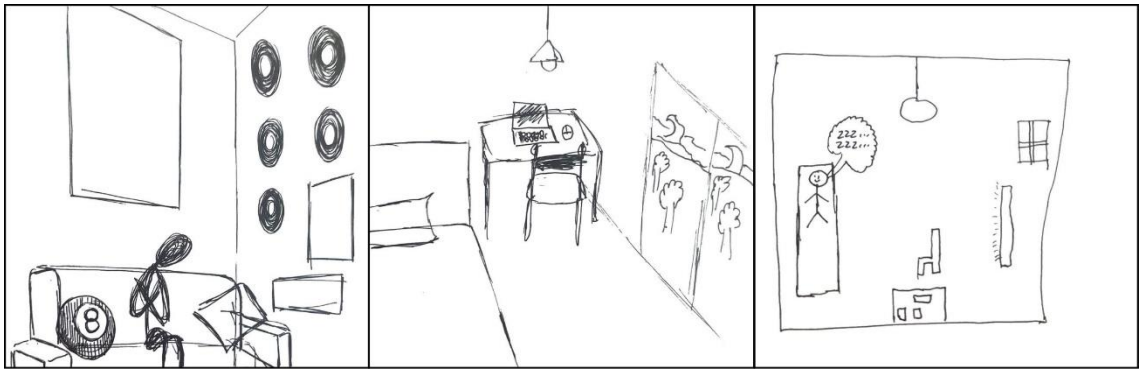


Figure 6

Examples of Drawings on "Home with Others"

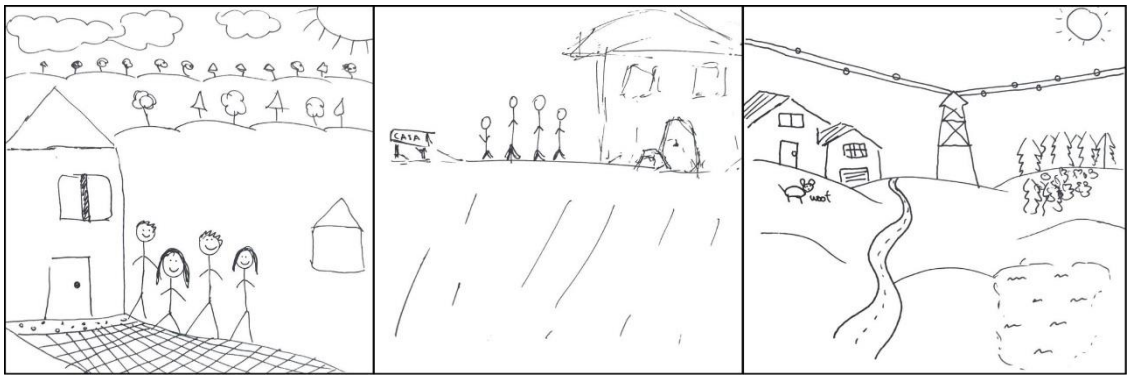
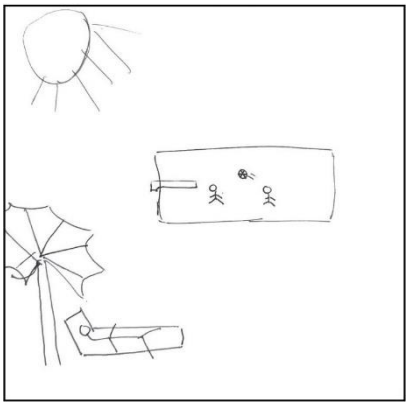


Figure 7

Drawing on "Pool"



Well-Being as Life-Balance (*n*=69). When students drew different life domains, such as physical health, healthy lifestyle, family, finance and leisure, emphasizing the concept of harmony or effective time management between these aspects, they were brought into this category. Common symbols included representations of family members, friends, trees symbolizing nature, musical notes, dumbbells indicating physical activity, pets, and scenes of the beach. The category was further divided into two sub-themes: **Life-Balance in general (*n*=48)**, focused on the broader concept of life balance, excluding academic or professional aspects (see figure 8). The sub-theme **Life-Balance with Work / University included (*n*=21)** addressed the integration of academic or professional life with overall well-being, highlighting the importance of balancing career and personal life (see figure 9).

