

Perceptions of Viennese people towards sustainable behaviors promoted by Yogic philosophy

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Submitted to David Leonard, PhD

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AFFIDAVIT

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ABSTRACT

The ancient philosophy of Yoga provides a framework for moral conduct, guiding societal and environmental interactions, and aimed at the union of the mind, body, and spirit (Galatino & Musser, 2007), or self-actualization. The lifestyle promoted by Yogic philosophy has wide-ranging implications for the social, economic, and environmental behaviours of practitioners, including what to consume, how to treat others, and how to prioritize. This framework is accessible due to its low-cost and aligns closely with the key principles of sustainable development (Zaferoudi, Pipinia, Yfantidou, & Georgomanos, 2021). UN Secretary, Ban Ki Moon advocated for Yoga to foster awareness of individual responsibility towards the planet's resources, promote neighborly respect, and cultivate peace (UN News Centre, 2016), yet the scope of its potential contributions to sustainability objectives remain largely untapped. As such, this study investigates the perceptions of the people living in Vienna towards yogic philosophy through the lens of the Theory of Planned Behaviour (TPB: Ajzen, 1991).

Based on a thorough literature review, a quantitative online survey assessed the attitudes, subjective norms, perceived behavioural control, and intentions of 162 Viennese participants related to 17 sustainable behaviours aligned with the yogic philosophy.

The structural equation models (SEM) for predicting each individual behaviour found a perfect fit for the TPB model, according to Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) statistics. The various models ranged in their explanatory power from R^2 values of 0.193 to 0.715. Attitude proved a significant predictor for all 17 behaviours, with the expected positive effect, and was the dominant predictor of 13 behaviours. Perceived behavioural control (PBC) proved a positive and significant predictor of 11 behaviours and was dominant for 4 behaviours. Subjective norms (SN) were insignificant in predicting 16 of the 17 behaviours, yet commonly displayed an unexpected negative effect on behavioural intentions, which may partly explain the observed attitude-behaviour gap.

To consider Yogic philosophy holistically, the various items relating to diverse lifestyle aspects were combined and showed a Cronbach's alpha of 0.91 for attitude, suggesting that the Yogic philosophy is a coherent concept (SN=0.91, PBC=0.94). Despite this, the aggregated SEM model showed TPB to be a poor fit for the data. Based on the outcomes of the analysis, this research uncovers opportunities to further promote and utilize the low-tech Yogic framework for adopting sustainable behaviors across societal, environmental, and economic dimensions.

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I hope that this thesis helps you explore new ideas of sustainability.

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LIST OF ABBREVIATIONS

GHG	Green House Gas
IPCC	Intergovernmental Panel on Climate Change
MDG	Millennium Development Goals
OCF	Our Common Futures
PBC	Perceived Behavioral Control
SCV/ SCW	Smart City Vienna/ Smart City Wien
SDG	Sustainable Development Goals
SDS	Semantic Differential Scale
SEM	Structural Equation Modelling
SET	Self Efficacy Theory
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
UN	United Nations
UNFCC	United Nations Framework Convention on Climate Change
WCED	World Commission of Environment and Development
WHO	World Health Organization
WSSD	World Summit for Social Development
YP	Yogic Philosophy

1 INTRODUCTION AND BACKGROUND

This study advocates the adaptation and application of the philosophical framework of yoga as a mean of transitioning to more sustainable lifestyle choices in the Global North and the Western world. The author establishes the need for individual participation and contribution to battle the ill-effects of social inequities and environmental catastrophes. Through a detail investigation of pressing sustainability issues and the tenets of the yogic philosophy, yoga is presented as a viable framework for individual change – at least in theory. Its application in the Western world, however, depends on a range of factors captured by the Theory of Planned Behavior. These factors are investigated in this study, with people living in the Austrian capital, Vienna, acting as a representative of the Global North. Based on the results of the study, recommendations for approaching the promotion, adaptation, and application of the yogic philosophy are provided.

The discourse on sustainability

The discourse around sustainability has seen an upward trend over the decades. There has been active movement in the domain on the social and political front, with organizations levelling up their operational performance across a range of measures. In the report 'Our Common Futures' (World Commission on Environment and Development, 1987), sustainable development was defined and society, environment, and economy were identified as the three pillars of sustainability. OCF also emphasized on the need of appropriate governance measures and global partnerships to tackle pressing issues of poverty, hunger, unemployment, social inequities, environmental degradation and the need for responsible economic growth. While technology and innovation are seen as important factors in efforts towards sustainable development, their effects ultimately depend on their usage. Technology and innovation will not aid sustainability efforts unless they are used responsibly. A key requirement of sustainable development is the need for affluent individuals to adopt lifestyles that are within ecological capacities, thus also putting responsibility on individual stakeholders.

The social discourse on the need for sustainable development is polarizing. The attitudes and normative behavior in many populations reflects denial of the causes and impacts of climate change (McCright & Dunlap, 2011; Dryzek, Norgaard, & Schlosberg, 2011),

poverty, and social inequalities (Jylhä, 2016). The call for action towards sustainable development has repeatedly been labelled as propaganda (Marquart-Pyatt, McCright, Dietz, & Dunlap, 2014), lobbying, and an act of spreading misinformation to cause panic. The reality of climate change and social inequalities are beyond the point of debate (Capstick, Whitmarsh, Poortinga, Pidgeon, & Upham, 2014); however, corrective measures are slow and lack commitment. On the other hand, the incidents of climate activists disrupting public events to attract attention and action towards tackling behaviors responsible for climate change by various actors are on the rise (Timperley & Henriques, 2023). Through the varied discourse on sustainability, it is certain that sustainable development is only possible by the involvement of all stakeholders (World Commission on Environment and Development, 1987). Governments, organizations, and people need to individually and collectively contribute to tackling unsustainable behaviors impacting the society, environment, and the economy. The continuous political discourse led by UN, UNFCCC, IPCC involves a majority of global participation (member states and organizations), towards the achievement of the United Nations Sustainable Development Goals. The role of individuals and their potential to contribute to sustainability needs to be better identified and developed.

Global North vs Global South

In the context of global development, the division of the global north and the global south is an important discourse. The concept of Global North and South emerged as an after effect of 'The Cold War' for comparative study of development in nations (Odeh, 2010). The global north is characterised by its access to wealth, resources, and technological advances. The resulting prosperity cannot be unseen through various indicators and reports. However, it must be noted that the global south was not always the weaker half of the planet with respect to wealth and resources. The global south, despite starting off rich in natural resources and other gifts of nature, is now struggling to provide lives of dignity to their people (Todaro & Smith, 2015). Colonial histories are proof of how the South has been drained of their wealth and resources, causing an imbalance of vast measures in terms of the consumption of planetary resources. The resulting steep crisis in the global south is now being addressed by the same approach that caused the problems: growth in affluence and consumption in the global north. This growth in consumption can be attributed to the gathered momentum of the industrial revolution (Røpke,

1999). This also led to political and economic interventions that led to a considerable transfer of resources from the South to the North, further enabling their growing consumption (Martinez-Alier, 1990, 1995; Leff, 1995). The growing populations in the Global South further contribute to this imbalance.

Sustainability goals in the development agenda have repeatedly underlined poverty, hunger, and unemployment as primary threats that need resolution. At the 1992 Earth Summit in Rio De Janeiro, Brazil, the global north argued that the growing populations in the global south were leading to social and environmental distress (Redclift, 1996). The global south retaliated underlining the rising unsustainable consumption patterns of the global north. Over the years, it has become increasingly accepted that the consumption patterns of the rich countries are unsustainable and contribute substantially towards environmental problems (Natur-og Miljøpolitisk redegørelse, 1995). Thus, invoking a dire need for change in lifestyle habits and consumption.

Trade between the North and the South is a critical channel through which the consumption in the Global North impacts the environment and natural resources in the global South (Peng, Zhang, & Sun, 2016), amounting to displacement of environmental load to the Global South (Muradian and Giljum, 2007; Srinivasan, et al., 2008). In the present reality, the Global South is more severely impacted by the effects of climate change, while the social inequities continue to grow (Huq & Adow, 2022; Leary, et al., 2006). This is resulting in an increasing number of environmental refugees in the Global North; In 1995, there were 25 million environmental refugees, the number was touted to double by 2010 and grow even more rapidly depending on the course of inaction (Myers, 1997). Food production has increased, but the level of poverty and hunger in the Global South still presents astonishing numbers. The availability of well-being factors in the Global South are scarce and negligible in comparison to the Global North. However, the access to many necessary interventions that can aid the competitiveness and progress of the Global South are controlled by the Global North (Alakija, 2022; Stamm, 2023; Reidpath & Allotey, 2019). The authoritative attitude of the richer countries has further been highlighted by the various sponsored military activities which result in a loss of economic benefits and opportunities for the poorer nations (Hornborg, 2009). SDG 10 of Agenda 2030 is focussed on reducing inequalities within and amongst countries. Target 10.6 focussed on enhancing representation and giving a voice to the developing countries in decision-making processes (Department of Economic and Social Affairs Sustainable Development, 2023).

In an overview of the 'political ecology', the accumulation of wealth and technology of the rich countries comes at the cost of natural resources, environment, and health of the poorer countries ((L.Bryant & Bailey, 1997; Martinez-Alier, 2002; Low & Gleeson, 1998; Paulson & Gezon, 2005).

Technological fetishism

There is a prevalent naïve belief in the inevitability and goodness of technological progress, accompanied by a denial of our collective ability to control, redirect, or restrict it in any form: a naturalist approach towards technological fixes that can also be referred to as technological fetishism (Harvey, 2003). Large sections of the governance organizations and peoples believe that technological interventions can fix any issue that exists or may arise in the near future, overcoming bio-physical limits (Georgescu-Roegen, 1986). This approach dominates the optimism to continue with the current course of action. There is convenient ignorance of the unintended side-effects of technology through the lens of eco-modernism (Strand, et al., 2018). After all, the very same technological fetishism led us into the present predicament. Besides, depending on a solution that has not yet come into existence or is yet to deliver results for a problem with such a massive impact on the global population can be considered overly optimistic, almost like a miracle.

While accounting for the fetishism with technology, there is a pressing need to reflect on the Marxist idea of technological interactions (Harvey, 2003). Technology impacts our relationship with the society, environment, the economy and develops our perceptions of the world. It may be worth pausing to evaluate how the interaction between these perceptions could impact the social order. In the context of the inequities between the global north and south, the delay and lack of technological interventions being accessible to the global south add to their increased vulnerability in tackling life-threatening situations. In the paper, *Zero Sum World* (Hornborg, 2009), the author argues that technological advancement, which is viewed as the way forward to achieve sustainability by creating more efficient machines, is subject to unequal distribution. The wealthier countries/entities can afford production and distribution of these technologies. However, the weaker economies are subjected to unequal opportunities in the acquisition of such resources. There are also imbalances in the net flow of biophysical resources (energy,

ecological footprint, labour) in addition to the unequal displacement of environmental load from the wealthier countries (Hornborg, 2009).

This leads to a demand for identifying existing, low-tech solutions with the potential to increase impact through heightened accessibility. Consideration of ancient wisdom, indigenous practices and knowledge from local communities that can be immediately adopted at low-costs for a heterogenous population of over eight billion people, could show the way forward.

Eastern philosophy vs Western practices

For the context of this study, Vienna, the capital of Austria, has been chosen as a representative of the Global North. A report by the City of Vienna (2022) acknowledges that those with higher incomes tend to use more energy and resources, having a substantial adverse impact on the environment. As per World Population Review (2023), Austria's ecological footprint per capita is estimated at 6.02gha, against India's 1.19gha, and China's 3.71gha.

The Western consumption is driven by various psychological patterns such as self-esteem, growth, competition and other socio-psychological and economic factors (Røpke, 1999). The Eastern philosophies identify with nature as a force to reckon with, treating nature and its resources with restraint, dignity and a sense of connection (Jackson, 2016). Such ideas are a stark contrast to seeing nature as a dispensable resource, as in many Western practices. For the sustainable development goals to be met, the Western agencies can draw inspiration from the Eastern philosophies to identify feasible solutions.

Yoga and its benefits

The ancient discipline of Yoga aims for the unity of an individual's body, mind, and spirit. Over the years, the positive results of yoga practice for physical fitness (*asana*) and mental wellbeing (*pranayama*) have led to the rise and spread of the practice across the globe (Sengupta, 2012; Ross & Thomas, 2010; Büssing, Michalsen, Khalsa, Telles, & Sherman, 2012). *Asana* and *Pranayam* are only two out of the eight limbs of Yoga and

the yogic philosophy. The global growth of Yoga for exercise and meditation led to the isolation from the rest of the yogic philosophy, which plays an integral role in achieving the goals of yoga for a *yogi* (yoga practitioner). Another proof of the growth of Yoga is the rise of different schools of the practice- *Ashtanga Yoga, Hatha Yoga, Bikram Yoga, Vinyasa Yoga, Yin Yoga*. The different schools represent the flexibility of Yoga practice based on the objectives; however, the core remains rooted in the yogic philosophy. While the growth of yoga can be largely attributed to the tangible impact on physical and mental well-being, the academic research is limited to that. The colossal growth in Yoga practise across the globe over the years is indicative of its increasing acceptance and adaptability, and, perhaps, its potential to aid social and environmental sustainability. There are not enough studies that identify the role and contributions of yogic philosophy towards sustainable development, leaving a notable gap in achieving and evaluating results.

The Yogic philosophy includes guidelines for moral conduct, nutrition, and philosophy all aimed at aligning the mind, body, and spirit (Galantino & Musser, 2008). As per Nolan et al. (2011), "Spirituality is the dynamic dimension of human life that relates to the way persons (individual and community) experience, express and/or seek meaning, purpose and transcendence, and the way they connect to the moment, to self, to others, to nature, to the significant and/or the sacred."

To achieve the goals of Yoga, guidelines were recorded by *Patanjali* as *Yoga Sutras* in around 400 BCE (The Yoga Institute, 2020) These guidelines, also referred to as the Yogic philosophy, provide a framework of moral conduct for individuals with regards to their individual, community, and societal behaviours and actions to aid the achievement of a fulfilled living: the one true goal of Yoga.

Over the years, many researchers have studied and identified the positive relationship between Yoga and sustainability (Bhagwat, 2008; Yüce & Günes, 2021). The Yogic philosophy offers codes of ethical conduct that encompass social, economic, and environmental applications. What to consume, how to behave, and how to prioritise are all aspects of the larger goal of Yoga- Moksha or union of the mind, body, and spirit. These have an impact on environmental interactions and sustainable lifestyle reforms (Zafeiroudi, Pipinia, Yfantidou, & Georgomanos, 2021). The Yogic philosophy also lays the framework for moral conduct and social behaviours, aiding social sustainability.

This study proposes that the adoption of Yogic philosophy principles in the city of Vienna (representative of the Western Society in the scope of this study) is likely to induce more

pro-environmental behaviours by transition to sustainable lifestyle choices. Yogic philosophy also promises to be efficient in aiding social sustainability by encouraging self-reflection, adherence to a moral code-of-conduct, and non-discriminatory behaviours. Thus, empowering individuals to act in a future-friendly manner.

While the discourse around sustainable development continues to grow, the over dependence on technological interventions is hardly an immediate solution. The Yogic philosophy, on the hand, is an ancient and prevalent knowledge system, whose results in parts (physical and mental fitness) have been widely studied and proven (Ross & Thomas, 2010; Sengupta, 2012). Yogic philosophy is a comprehensive framework that provides systemic ideas to transition to healthy and sustainable behaviors and lifestyle choices at a relatively low cost of adoption and fluidity to adapt based on individual goals and requirements in a simple, low-tech manner. However, it is most important to note that despite numerous references to the practice of the (Yüce & Günes, 2021) yogic discipline and philosophies in religious texts of Hinduism, Buddhism, and Jainism, Yoga is a discipline and philosophy independent of religion. It focuses on the individual's connection with themselves, the society, and the environment. Various aspects of yoga and the yogic philosophy and its contributions to sustainable development are explored in the further sections of this study.

1.1 Research Question and Purpose

The purpose of this study is to understand the perceptions of people living in Vienna, Austria towards the Yogic Philosophy in order to develop methods that can be used to induce them to incorporate aspects of the Yogic philosophy to transition to sustainable behaviours and lifestyle choices. As such, the study aims to answer the research question:

‘What is the perception of people living in Vienna towards sustainable behaviors promoted by Yogic philosophy?’

Motivating the research question, the positive correlation between yoga and sustainable development is first established in the literature review, where the impact of yoga on pro-environmental behaviours is identified. Simultaneously, positive social sustainability outcomes are highlighted. On this basis, the study aims to bridge the gap between eastern

philosophies and western practises by seeking to understand the alignment of the sample population with the Yogic philosophy. This is investigated through the application of Ajzen's (1991) Theory of Planned Behaviour, which includes data collection and analysis of the components of TPB—attitudes, subjective norms, perceived behavioural control, and intentions—to predict behaviour and identify obstacles. Based on the alignment of the people living in Vienna with the various facets of the Yogic philosophy, further recommendations regarding the scope, preparedness, and potential impact can be made to pursue further action to promote sustainability in the Austrian capital city.

1.2 Structure of the thesis

This paper is divided into 5 principal chapters.

Chapter 1: Introduction and Background

This chapter provides an introduction to the thesis topic by establishing the research context and the research question along with the purpose of this study.

Chapter 2: Literature Review

The second chapter focuses on the extant literature to explore the treatment of key concepts in relevant research. This covers the theoretical framework for this study, Ajzen's Theory of Planned Behavior (1991), the concept of sustainability and sustainable development, an introduction to yoga, yogic philosophy, and its limitations. The literature review also explores the contributions of yoga in the context of sustainable development. In the final part of the literature review examines the Viennese context, as the setting and the sample population for this study.