Figure 8

Examples of Drawings on "Life Balance in General"

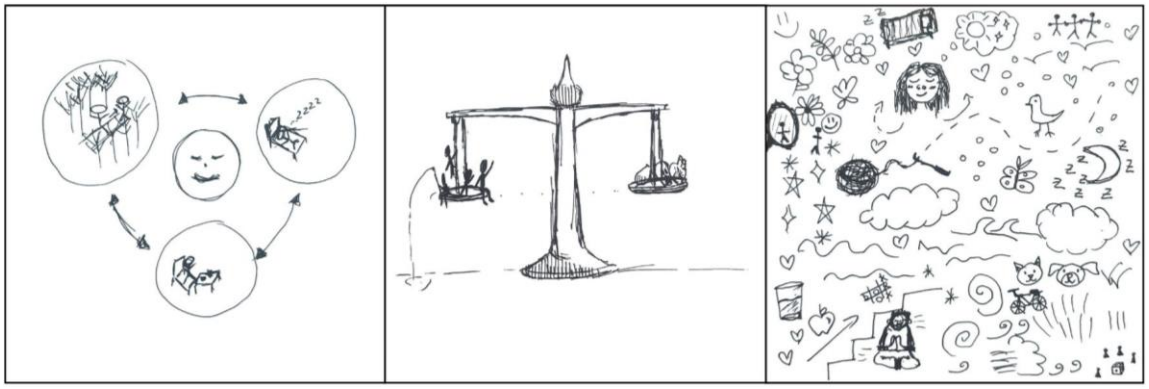


Figure 9

Examples of Drawings on "Life-Balance with Work / University included"



Well-being as Self (*n*=69), these drawings focus on internal aspects of well-being, encompassing mental health, inner balance, and relaxation. The drawings were divided into four sub-

themes, each reflecting different dimensions of the self and personal experiences. **Inner Self (*n*=39)**, depicts internal processes and personal growth. Common themes include self-love, self-compassion and self-esteem (see figure 10). **Self with others (*n*=11)**, illustrates well-being as experienced through interactions with others who provide comfort and emotional support. These images highlight the role of close relationships in fostering self-expression and self-acceptance. The emphasis is on how connections with people who make one feel good contribute to a positive sense of self (see figure 11). **Absence or overcoming of Ill-being (*n*=16)** addresses the concept of well-being through the lens of avoiding or overcoming negative states, through drugs, isolation or even the contemplation of death (see figure 12). **Personal Dreams (*n*=3),** refer to personal aspirations and life goals, whether they are realistically attainable or not. Examples include desires such as having a family or achieving a dream job, distinct from the bachelor's degree (figure 13).

Figure 10

Examples of Drawings on "Inner Self"

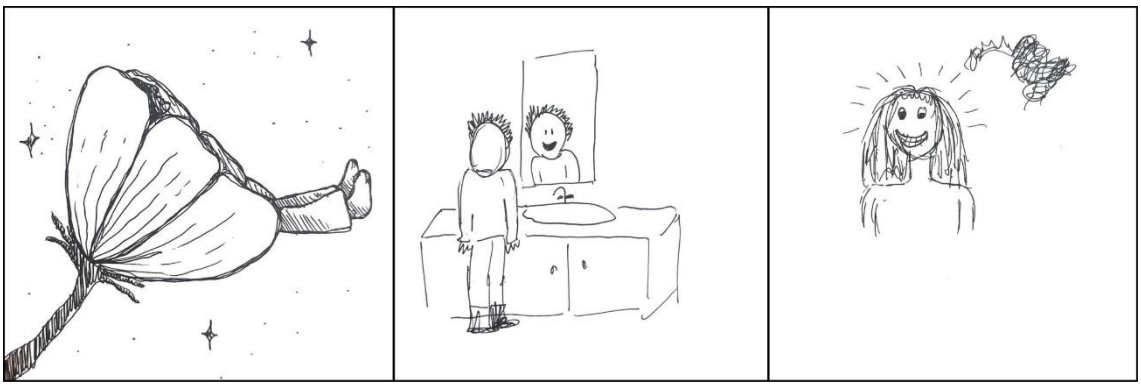


Figure 11

Examples of Drawings on " "Self with others"