Chapter 3: Methodology

The third chapter draws an outline of the methodology of the research, providing details of the worldview, strategy, and methods behind the development of the research instrument, as well as the sampling technique and the process of data analysis.

Chapter 4: Results and Discussion

The fourth chapter focuses on the results, their interpretation and discussion in context of the research question.

Chapter 5: Conclusion

In the fifth and final chapter, a summary of the study is provided along with recommendations based on the results, limitations of the study, and the future scope of research in this field.

2 LITERATURE REVIEW

2.1 Introduction

In this section, the central themes of this study will be explored through in-depth literature review of existing studies, reports and other publications with a focus on understanding the theoretical framework, the concepts of sustainability, yoga and yogic philosophy, the contribution of yoga to sustainability, and the Viennese context for this study. The insights from the literature will illuminate the relationship between the central themes, providing a base for the empirical study used to answer the research question.

2.2 Theoretical framework

Based on the research question of this study, this study aims to predict the environmental and health behaviors of the target population, to identify their alignment with the Yogic philosophy. Icek Ajzen's (1991) Theory of Planned Behavior aims to predict behaviors of individuals based on their evaluation of the behavior, their perception of what their community thinks and how it engages with the behavior of interest, and the individual's ease of performing that behavior. This makes TPB the most appropriate choice of theoretical framework to address the identified research question. Based on the outcomes of this study, suitable approaches to incorporate this ancient philosophy can be identified.

2.2.1 Theory of Planned Behavior

The Theory of Planned Behavior (TPB) was developed to address the criticisms towards the Theory of Reasoned Action (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975), particularly, to deal with behaviors over which individuals have little volitional control (Ajzen, 1991). TPB suggests that there are three primary determinants of a person's behavior. The first determinant is the person's **attitude** towards a behavior. This attitude can be a positive or a negative evaluation of performing a certain behavior. The second determinant is the individual's assessment of social pressures or the society's or community's assessment of the behavior of interest, referred to as **subjective norms**. The third determinant is the **perceived behavioral control**: the individual's belief in their ability to perform the behavior of interest. These three determinants lead to an individual's **intentions** to perform or not perform a behavior, leading to the actual performance of the **behavior** of interest, or not.

Simply put, TPB states that people are most likely to perform a behavior when they intend to perform it because of their positive evaluation of the behavior, the social pressure to perform it, and their positive belief in their ability to perform the behavior.

In some cases, the attitudes may have a stronger impact on intentions, while in other cases, perceived behavioral control might be the dominant driver of intentions. For some cases, the interplay between the three components is instrumental in heightening behavioral intentions.

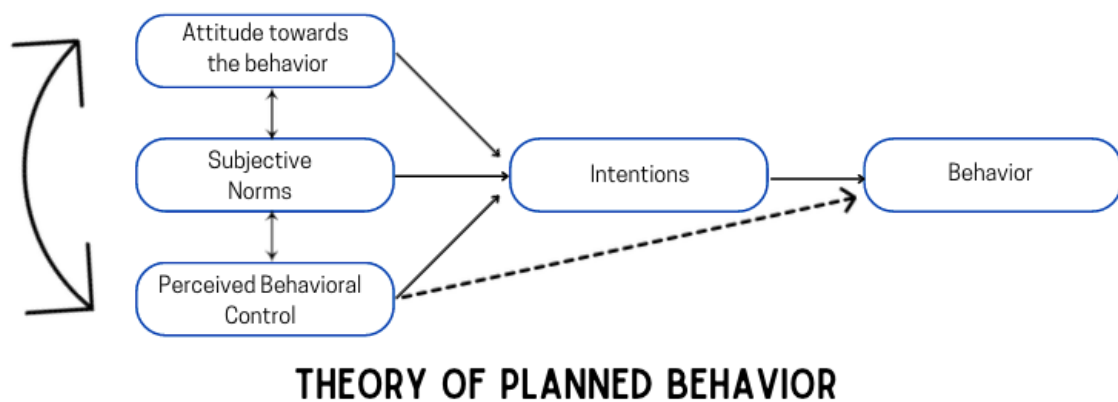


FIGURE 1: THEORY OF PLANNED BEHAVIOR (AJZEN, 1991)

Based on Fig. 1, below are the main components of TPB:

Attitudes

Attitudes are formed through a process of cognitive evaluation of a behavior. It is based on an the individual's beliefs and evaluations regarding the positive or negative outcome of performing the behavior of interest (Ajzen, 1991). Therefore, attitudes can be considered as a disposition to react positively or negatively to an object, event, person or institution (Ajzen, 2005). Attitudes maybe inaccessible to direct observations and must be deduced from measurable evidences.

Subjective Norms

Subjective Norms are also assumed to be a function of beliefs. Here, the beliefs refer to the individual's beliefs regarding how specific people or groups perceive the behavior of interest (Ajzen, 2005). Expectations about how the behavior of interest is perceived by

the specific people or groups, whether they approve or disapprove of engaging in that behavior, whether they themselves engage in that behavior, their expectations of the outcome of that behavior, and their positive or negative evaluation of the behavior of interest are all part of the subjective norms of that individual.

Many scholars refer to subjective norms as 'injective norms' referring to the individual's belief of people's approval or disapproval towards the behavior of interest. To expand the scope of the normative component in TRA, 'descriptive norms' were included which reflect an individual's belief that the behavior of interest is performed by other people (Yzer, 2013).

Behavioral Intention

Behavioral intentions are a result of the attitudes and subjective norms towards the behavior of interest in the TRA. Depending on how positive the attitudes are and how strong the subjective norms are, behavioral intentions are influenced. However, attitudes and subjective norms alone aren't enough to determine the behavioral intent. An individual's characteristics and situation are also likely to play a major role in the mix.

Perceived Behavioral Control (PBC)

Perceived Behavioral Control was the key addition in the modification of the Theory of Reasoned Action to the Theory of Planned Behavior.

PBC refers to the beliefs of an individual regarding the presence or absence of factors that they may consider important to successfully perform or not perform a behavior (Ajzen, 2005). These beliefs can be a result of past experiences with the behavior of interest or second-hand knowledge gained prior to performing the behavior obtained through peer discourses, observations, and studies related to the behavior. PBC takes into account the role of opportunities and resources available to the individual to successfully perform the behavior of interest (Ajzen, 1991).

PBC stems from Bandura's concept of perceived self-efficacy (1977, 1982). As suggested in these investigations, individual behavior is strongly influenced by their confidence in their ability to perform the desired behavior (i.e., perceived behavioral control).

Beliefs act as a cognitive foundation for attitudes, subjective norms, and perceived control, leading to intentions and ultimately resulting in behavior, in a reasoned and consistent pattern (Ajzen, 2005). There are myriad factors that influence and shape beliefs in individuals, such as age, gender, ethnicity, religious affiliation, socio-economic backgrounds, education, personality, intelligence, peer groups, social support, exposure to information, etc.

2.2.2 Applications of TPB

The Theory of Planned Behavior continues to provide the theoretical framework for numerous studies to predict behavior based on the belief components in social and behavioral sciences. It has been used as a theoretical base for many health related studies and environmental behavior studies, as well as research into business and management behaviors and voting behavior (Michael Bosnjak*, 2020).

While the theory has a standalone application in some studies, other studies include other theoretical frameworks such as TRA or the newly developing frameworks to better explain the results.

Environmental Behaviors

The application of the theoretical framework of TPB is largely evident in a wide range of studies concerning environmental behaviors. Some notable studies include predicting the sustainable consumption patterns of the youth (Vermeir and Verbeke (2007), and studying waste recycling behaviors (Cheung et al., 1999; Taylor and Todd, 1995; Tonglet et al., 2004; Chan, 1998; and Begum et al., 2009). The other notable environmental topics applying the TPB framework include green consumption, climate and environment, energy consumption behaviors, and sustainable transportation (Si, Shi, Tang, Wen, & Duan, 2019). These themes also found extension in predicting the purchase intentions of individuals based on environmental topics. Human environmental behaviors are increasingly attracting attention to predict sustainable behaviors and identify influential factors to alter these behaviors. TPB with the environmental values and education as the antecedent have aided many crucial studies across the globe.

Health Behaviors

Another integral domain for the application of TPB is the study of healthy-related behaviors. The common theme observed is studies predicting behaviors such as exercise (Blue, 1995), alcohol consumption (Conner, Warren, Close, & Sparks, 2006), smoking (Norman, Conner, & Bell, 1999), condom use (Reinecke, Schmidt, & Ajzen, 1996), self-care, and mental health care (Bohon, Cotter, Kravitz, Jr., & Garcia, 2016), etc.

By the application of TPB, researchers have tried to predict the motivations (intentions) and the influencing factors (perceived behavioral control) that have the potential to drive these behaviors in different populations, also taking into consideration other factors such as age, gender, culture, socio-economic situations, etc. Studies pertaining to adolescent populations and those predicting physical activity (exercise, walking, movement) take centre stage in the health-related behavioral studies based on the theoretical framework of the Ajzen's Theory of Planned Behavior (1991). Based on a comprehensive study reviewing the applications of TPB to health-related behaviors, it was speculated that the inability to act on certain behaviors is a function of the personal and environmental factors (Godin & Kok, 1996). However, the role and magnitude of each of the components of TPB is likely to differ based on the health-related behavior under study. Self-identify is an integral factor in various health-related behaviors, such as consumption of organically produced vegetables, alcohol, smoking, exercising, and condom use. However, an important factor in various health-studies are the potential inconsistencies in outcomes, varying degree of contributions of different components, and the factor gap (past predictors, personal responsibility) that is essential for better prediction of health-related behaviors in certain studies (Godin & Kok, 1996; Sheeran, Conner, & Norman, 2001).

The Theory of Planned Behavior is the applied theoretical framework for a wide range of studies in the fields of Marketing and Communications, Political Sciences, Social Sciences and Psychological studies of different kinds.

Based on its application in social and environmental sciences, the application of TPB in the context of this study was found to be the most suitable theoretical framework for predicting the Yogic-philosophy-aligned behaviors of the people living in Vienna. TPB takes into consideration the current behaviors of the people living in Vienna, their approach toward the Yogic philosophy (attitudes), the peer pressure experienced or their own interpretations of how their community thinks about and engages with these behaviors, and their belief in the availability of resources and opportunities to incorporate the behaviors of interest in their daily lifestyles.

2.2.3 Limitations of TPB

The survey design of this study is modelled on the principles of the Theory of Planned Behavior. However, despite its many successful applications in a multitude of studies, it is important to take into consideration the critiques and limitations of this theoretical framework in order to eliminate potential errors in the interpretation of the results.

In an editorial for *Psychology and Health*, Ajzen (2011) underlines the reactions and reflections to the Theory of Planned Behavior and its evolution. In this editorial, he addresses the various limitations associated with the theory raised by different authors.

There are limits to the predictive validity of TPB, which can be observed through the random measurement errors in correlations (Ajzen, 2011). In a study by Kor and Mullan (2011), intentions were found to be poor predictors of behavior, even over short time durations. TPB also overemphasizes decision making as a conscious process incorporating components such as attitudes, subjective norms, and perceived behavioral control, whilst ignoring the existence of various external factors such as past behaviors, health conditions, access to sleep, rationality of mind, etc. Similarly, factors such as cultural and contextual variations are missing to account for potential errors in the ability to predict behaviors based on the missing components. This leads to a sufficiency assumption in TPB, even though the core components of the theory may not be enough to predict people's intentions and actions (Conner & Armitage, 1998). TPB is inconsiderate of human emotions which are likely to be inconsistent through the various stages of intention formation. However, differences in the affective states of individuals while participating in the study are likely to influence the outcomes. Therefore, the affective state can be considered as a part of the measurement context (Ajzen, 2011).

The limitations of the Theory of Planned Behavior do not discredit the theory in totality. They are reflective of the potential to further develop and advance this theoretical framework in order to apply it for future studies to correctly predict human behavior across situations. Considering the limitations of this theory is important for researchers to identify the short-comings of their own study based on this theoretical framework. This could further help in identifying suitable solutions and eliminating the potential limitations to their study.

In the context of this study, background factors such as cultural contexts, gender, age, secondary knowledge, exposure to information (media) and roles of institutions (governments, church, etc) are also likely to impact the predictive potential of this research.

2.2.4 Predicting Yogic behaviors through TPB

As established in this chapter, the theoretical framework of the Theory of Planned Behavior (1991) is suitable to predict behavioral intentions to perform the desired behavior. Stronger intentions are likely to result in the performance of the behavior of interest. In the context of this study, the research question, ‘What is the perception of people living in Vienna towards sustainable behaviors promoted by Yogic philosophy?’, aims to identify the behavioral intention of the sample group based on their existing behaviors. By employing TPB as the theoretical framework, it is possible to measure and observe the attitudes, subjective norms, and perceived behavioral control towards yogic philosophy. By utilizing this theoretical framework to this study, it is possible to observe if the current behaviors of the people living in Vienna align with the principles of the yogic philosophy. By observing the patterns in the subjective norms, the social pressure and degree of approval can be identified to adopt the yogic lifestyle. Finally, the perceived behavioral control can be instrumental in predicting how likely is the sample population to perform the behaviors of interest; whether they believe that have the resources and the opportunities to engage in the behaviors of interest. Depending on the situation, Perceived Behavioral Control has the potential to predict the factors of motivation that have direct impact on intention or the actual control resulting in behavior, irrespective of intentions. In the context of this research, identifying the level of PBC is essential in interpreting results and making recommendations based on the results (Madden, Ellen, & Ajzen, 1992). To obtain the results to predict the behaviors, a survey has been designed modelled on the principles of TPB. This survey aims to investigate the attitudes, beliefs, subjective norms and the perceived behavioral control of the participants of the study. Thus, making TPB instrumental in obtaining data and interpreting its analysis, to answer the research question of this study.

2.3 Yoga and Yogic Philosophy

2.3.1 Introduction to Yoga

Yoga is one of the most ancient traditions known to mankind, that continues to evolve and grow through its practice and philosophy even today. Yoga (Yuj) is a Sankrit word that translates to union. Yoga is an embodiment of the discipline to unite the mind and body, in order to achieve spiritual development (Bryant, 2009). It was originally a method to use the body and still the mind in order to achieve high levels of consciousness (Iyengar, 2005; Larson, 2012). Spiritual development and achievement of high levels of conscious are akin to 'self-actualization' from Maslow's Hierarchy of Needs (1980).

The origins of yoga can be traced back over 5,000 years to the ancient Indus Valley Civilization, with the first mention of the term "yoga" appearing in the Rigveda, a collection of ancient Indian hymns (Feuerstein, 1998). During ancient times, India's *Gurukul system* (schooling system) relied on verbal teachings and physical trainings of life skills. The knowledge of Yoga and its philosophy found passage through that system. Yoga is often considered to be about 2500 years old but that is only when Patanjali compiled everything the world knew about Yoga orally into one concise book called Patanjali's Yoga Sutra (The Yoga Institute, 2020). It is known that this book was written about 2500 years old but Yoga and its Philosophy are much older than that. The discipline of Yoga finds mentions in various eastern religious texts of Hinduism, Buddhism, and Jainism. However, Yoga, itself is not a religion and continues to be an important discipline for mankind with a range of physical, psychological, societal, and environmental benefits.

However, the systematic development and codification of yoga practices took place around 2,000 years ago, primarily through the sage Patanjali's compilation of the Yoga Sutras. These sutras provide a comprehensive framework for understanding the nature of the mind, the practice of yoga, and the attainment of spiritual liberation.

As an important component of Yoga, it is necessary to understand the meaning of spirituality. Traditionally, spirituality was associated with religious practises, however, in the present day, spirituality expands to religious people, secular people, and even those seeking wellbeing and happiness (Koenig, 2008). Scholars agree that there is a lack of a universally accepted definition of spirituality. The common themes in the context of defining spirituality range from "practical relevance and application" (McSherry et al.,

2012), “meaning and purpose” (Holloway, 2015; Swinton et al., 2012), and moral behaviors and ethics (Holloway et al., 2012). Zawawi and Wahab (2019) underline that spirituality is related to the search for a meaning and purpose in life, through work or human behaviors. Spirituality practise is often characterised as self-reflective in nature. Further, aligning to environmental sustainability, social justice and economic equity (Sheridian, 2015). Canda and Furman (2019) explain spirituality as a human development that seeks morality, meaning, purpose, and wellbeing. This is explored through the relationship with one self, others and the environment; with a an engaging sense of transcendence. In the context of this study, this definition by best Canda and Furman (2019) explains the role of spirituality in Yoga.

Its holistic approach to physical, mental, and spiritual well-being has captivated the interest of people seeking a balanced and sustainable lifestyle. Rooted in a rich philosophical tradition, yoga encompasses not only physical postures but also meditation, breath control, ethical principles, and self-realization. Patanjali, in the second sutra, defines Yoga as the cessation of activities or permutation of vrittis of the chittas or the mind (Vivekanand, 2022). Thoughts, ideas, mental imaging or cognitive acts performed by the mind or the intellect are referred to as Vrittis (Bryant, 2009).

At present, Yoga is commonly known as a discipline that consists merely of physical exercises and breathing techniques, but Yoga is much more than this. More than a fitness regime, Yoga is a philosophy and a way to live a life that is in resonance with the person, the family, the society, the environment, and the world as a whole. Yoga is a philosophy that attempts at introducing harmony from a micro to a macro level.