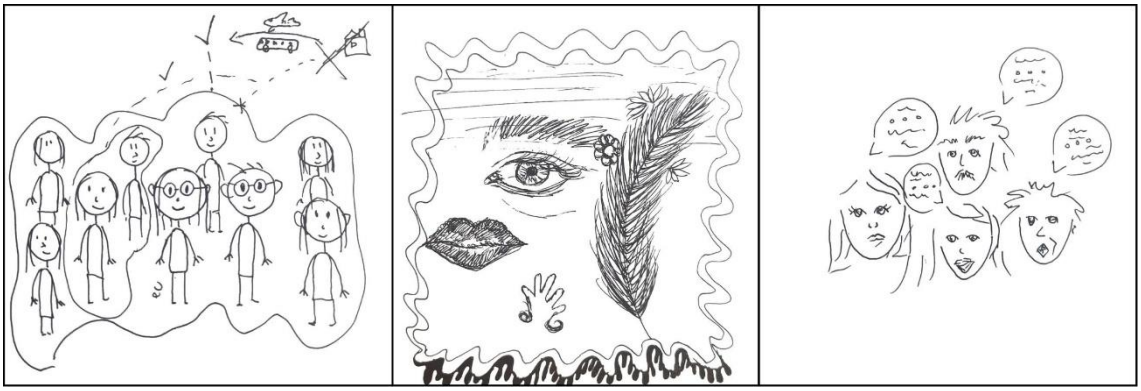


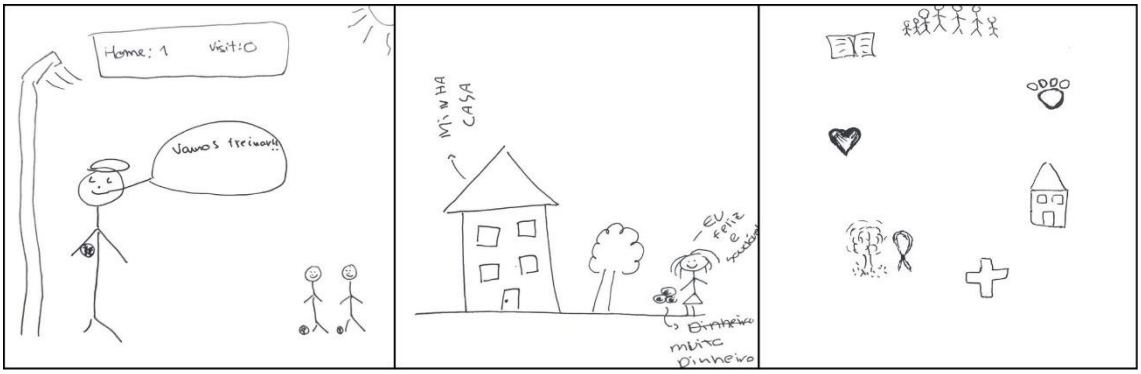
Figure 12

Examples of Drawings on "Absence or overcoming of Ill-being"



Figure 13

Examples of Drawings on "Personal Dreams"



Well-Being as Interpersonal Relationships (*n*=36), relates to interactions and relationships with specific individuals or groups. The drawings were divided into four sub-themes, each reflecting different types of social connections. In **Family (*n*=10)**, the drawings depicted shared moments with family such as shared meals, family gatherings, spending time together, or just the members without social context (see figure 14). **Family and Friends (*n*=11)**, when both were represented (see figure 15). **Significant People or Animals (*n*=11)**, these drawings depict close bonds with specific individuals or pets. It encompasses a range of significant relationships, such as a romantic partners (e.g., boyfriend/girlfriend), a loved one who has passed away, a particular family member like a niece or goddaughter, or a cat that is one's emotional support (see figure 16). **Friends (*n*=4),** it often included scenes of social activities, such as enjoying shared hobbies or just talking (see figure 17).

Figure 14

Examples of Drawings on "Family"

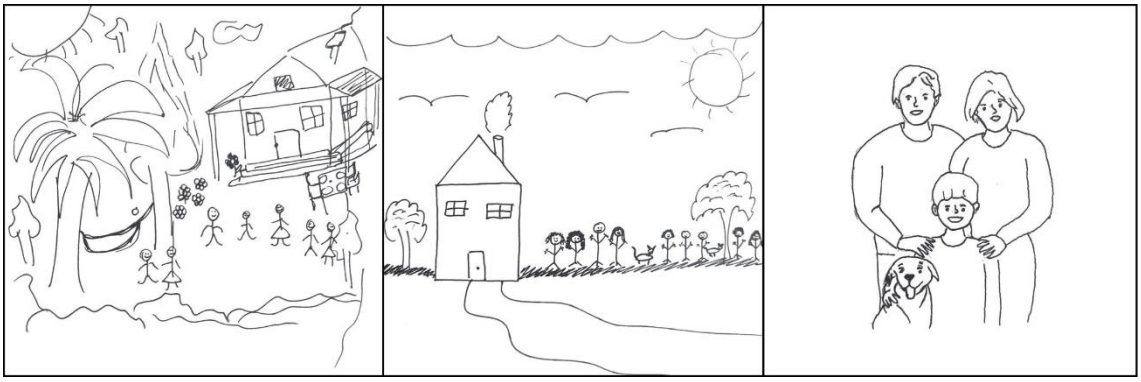


Figure 15

Drawings on "Family and Friends"

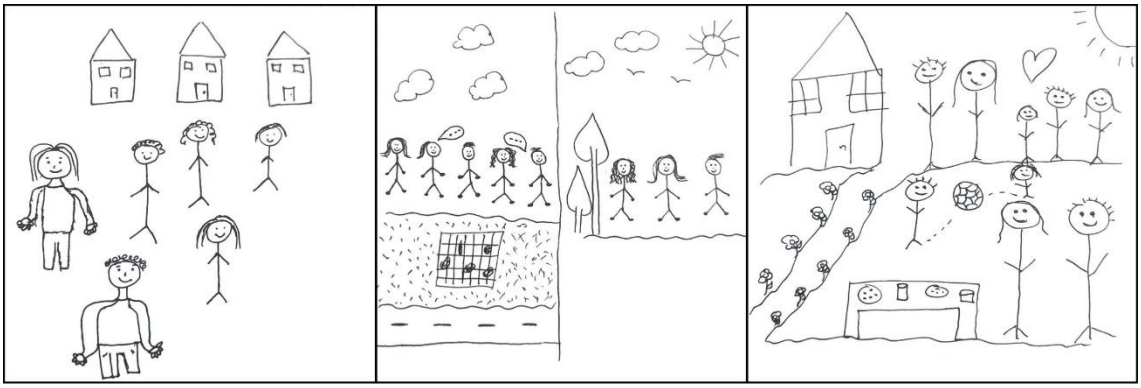


Figure 16

Examples of Drawings on "Significant People or Animals"



Figure 17

Examples of Drawings on "Friends"



Well-being as Memorable Experiences (*n*=26), this theme relates to distinct and meaningful experiences, whether they occur frequently or are rare and unique. It was divided in two sub-themes **Specific Moments (*n*=16)**, that portray moments that are notable for their rarity or the special circumstances required for them to occur. For example, weddings, witnessing breathtaking landscapes or moments that involve a confluence of specific elements, like lying in bed with a significant other during a rainstorm, accompanied by pets, snacks and favorite TV shows (see figure 18), and **Leisure (*n*=10)**, activities people engage in for enjoyment and relaxation. The activities often included watching TV shows, movies, reading, listening to music, driving, painting, and playing with pets (see figure 19).

Figure 18

Examples of Drawings on "Specific Moments"

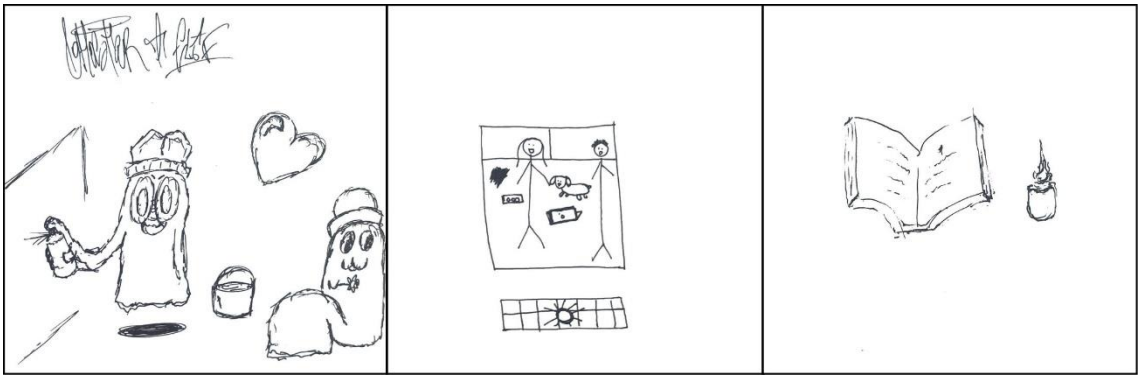
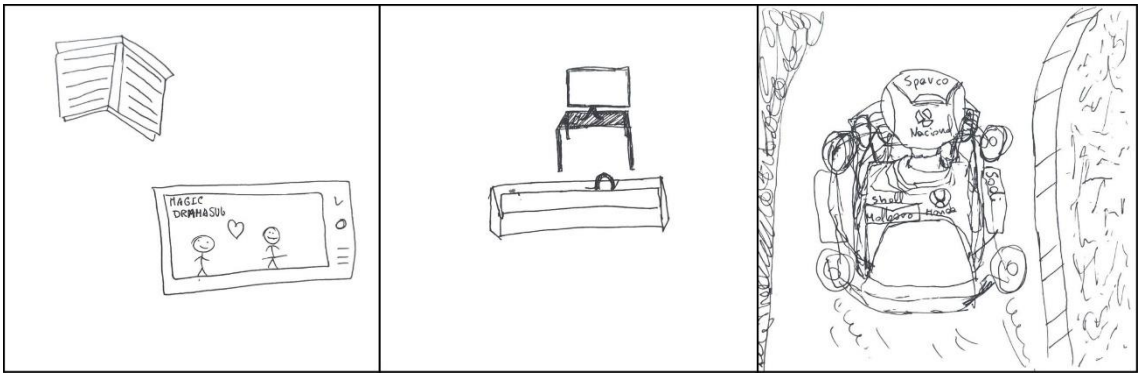