In the 19th and 20th centuries, yoga began to attract attention beyond its traditional roots in India. Yoga was introduced to the Western World by influential Indians like Swami Vivekananda (Beckerlegge, 2013), and Paramahansa Yogananda, sparking a growing interest in its transformative potential. The practise gained momentum with people recognizing the numerous physical and mental benefits associated with the practise.

Today, yoga is practiced by millions of individuals from diverse backgrounds, transcending cultural, religious, and geographical boundaries. Its popularity can be attributed to its adaptability to different needs and preferences. Different schools of yoga have developed based on the needs and associate practises. These include dynamic styles such as Ashtang Yoga, Hatha Yoga, Yin Yoga, Bikram Yoga, Kundalini Yoga, etc.

In 2014, the wide appeal of yoga and the potential role of this holistic practise towards the fulfilment of the UN SDGs were identified by the UN General Assembly (United Nations, 2014). A resolution was passed to annually celebrate 21 June as International Yoga Day. In 2021, WHO launched the mYoga mobile app for both Apple and Android users to help users stay active and healthy (WHO, 2021).

Yoga and yogic philosophy offer a profound path towards sustainable living. As we delve deeper into the history of yoga, explore its global growth, and recognize the importance of its philosophical teachings, we can embrace yoga not only as a physical practice but also as a transformative tool for personal, societal, and environmental sustainability. Yoga is a philosophy, a science and a spiritual code in parts. The scientific and tangible aspects of Yoga and Yogic philosophy will be taken into consideration. However, some studies state that 'psychology that is culturally aware, identifies spirituality as a basic dimension of human condition' (Sue, et. al, 1999).

2.3.2 Ashtang Yoga: Eight Limbs of Yoga

'Ashta' in Sanskrit means eight and 'anga' means parts. The eight limbs of yoga can be considered as eight parts of Yoga that unite to fulfill the goals of Yoga. Drawing together a spectrum of practices described in the Hindu, Buddhist and Jain literature, eight limbs or 'Ashta-anga' are used to represent the central principles of Yoga (Sarbacker & Kimple, 2015). The eight limbs showcase a progression from external to internal practices (abhyās), from social to psychological life. These practices are considered the eight steps or guidelines to attaining the goal of self-realization. Self-realization, as described by Maslow (1970), is the ultimate stage of individual growth which can be achieved only after the fulfilment of the preceding needs in the hierarchy. However, the YP focusses on the achievement of the preceding needs through its principles, to get to the ultimate stage of self-actualization.

The eight step framework goes beyond its absolute value or literal translation. It encourages yogis to look for a contextual meaning in their life conduct. As a philosophy, the meaning of each of the eight limbs can be broad and open to interpretation, acting both as a strength and weakness to the case.

Let us look at the eight limbs and their suggested meanings as per Patanjali's Yoga Sutras (Vivekanand, 2022).

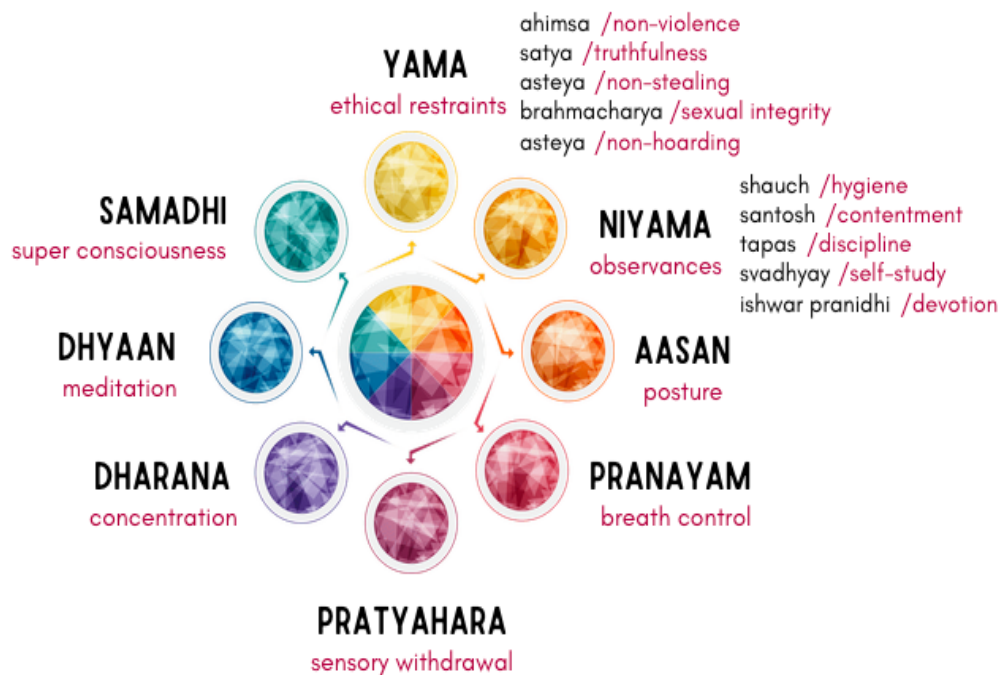


FIGURE 2: 'ASHT-ANGA'-EIGHT LIMBS OF YOGA (VIVEKANAND, 2022)

1. Yama (Ethical Practices)

The first limb of Yoga, Yama points towards ethical practices. This is the building block of the Yogic philosophy. Ahimsa, Satya, Asteya, Brahmacharya and Aparigraha lays five principles of ethical practice that must be followed to move towards the next stage towards self-actualization (Bryant, 2009).

Ahimsa (Non-violence)

Ahimsa translates to non-violence. This principle of Yama focus on non-violent and non-harming actions, behaviors or intentions of an individual. Ahimsa condemns any thought or action that has the potential to harm the environment, society or self. Ahimsa can also be interpreted as practising compassion and preservation of all life forms. This principle of Yama can be applicable to dietary habits, consumption behaviors and social interactions, etc. It can further be extended to conservation practises and protection of life forms. This is one of the most prominent principles of the Yogic philosophy that highlight its sustainable nature.

Satya (Truth)

Satya means truth or honesty. The principle of Satya in the Yogic philosophy directs individuals to stay truthful in their words, thoughts and behaviors. Honesty with self, society and surroundings helps in building healthy relationships and living in harmony.

Asteya (Non-stealing)

The principle of non-stealing is called Asteya. This principle of Yama directly condemns the unrightful possession of anything that does not belong to you (and can be considered as stealing)- objects, ideas, accolades, even relationships.

Brahmacharya (Sexual Integrity)

Brahmacharya primarily directs towards sexual integrity. But it is also often interpreted as moderation in sexual activity (leading to birth control), sexual integrity or having a single sexual partner (to avoid sexually transmitted diseases). This is an important ethical practice directed by Patanjali's Yoga Sutras.

Aparigraha (Non-hoarding)

Non-hoarding or non-possessiveness translate to Aparigraha in YP. This principle directs individuals to lead their lives with minimalism without being overly attached or possessive of material belongings, or emotional ideas. Hoarding on things, thoughts and feelings that one may no longer need is strongly condemned by the yogic philosophy to be able to realize sufficiency. At largem aparigraha points to mindful consumption practises at all levels.

2. Niyama (Observances)

After the five principles of ethical practices (Yamas), there are five principle Niyamas or observances that must be practiced to progress further towards an enlightened living. The five principles of Niyama are: Shauch, Santosh, Tapas, Svadhyay and Ishwar Pranidhi.

Shauch (Cleanliness)

The first principle of Niyama refers to cleanliness, hygiene or purity. Based on this principle, an individual is directed to maintain hygiene or purity of thoughts, actions and surroundings. While the physical manifestation of this principle is easily understood, the

intangible aspects- purity of thoughts, intentions and emotions need equal consideration. Negative thoughts and emotions must be regularly discarded to ensure hygiene of the mental state. In the contemporary context, this can also extend to following digital and social hygiene- deleting unnecessary emails, pictures, apps from one's devices or unfollowing accounts that may not add any positive value.

Santosh (Contentment)

The principle of contentment is the second Niyama and is integral in the practice of Yogic philosophy. Yogic philosophy emphasizes on being content in the current state to be truly present in the moment. This goes in tandem with the principle of Aparigraha in Yamas. The state of contentment plays an important role in developing an individual's relationship with themselves, their community and their surroundings. Lack of contentment can lead to an imbalance in actions, straying away from the path of Yogic philosophy. In the scientific context, the principle of Santosh aligns with sufficiency, making an individual question 'if they really need what they are consuming?'

Tapas (Discipline)

The third Niyama, tapas refers to discipline or austerity, when translated in Sanskrit. At large, the path of enlightened living is founded on the principle of discipline. However, it also extends its meaning to efforts or disciplined efforts of an individual. Only with discipline is it possible to follow the eight limbs of yoga to achieve self-actualization. The principle of discipline in contemporary societies is convenient and inconsistent. Tapas are instrumental in progressing towards conscious living.