Figure 19

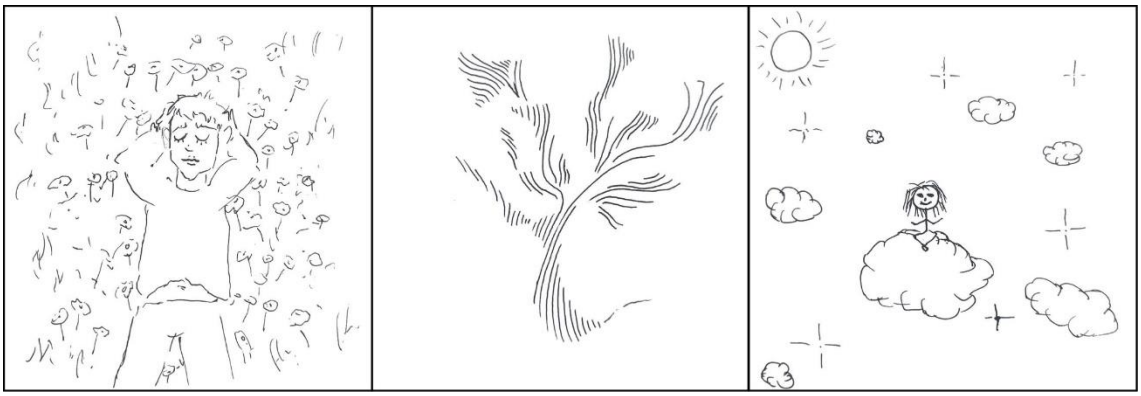
Examples of Drawings on "Leisure"



Well-being as Peace (*n*=18), this theme depicted a sense of overall peace and harmony within oneself, oneself in relation to the world and the world itself. Common elements were rainbows, eyes closed and the sun. The drawings evoke an ideal state, free from turmoil and filled with tranquility (see figure 20).

Figure 20

Examples of Drawings on "Peace"



3.2 Comparison of Visual Representations of Well-Being Between Students From Both Universities

As shown in table 1, students from the University of Algarve most frequently depicted well-being through the themes of "Meaningful Places", "Self", and "Life-Balance". Similarly, students from the University of Minho primarily visualized well-being with the themes of "Meaningful Places", "Life-Balance" and "Self".

Table 1

Distribution of Themes and Sub-themes of Well-being Visual Representations by University

Theme/Sub-theme	University of Algarve (*n*)	University of Minho (*n*)
Meaningful Places	51	51
Home	7	7
Beach	22	21
Nature	22	22
Life-Balance	35	34
Life-Balance in General	29	19
Life-Balance with Work/University Included	6	15
Self	39	30
Inner Self	26	13
Self with Others	5	6
Absence or Overcoming of Ill-being	6	10
Personal Dreams	2	1
Interpersonal Relationships	15	21
Family	5	5
Family and Friends	2	9
Significant People or Animals	7	4
Friends	1	3
Memorable Experiences	8	18
Specific Moments	6	10
Leisure	2	8
Peace	5	13

Note: Themes are in bold, and sub-themes are in regular text.

A chi-square test was conducted to examine possible associations between geographical location (University of Algarve and Minho) and the six main themes of well-being. Results indicated that the association between geographical location and the visual representation of well-being was not statistically significant, $\chi^2(5, N=320)=8.995, p=.109$. There is no significant difference in the visual representations of well-being between students studying in the University of Algarve or University of Minho.

3.3 Analysis of Place Identity and Mental Health According to Visual Representations of Well-Being and Geographic Location

A MANOVA was conducted with place identity and mental health as dependent variables and geographic location and well-being representations as independent variables. No significant multivariate effects were found for the combined dependent variables, F (10, 614)=1.170, p =.308; Wilks' Λ=.963, partial η^2 = .19. However, univariate analyses revealed significant differences for geographic location in place identity, F (1, 317)=6.084, p <.05; partial η^2 = .19. Students from the University of Minho reported higher levels of place identity (M=3.43) compared to students from the University of Algarve (M=3.28).

When the data was split by geographic location, for the students at the University of Algarve, no significant multivariate effects were found between well-being representations, place identity, and mental health, F (5,147) =.912, p=.523; Wilks' Λ =.940, partial η^2 = .030. In contrast, the University of Minho sample revealed significant multivariate effects of well-being representations on both place identity and mental health, F (5,161)=2.702, p < .005; Wilks' Λ =.850, partial η^2 = .078. Univariate analysis showed significant differences in place identity based on how students visually represented well-being, F (5,161)=2.949, p < .05, partial η^2 = .084. Tukey's HSD post-hoc tests indicated that students who depicted well-being as "Interpersonal relationships" (M=3.80) reported significantly higher levels of place identity compared to those who depicted well-being as "Self" (M=3.10), F (5,161)=.211, p < .05 (95% CI=.09198–1.31120).