Svadyay (Self-study)

'Sva' meaning self and 'adhyay' meaning lesson or study refers to self-study as a key principle of Niyama. The focus on oneself in Yogic philosophy guides the individual towards building a better relationship with themselves, understanding the strengths, weaknesses and other aspects of their being. This principle is very powerful not just because it creates a bridge for an individual towards self-actualization, but it gives the individual the power to control their actions, thoughts and emotions, making them their own agent of change and control.

Ishwar Pranidhi (Surrender)

The final principle of Niyama, Ishwar Pranidhi or surrender to a divine power is a debatable principle in the scientific context. However, many non-believers and agnostic followers of Yoga have redefined this principle to 'surrender to nature', the higher power.

3. Asana (Posture)

The third limb of Yoga, asana means exercise or posture. It refers to the different physical poses that help strengthen the physical body. When a person follows all the ethical practices (Yama) and restraints (Niyama), Asana prepares the Yogi to attain a physical fitness. This limb of Yoga has found popularity in the Western societies, at the cost of isolating it from its context (the philosophy of yoga), making one ingredient more ambitious and far reaching (Bryant, 2009).

4. Pranayam (Breath Control)

Along with the third limb of Yoga, the fourth limb, Pranayam or breath control has also gained momentum in modern societies. Pranayam or breathing exercises are an important part of both traditional and modern Yoga practice. These techniques are also applied in numerous health-related behaviors and coping mechanisms for mental distress. According to Yoga Sutra, Pranayama prepares the mind to calm down to a level that it is bothered by any internal (mental) or external (environmental or physical) disturbances.

5. Pratyahara (Sensory Withdrawal)

Pratyahara is the fifth limb of Yoga. From this point, the focus of practices turns inward, making this limb the bridge between external and internal practices. Pratyahara refers to detachment or sensory withdrawal, here an individual is completely withdrawn from the physical senses and turns inwards.

6. Dharana (Concentration)

The sixth limb of Yoga, Dharana refers to a deep state of concentration, in which a person can start concentrating on a singular object for a relatively long time. This singular focus is known to achieve knowledge and wisdom about oneself. Dharana is known to be a really important step to reach the next level.

7. Dhyaan (Meditation)

Dhyana is the seventh step in the eight limbs of Yoga. It is also popularly known as meditation. There is a lot around meditation across the world like audio, podcasts, videos, camps, retreats, books, and much more. Patanjali talks about Dhyana as a singular, continuous, and unwavering thought about an object without any divergence for even a fraction of a second. This focus can be for an hour, a day, a week, or even more. Meditation in Yoga leads to an absolute blissful state of mind.

8. Samadhi (Super consciousness)

Samadhi is the final stage of Yoga. Following all the seven steps takes a person to the final step called Samadhi or transcendence or the superconscious state of mind. Many texts believe that people obtain some sort of superpowers while in the Samadhi state. It is considered the stage that grants enlightenment and transformation (Hotep, 2014).

It is roughly possible to draw parallels between the Eight limbs of Yoga and Maslow's Hierarchy of Needs (1943), especially while considering the intended revision of incorporating self-transcendence as the top tier stage (Koltko-Rivera, 2006). With this revision, it may be possible to make firmer connections between traditional psychologies of the world with mainstream psychological frameworks.

2.3.3 Eastern philosophy vs Western practices

The inequalities between the Global North and Global South also find an extension in the inconsistencies between the Eastern philosophies and the Western practices. The difference in approaches between the two is an age-old debate. The discourse on sustainable development, eco-friendly choices, decent work conditions is mostly led by the Western perspective (Jackson, 2016).

Evaluating from the lens of Yogic philosophy, an Eastern philosophy, the lifestyles, consumption patterns and behaviors of the Western civilizations or the Global North are evidently unsustainable, led by the indomitable greed for development. This greed leads to overexploitation of available resources. Yoga, on the contrary, focuses on striking balance with nature, society and the planet.

Most Eastern philosophies have a holistic view of the world, while seeking union with nature through a range of actions and initiatives. Whereas, the reference to humans and nature in Western ethics is merely as entities (Jackson, 2016).

Eastern philosophy of Yoga talks about focusing on prioritizing to strike a balance between one's own body, mind, and nature. It then talks about focusing on the immediate family, and friends, then going further to help the community and the country one lives in and eventually helping the world as a whole (Jackson, 2016).

Western philosophy for sustainability talks about whole countries and communities changing at once. It also calls for individuals to change their habits drastically simultaneously regardless of their economic and social statuses. As can be seen with the yogic philosophy, there is scope for flexibility to bring change and adapt new behaviors. The philosophical roots are considerate of the socio-economic and even psychological factors that may impede change. While it may be unrealistic for certain sections of the population in the East to consciously focus on sustainable behaviors from the Western lens of 'consumption of organic products, switching to veganism, subscribing to products and services with the sustainability labelling' due to the entailing economic factors, following the path of the Eastern philosophies may be less pronounced but has lower costs of adaptation and practise (Jackson, 2016).

The knowledge gaps due to the lack of academic research in Eastern philosophies could be an opportunity to systematically study these ideas and select the most acceptable concepts to further solutions. However, this could also be a challenge within itself, due to many references of non-scientific concepts in the Eastern philosophies, undefined paradigms of religion, normative components, cultural contexts and semantic losses. As the world awaits transformative measures of increasing sustainability in all three dimensions, there is a stark need for consideration of all the perspectives. Instead of pitting Global North against Global South or Eastern against Western philosophy, there is a need to assess the strengths and weaknesses to identify viable solutions, through collaboration of ideas and resources. Diversity and dialogue are going to address significant challenges that we face while creating a perfect landscape for a sustainable future.

2.3.4 Yoga in practice

Yoga offers a holistic view of an individual's interaction with the elements of nature. Some view Yoga as a form of exercise, some focus on the benefits to mental health, for some Yoga is merely a form of leisure. While the range of Yoga practice may differ from individual-to-individual, there are a wide range of benefits commonly associated with the practice of Yoga.

Improved physical health : Yoga practice, breath control and following a yogic lifestyle have shown positive results over a range a of health issues resulting from the modern lifestyle (Harvard Health Publishing, 2019). From stiffness of muscles, eyesight, or cardiovascular diseases, the positive effects of yoga practice are promising, leading to a growth in popularity.

Improved mental health : Yoga practice stimulates the release of endorphins, as more oxygenated blood is released to the brain. This plays an integral role in improving mood, reducing anxiety and improving mental health. Yoga is used as a coping mechanism for a wide range of mental health issues (Harvard Health Publishing, 2021). However, its popularity is owed to the long-lasting effects in the coping process.

Benefits of the yogic diet : The yogic philosophy also extends to dietary habits. Yoga encourages mindful eating, a practice of being fully present and attentive during meals, which can promote healthier eating habits. The practise of ahimsa (non-violence) direct towards a plant-based diet, instead of consuming high quantities of meat. Shauch (purity) suggests maintaining high levels of hygiene in food- washing your hands before cooking and eating, washing vegetables, clean surroundings for cooking and consuming food. These are basic practises that help in avoiding diseases passed through food, water and the surroundings.

Heightened focus : Yoga practice tends to improve brain health. Brain imaging studies have found a thicker cerebral cortex and hippocampus (responsible for learning and memory) compared to non-practitioners (Harvard Health Publishing, 2021). Thus, improving memory, attention, awareness, language and thoughts.

Sense of community : Yoga is often learned and practiced in groups. Uniting people with a common goal. By practicing Yoga regularly, many individuals feel a sense of com-

munity and belongingness, connecting with other individuals, through the process of connecting with themselves internally. Anyone irrespective of their social identity can practice yoga. This aids a strong sense of celebrating diversity and belongingness, at once.

Alignment with self : The primary goal of Yoga is union with yourself. Following the yogic lifestyle aids this goal, resulting in a more tempered response to situations, having a better control over your actions and emotions and being mindful of your thoughts, words, actions and the resulting consequences.

Yoga is an accessible holistic practice with flexibility to accommodate different goals. It is also relatively cost-effective with minimal material requirement for practice. There is a growing population engaging in yoga practice for diverse reasons, including commune with nature, mindfulness, and a sense of purpose. The growth of Yoga as an industry highlights the economic benefits of practicing yoga and deploying its principles.

2.3.5 Limitations of Yoga

The roots of Yoga can be traced back to the ancient Indian civilization. The practise of this discipline is clearly mentioned in various religious texts including Hinduism, Buddhism, and Jainism practised across Asia. While the practice of Yoga, Yogic philosophy, Yogic lifestyle are all disciplines that are independent of any religious systems, Yoga is often confused to be a religion or a part of the Hindu religion. This however, is an assumption based on the importance of Yoga in the religious narratives and not vice versa. As per the Yogic philosophy, Yoga is anything but a religion (The Yoga Institute, 2020). It does not confine itself to a singular religious belief, deity or practise. Instead, the focus of Yoga is deeply rooted in union with nature and elevation of the inner self to achieve detachment and self-actualization (Bryant, 2009).