4. Discussion

In exploring how university students visually represent the concept of well-being, six main themes emerged through inductive thematic analysis: "Meaningful Places", "Life-Balance", "Self", "Interpersonal Relationships", "Memorable Experiences" and "Peace". These themes represent various dimensions of well-being, integrating elements of subjective, psychological, and social well-being, illustrating the multifaceted nature of well-being, but also new insights.

Most students represented well-being through "Meaningful Places", and these cannot be interpreted as mere physical settings. People create meaning, experiences, their identity, social connections and opportunities in places, turning them into fluid, relational and experiential spaces (Doroud et al. 2018) . Rather than merely being backgrounds to emotional experiences, the places drawn may be catalysts for the experience of well-being. Proshansky et al. (1983) realized we neglected the role of places in our identity development. These drawings may shed light that we may also been neglecting the centrality of places in our well-being, besides the knowledge that they contribute to it. While one could

argue that in some drawings within this category, what individuals depicted might be better categorized under "Interpersonal Relationships," the emphasis was on the significance of the place itself.

One key observation from the study is that many written descriptions on the back of the drawings omitted key elements that were prominently featured in the drawings. For example, while participants often mentioned friends and family in their descriptions, they depicted a beach or forest landscapes without referencing it in writing. If one were to rely solely on written or verbal responses, they might conclude that interpersonal relationships were the primary factor in well-being, overlooking the significance of meaningful places and other scenarios created in the mind. This suggests that visual representations may complement traditional assessments, offering deeper insights into how individuals view well-being (Hartel et al., 2018).

The main places drawn were “Beach” and “Nature”. The first aligns with studies conducted across various countries, including China, Canada, and England, which demonstrated a link between residing near coastal areas or inland water bodies and improved mental health and well-being (White et al., 2020). Frequent visits to natural environments are associated to enhanced eudaimonic well-being, while particular visits to these spaces are associated with increased positive experiential well-being (White et al., 2017). According to the same authors, individuals who frequently spend time in nature tend to perceive their lives as more meaningful, and those who had recently visited natural areas reported feeling happier. Blue spaces are important for promoting positive social relationships, where people tend to spend more quality time with friends and family in these settings (White et al., 2020). This resonates with the sub-themes of "Beach with Others" and to some level, "Nature with Others," where students visually represented these environments as spaces of connection and shared experiences. On an emotional and psychological level, blue spaces are used to build positive emotions or memories, to engage in positive social relations, and to form attachment bonds and personal meanings to specific locations (White et al., 2020).

Green spaces are positively related to life satisfaction (White et al., 2013), and blue spaces in the drawings may also reflect the social aspects of well-being. The sub-theme ‘Nature” aligns with how urban green spaces support physical, psychological, mental, social and subjective well-being. Weekly visits can enhance well-being and mental growth, and viewing green spaces can prevent mental stress effects (Jabbar et al., 2022). On the other hand, when interpersonal connections are attenuated, connections to places may buffer poor mental health outcomes (White et al., 2020), resonating with sub-themes like “Nature Alone” and “Beach Alone”. Blue space settings were often chosen to self-regulate emotional

states and “feel better”, being a restorative context (Korpela et al., 2020), and urban green spaces have also shown positive effects on psychological restoration, attention restoration and improved mental energy (Jabbar et al., 2022).

Interestingly, “Beach” was more frequently illustrated with “others”, comparing with “alone”, and “Nature” was more drawn “alone” than with “others”, suggesting social experiences in the first and for solitary experiences in the latter. According to Staats and Hartig (2004), in natural environments, being with others can aid in restoration by offering a sense of safety, whereas being alone can enhance the restorative experience.
Although being immersed in nature is both scientifically and intuitively restorative as opposed to built environments, especially when in need for rest and recovery (Twedt et al., 2019), some students still drew ''Home''. This may constitute to be their place for recovery, but nonetheless, ''Nature'' and ''Beach'', had higher frequency.

The theme “Life Balance” connects with environmental mastery, a component of PWB (Ryff, 2013), and work-life balance is linked to SWB through job satisfaction when intrinsic motivation is low (Hasan et al. 2020). It also aligns with Douwes et al. (2023), who through student interviews found that one recurring theme was balance between studies and life beyond them. However, this study found that within the ''Life-Balance'' theme, double the drawings were on the sub-theme of ''Life-Balance in general”, excluding work and university from representations of well-being. Work in this population can also be seen as course work, academic activities, career and professional development activities (Yusuf et al. 2020). One possible explanation could be that students perceive university as a source of stress and anxiety due to academic stressors, adjustment issues, financial burdens, increasing responsibilities, balance between different life domains and for some, leaving home (Ahuja, 2024; Hernández-Torrano et al. 2020; Tan et al. 2023). Anxiety and other mental health issues have been more prevalent among university students compared to the general population, and these rates increased during the Covid-19 pandemic (Allen et al. 2022).