This mix-up of Yoga with religion can be considered a major limitation when considering the path of Yogic philosophy as a means to transition to sustainable behaviours for the masses.

Isolation of yoga from the yogic philosophy is another major limitation of modern Yoga practises, that almost acts like a smokescreen. While the practice of Yoga continues to grow across the globe in various schools and forms, its applications are often limited to fitness of the mind and body (Vivekanand, 2022). Despite the various forms of Yoga

schools, institutes, studios, private trainers, workshops and events in the space, the practice is growing as a means of fitness by isolating the soul of Yoga, its philosophy. Through this isolation, the true essence of Yoga and its potential impact on lifestyle stays limited and unknown to the millions of yoga practitioners across the world. This limitation represents a knowledge gap, showcasing an opportunity of great value. However, it also poses the threat of underutilised opportunities to fully impact and influence individuals, societies and their way of living.

Another key limitation of Yogic philosophy is the non-enforcing nature of the framework. Unlike religious practices and civil laws, Yogic philosophy provides moral guidelines which can be interpreted based on the individual and social context, convenience and understanding. For instance, giving up on behaviours rooted in cultures, conditioning and lifestyle can be extremely difficult. Transitioning to a plant-based diet for meat-eaters can be a radical change. Such behaviours are intimidating at the very thought and the transition or lack of transition is dependent on various factors such as attitudes, behaviours, subjective norms, and perceived behavioural control. Yogic philosophy guides those with intent to start with small changes that are achievable. Which could mean reduction in meat consumption, following a plant-based diet for particular days of a week, etc. Much like sustainability, complete adoption of a yogic lifestyle is a long term process, one that is availed and encouraged by the flexible nature of the framework. While the flexibility makes the behavioural transition less intimidating and more achievable, there is a constant threat to manipulate the interpretations of the Yogic philosophy to suit one's needs and actions, thus, justifying it through the lens of the philosophy. This threat is likely to cause more damage than provide solutions.

The number of Yoga practitioners in different parts of the world are significantly higher compared to male practitioners (Wei, 2016). This variance can be explained by numerous factors such as differential appeal, the deployment of other activities for physical fitness, and societal norms. These factors are likely to impact the results of this study and/or the effect of any program that aims to be inclusive.

Often, the wealth of ancient wisdom holds the potential to present extraordinary results. However, there is a lack of academic research to better understand the scope and shortcomings of these ancient knowledge streams leading to questions related to their credibility, importance and effectiveness. This holds true for Yoga and Yogic philosophy as well. While there are studies that establish the effects of Yoga on individual mind and

body, there are fewer studies that indicate the role of Yoga in sustainability or elements of it. The disadvantage here is the lack of serious consideration of Yoga for formulating serious strategies, policies and products.

These limitations have the potential to adversely impact the intended movement of sustainable lifestyle transitions based on the Yogic philosophy. The scope of these limitations is likely to vary and each of these limitations deserve to be analysed and assessed in future initiatives involving Yoga for sustainable models.

2.4 Sustainable Development

2.4.1 Introduction to Sustainable Development

The concept of 'Sustainability' or 'Sustainable Development' gained momentum when the United Nations published "Our Common Future" (World Commission on Environment and Development, 1987). The World Commission of Environment and Development also known as the Brundtland Commission was formed during the 1983 United Nations General Assembly in New York. Gro Harlem Brundtland, the former Norwegian Prime Minister, led the commission as the chair of the WCED. Mansour Khalid, former Sudanese Foreign Minister, was the vice chairman, also representing the Global South. The primary aim of the report was to assess the critical issues pertaining to the environment, development, people, business and governments in order to identify a realistic action plan to tackle these issues.

The report is divided into three parts, i) Common Concerns, ii) Common Challenges, and iii) Common Endeavours. The document navigates by addressing the arising issues, providing policy direction, and emphasizing international cooperation and policy reform. The expansive nature of OCF can be considered as the foundation for the sustainable development initiatives that followed and that continue to find new directions through policies and actions. Here are the key outcomes of this comprehensive report that was published as the Brundtland Report, with the title, 'Our Common Futures' by the Oxford Press in 1987.

Social and Environmental Poverty

Taking into account the prevailing state of developments, OCF acknowledged the growing development, increased life expectancy, increased literacy rate and food production

(World Commission on Environment and Development, 1987). However, it also underlined the growing disparities in society that prevent access to food, basic amenities such as health care, education, gender equality, clean water, etc. The committee underlined that rising poverty and increased environmental pressure are alarming crises in the present and the near future. There is a dire need to take the necessary measures by all stakeholders in order to ensure that development is sustainable for the environment, the people, and the economy.

Defining Sustainable Development

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, 1987). This definition of sustainable development became hugely popular, as the concept of sustainability became the centre of numerous conferences, initiatives and agendas in the years that followed. It served as a turning point in the history of sustainable development.

Over the years, this definition of sustainable development by the Brundtland Commission came to be criticised for being considered too broad, open to contextual interpretation, with a constant threat of being too vague. Unlike the Eastern philosophies that emphasised on living in harmony with nature instead of commodifying it, this definition was too anthropocentric.

Impact of the human ambitions

OCF suggested that growing unemployment in developing countries and poor working conditions for people contrast with the growing needs of the affluent class to showcase the growing divide and the lack of access to basic amenities for a large section of the population. Human progress, along with the growing needs and ambitions are unsustainable at large. Causing environmental degradation in the process.

Need for environmental protection

There is emphasis on the need for environmental protection. Human development and livelihood depends on the environment and the resources obtained from it. The industrial processes undertaken to meet human needs fail to address the need for environmental protection, causing ecological stress instead. OCF (World Commission on Environment and Development, 1987) claims that many organizations, governments across the globe

have cut back on their efforts to protect the environment or take environmental impact into consideration while planning development.

Three pillars of sustainable development

The Brundtland Report also identified social, environment and economy as the three pillars of sustainable development. As per the report, society, environment and economy are interdependent factors in an ecosystem and overlooking any of the three pillars will lead to unsustainable development, which is likely to have adverse consequences. There are various models that explore the coherence of the interconnectedness of the three pillars, these will be analysed in section 2.4.2.

Role of responsible consumption

Technology and innovation have a role of immense importance in sustainable development. However, the Brundtland commission lays larger emphasis in responsible usage of the technology and resources (World Commission on Environment and Development, 1987). Technology and innovation alone cannot aid sustainability without a responsible use of these aspects.

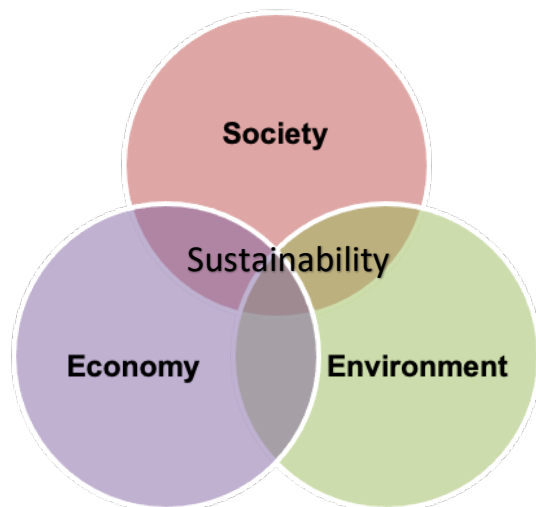
Sustainable global development requires participation of all stakeholders in order to facilitate the necessary change in the society, to create social sustainability, environmental sustainability and sustainable economic development that supports the other two pillars. The document also highlights the role of unsustainable consumption patterns of affluent individuals, stressing on the need to adopt lifestyles that are well within the means of the ecological capacity, thus also putting responsibility on individual stakeholders.

The responsibility of governments and large organizations is even higher as the Brundtland Commission called for global partnerships to aid sustainable global development. Only when governments across the globe will create policies and take the relevant measures to protect and sustain the environment, the people and the business that keep the economic system running, inequalities can be reduced, environmental impact lowered and more efficient growth that does not compromise on other pillars will be generated.

In order to achieve the goals of sustainable development, with a focus on the environment, society and the economy, a more defined approach is required which was developed over the years.

2.4.2 Three pillars of sustainability

Society, environment and economy were identified as the three of sustainable development (UN, 1987). The three pillars and the interactions between them form an important aspect of the discourse on sustainability. Social sustainability is dependent on environment and economic factors. Environmental resources and economic resources aid people's access to wellbeing factors. Similarly, environmental sustainability is dependent on social and economic factors such active participation of people, attitudes and environment protection measures along with technology and innovation. Economic sustainability requires resources from the nature and people as a part of the production and consumption process.