The theme “Self” aligns with multiple dimensions of PWB as outlined by Ryff (2013), particularly self-acceptance and personal growth. The sub-theme “Inner Self,” with its illustrations of self-love, self-esteem, and confidence, strongly reflects these dimensions. Additionally, the sub-theme “Self with Others” connects to positive relations with others, although it also touches on social well-being (Keyes, 2003), as the drawings highlight relationships not only with close individuals but also with strangers and broader society. “Personal Dreams” could connect with Purpose in Life, by bringing a sense of direction

and motivation, toward achieving their goals. A novel and interesting sub-theme was “Absence or overcoming of ill-being”, illustrating the existence of outdated notions of well-being, focused on the absence of ill-being (Seligman, 2011), but also aligns with the understanding that attending university can be a particularly challenging time, often associated with increased anxiety and lower PWB compared to other life stages (Morales-Rodríguez et al., 2020). Given this sub-theme, this technique could explore well-being representations with a clinical population, to inform better interventions. For instance, Cheung and colleagues (2016) explored patients’ perceptions of their illness through drawings.

Another novel theme emerging from this technique was the sub-theme “Specific Moments,” which illustrates how well-being can be linked to particular past experiences/memories, that hold personal significance. These moments may serve as emotional anchors, and could almost be conceptualized as a “safe space” or “safe memory”.

Social support plays a crucial role in facilitating a smoother transition and adaptation for university students, where they face new challenges (Cruz et al., 2016). It also predicts the life satisfaction component of SWB, with resilience acting as a mediator (Yıldırım & Tanrıverdi, 2021), and predicts PWB (Harding et al. 2019). Within the theme of "Interpersonal Relationships," there were no notable differences in the frequency of drawings across sub-themes, though family appeared slightly more frequently than other categories. Which is interesting since emerging adults expand and diversify their social networks by forming connections with friends, peers, classmates, coworkers, romantic partners, and others (Arnett, 2015). This may be due to the higher number of students studying away from home, a transition that can have a significant impact on their well-being by experiencing a reduction in contact with important social support networks (Alharbi & Smith, 2019).

Although “meaningful places” were the main theme representing well-being, the comparison between students from the University of Algarve and the University of Minho showed that geographical location did not appear to influence visual representations of well-being. Despite the distinct geographical contexts of the two regions, both groups valued similar themes in their visual representations. This result suggests that the way students visually represent well-being does not differ substantially based on their geographical location, indicating that other variables may better explain potential differences, such as stress levels or behaviors (Candeias et al., 2024), or that a larger sample size might be necessary to detect any regional distinctions. Both samples had a similar number of drawings illustrating “beach” and “nature”. While the Algarve region, with its warm climate and vast coastline, is naturally linked to beaches, Minho region, with its inland position, is more associated with green landscapes and mountains.

Nonetheless, both regions highlighted the importance of natural environments in their visual representation of well-being. This may be because both blue and green spaces are commonly used for restoration and promoting well-being, even if the Algarve has easier access to beaches and Minho to more mountainous, natural landscapes. Coastal environments, like beaches, encourage behaviors that enhance well-being, and people living nearby tend to take advantage of these opportunities (White et al., 2013), but maybe the allure of the beach itself may be a strong enough motivator for people inland to seek it out regularly, much like people could be drawn to green spaces regardless of their proximity. On the other hand, the increased number of drawings depicting the beach and nature on both regions may reflect a culturally developed preference, since in general, humans have a strong affinity for natural environments (Meidenbauer et al., 2019) . Over time, preference for nature emerges, providing affective benefits due to this developed preference (Brancato et al., 2022).

Geographic location appeared to play a role in students' place identity, with students from the University of Minho demonstrating higher levels compared to those from the University of Algarve. This suggests that regional factors may contribute to how students relate to their environments, possibly due to differing cultural or environmental influences between the two universities. Universities may vary in their infrastructure, regional characteristics, and the resources they provide to students, which can serve as a differentiating factor.

When splitting the data by geographic location, well-being representations did not seem to have a strong influence on place identity or mental health for students at the University of Algarve, indicating that these factors may not play a prominent role. In contrast, students from the University of Minho who represented well-being through 'Interpersonal relationships' appeared to exhibit higher levels of place identity compared to those who focused on 'Self' themes. This finding aligns with Proshansky's (1978) view where an individual's self-identity is shaped and articulated through their place identity, which encompasses a pattern of beliefs, values, emotions, expectations, and preferences that are intertwined with the characteristics of the physical environment. Maybe interpersonal relationships may reinforce students' connection to their physical surroundings, highlighting the role of social bonds in the development of place identity. The absence of this effect in the Algarve sample might suggest that different social dynamics or variables might influence how well-being is linked to place identity.

4.1 Limitations and Future Studies

This study provides valuable insights into how Portuguese university students visually represent well-being and the potential influence of geographic location on place identity and mental health. However,

several limitations must be acknowledged, which also present opportunities for future research. One key limitation lies in the sample size, which limits the generalizability of the findings. Although the study included students from two different universities, a larger and more diverse sample would offer a more comprehensive understanding of the population. Expanding the sample size could also support the development of a conceptual framework that explores the relationship between visual representations of well-being, and different levels of mental health, and place identity. On the other hand, this exploratory study provides a valuable contribution toward the validation of the Place Attachment Scale (Williams & Vaske, 2003), in future research.

Studies could build upon these findings by exploring how different life stages and age groups represent well-being. Research shows that as individuals age, their life priorities shift, and this impacts on what contributes to their well-being (Jebb et al., 2020), the significance of "Meaningful Places" for well-being may evolve, either giving way to other themes or maintaining its importance over time. Understanding these differences could shed light on how well-being is represented visually across the lifespan. A longitudinal approach could be also useful to track how students' representations of well-being evolve as they progress through different academic and life stages, offering insights into the temporal dimension of well-being.

This study also excluded immigrant populations, and future research should address this gap. This was attributed to the deeper and more intense connections natives typically establish with their place of origin or residence, whether it be in terms of place identity or attachment (Hernández et al., 2007). It would be valuable to explore how international or Erasmus students form place identity in foreign settings and how this interacts with their well-being. On the other hand, future research could compare local and non-local students to determine whether non-locals, who are often physically distant from family, place more emphasis on certain themes like family in their well-being representations. Building on the varying levels of place identity observed at both universities, further research could investigate how university culture and social support systems may influence the relationship between place identity and well-being.

4.2 Implications for Clinical Practice and University Policies

According to Blackwell (2019), mental imagery is a form of thought that influences our emotions, cognitions, and behaviors, and in some cases, can be more powerful than verbalization. If we consider visual representations to access or work with mental imagery, this study could have significant implications for clinical practice. It could provide valuable insights into clients' internal experiences and

offer new methods for therapeutic intervention. For instance, a therapist might ask a client to draw their ideal state of well-being, helping them to clarify and focus on their goals or even work on maladaptive representations (like some seen in the theme "Absence of ill-being") , as negative imagery can lead to avoidance behavior, for example (Blackwell, 2019). Also, individuals may struggle to articulate what brings them well-being, but through drawing, they may tap into answers that words alone cannot provide. In line with the sub-theme "Nature", the incorporation of nature imagery can have restorative benefits and serves as a viable alternative when direct access to natural environments is unavailable (Koivisto & Grassini, 2024).

Visual representations can be worked in different ways besides drawings. In research, Dare et al. (2021) co-created visual representations of safe spaces through photovoice and focus groups with mental health service users.

The prevalence of students representations of well-being with natural places highlights the potential for universities to design less stressful environments by incorporating more elements of nature into students' daily spaces. Academic greenspace can be therapeutic landscapes, functioning as social, symbolic and recovery spaces (Foellmer et al., 2021). According to Baik et al. (2019), studies on the wellbeing of university students have primarily concentrated on their use of support services and the prevalence of psychological distress with less emphasis on strategies to mitigate environmental stressors and enhance protective factors within the university setting. Regular interaction with green spaces improves student's positive mental development (Jabbar et al., 2022), and those who actively engage report higher quality of life, better overall mood and lower perceived stress (Holt et al., 2019) .This study suggests that creating more green spaces on campus, due to the sub-theme "Nature", could possibly enhance students' well-being. It may improve place identity through the design of spaces that enable students to establish connections with their university (Khaidzir & Kamal, 2023).

5. Conclusion

Drawing serves as a powerful tool through which an individual expresses their inner world (Quaglia, 2011). In this study students manifested their visual representations of well-being through six core themes "Meaningful Places", "Life-Balance", "Self", "Interpersonal Relationships", "Memorable Experiences" and "Peace", with a particular emphasis on "Meaningful Places".

This innovative visual technique provided insights into well-being, as empirical research simplifies the concept of well-being by focusing on life satisfaction and happiness (Jebb et al., 2020; Ruggeri et al., 2020; Schwanen & Wang, 2014). While there are studies highlighting the impact of places on well-being,

few address the central role that these spaces play in shaping overall well-being. Rather than merely being backgrounds to emotional experiences, the places drawn may be catalysts for the experience of well-being itself. As Seligman (2011) emphasizes, well-being is not defined by a single element, rather being the combination of various factors, and each visual representation reflects a unique dimension of well-being.

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