Venn Diagram of Sustainable Development

Economic ~ Social ~ Environmental

This model suggests that sustainability is at the intersection of the three dimensions of sustainability

FIGURE 3: VENN DIAGRAM OF THREE PILLARS OF SUSTAINABLE DEVELOPMENT

The Balanced Pillars Model

Economic = Social = Environmental

This model underlines places equal weightage on all three pillars, emphasizing on the 3 pillars

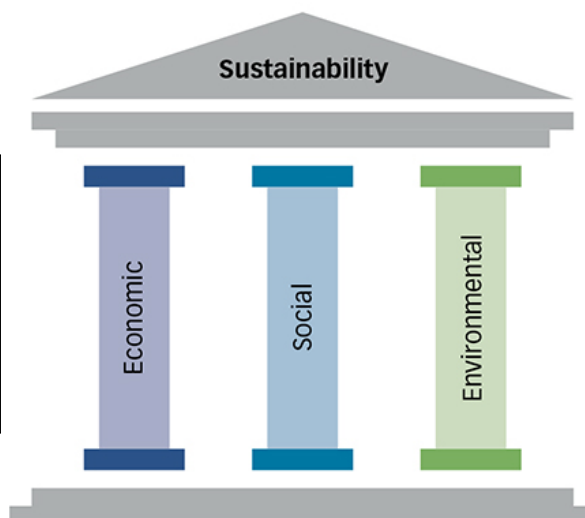
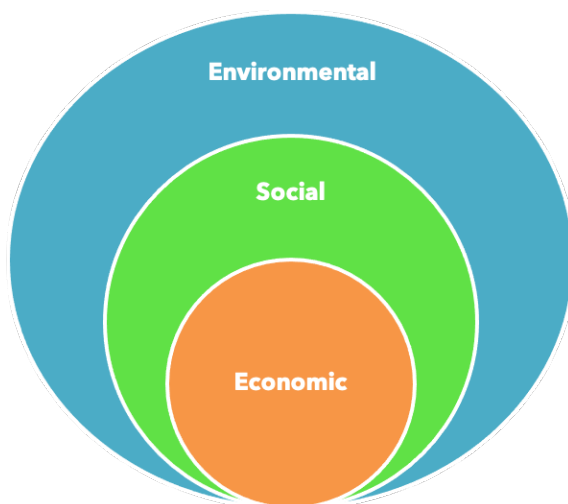


FIGURE 4: THE BALANCED PILLARS MODEL



The Nested Model

Economic > Social > Environmental

This model underlines the economy and society are restricted by limits of the environment

FIGURE 5: THE NESTED MODEL

In each of the models above, the weightage given to each pillar differs. The Venn diagram is the most commonly used model for the representation of sustainable development in the form of three intersecting circles, representing environment, society and economy, placing sustainability at the intersection (Purvis, Mao, & Robinson, 2019). The Balanced Pillar Model suggests equal importance of each pillar with some interaction between them. A critical detail in the first two models, is the outlook of economic interests. Economic growth is looked at from the same optics of urgency and required action, as society and environment. Suggesting a neoclassical approach to sustainable devel-

opment, while placing the pressing issues of growing poverty and environmental degradation on the same scale as the need for economic growth. The Nested Model suggests that economy is a subset of the society and environment, the society is a subset of the environment and that both economy and society are contained by the biophysical limits of the environment. Thus, suggesting greater importance of the foundation, i.e., the environment. There are numerous studies that investigate the interdependence and various models that have been developed to explain their interactions. These models have also been used for program and policy formation, goal setting and solution identification in different domains. Which model is better suited to represent sustainability is driven by the interest of the researcher and context of the study. However, many scholars suggest a missing fourth pillar of sustainable development (Burford, et al., 2013). Some argue that culture is a strong contender as the fourth pillar (Sabatini, 2019). In this context, culture is not just restricted to arts and creative expression, it is viewed as the entirety of knowledge shared by humanity. Spirituality is also considered as the missing fourth dimension, with the aim of awakening an ethical and spiritual conscious to promote sustainable behaviors (Burford, et al., 2013).

From the yogic lens, the Nested Model best aligns with its core philosophy, with the economy and society as the subsets of the environment. This approach pegs humans and their activities of subsistence (economy) as a part of nature or the environment, suggesting that living in harmony with nature, as a part of it while respecting its limits is of highly important.

Doughnut Economy

The 'Doughnut Economy' diagram was developed by Kate Raworth (A Safe and Just Space for Humanity, 2012). In her book, *Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist* (Raworth, 2017), she elaborates further on this model that takes its name from the shape of the diagram. This model is viewed as a visual framework for sustainable development, where the economic performance is analysed in the context of meeting people's needs without overshooting the ecological ceiling or the planetary boundaries.

The diagram creates a safe and just space between social and planetary boundaries, by bringing them together. Raworth (2012) emphasises on looking for indicators beyond the

GDP, reassessing economic goals based on social and environmental limits and an integrated vision incorporating the social, environmental and economic dimensions of sustainable development.

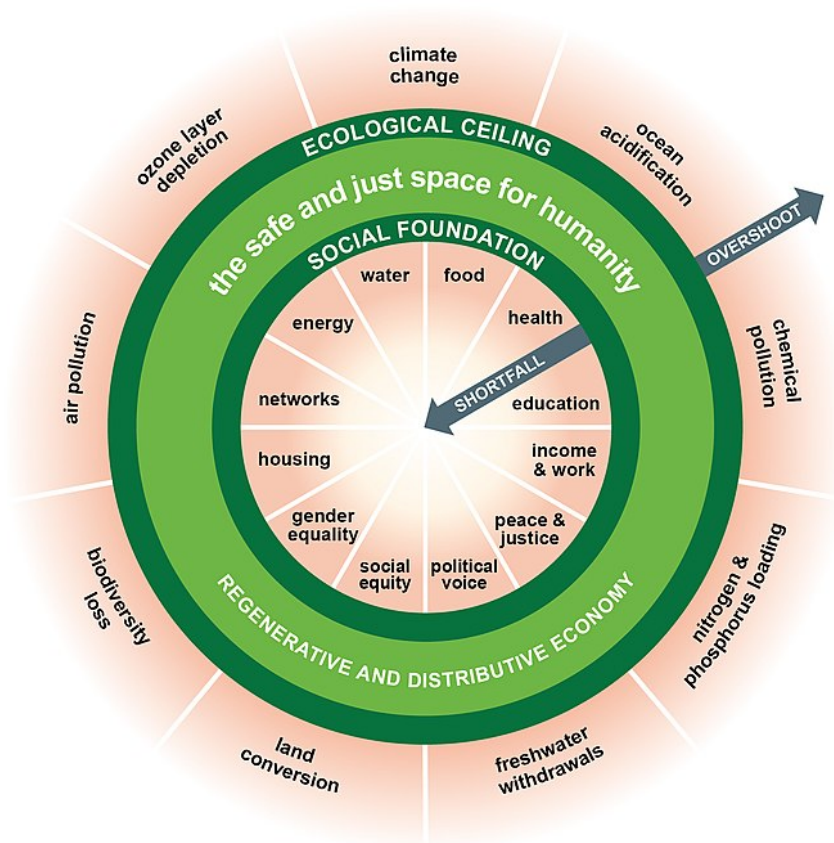


FIGURE 6: PLANETARY BOUNDARIES (ROCKSTRÖM ET AL., 2009B)

Sustainable development is an outcome of the interactions between the different systemic components. A surge in sustainability literature brings forth new models, modifications to the existing ones to identify feasible solutions. These models are integral to researchers, policy analysts and other important stakeholders.

2.4.3 UN Sustainable Development Goals (UNDP, n.d.)

On 25th September, 2015, the 2030 Agenda was adopted by the 193 members of the United Nations General Assembly. This Agenda serves as a framework towards a peace-

ful, prosperous future for the people and the planet. 17 actionable Sustainable Development goals or Global Goals were formulated with specific targets and measures to track progress.



FIGURE 7: UN SUSTAINABLE DEVELOPMENTS GOALS BASED ON THE THREE PILLARS OF SUSTAINABLE DEVELOPMENT

These 17 Sustainable Development Goals were formulated corresponding to the three pillars of sustainable development- social, environmental and economic. Each of the 17 SDGs addresses a different issue, and targets a specific dimension. However, a close look into each dimension underlines the interconnectedness of the Global Goals in order to achieve social, environmental and economic sustainability.

In 2.5.4, the 17 SDGs will be analysed in detail.

2.5 Yoga and Sustainability

Theoretically, the moral framework of Yoga and the Yogic philosophy draw an optimistic solution to promote sustainable behaviors. At its core, yogic philosophy emphasizes the interconnectedness of all beings and the harmony between oneself and the environment. This worldview aligns closely with the principles of sustainability, which advocate for the responsible use of resources, social equity, and the preservation of ecological balance.

As established earlier, despite the age-old existence of Yoga in the society, not enough studies have been conducted on the topic to gather empirical data to identify impacts of yoga on individuals, societies, environment and economy. Based on the literature from the recent studies, a brief assessment of the impact of yoga can be obtained.

2.5.1 Impact of Yoga on the Environment

Yoga and the yogic philosophy are centred in harmony with nature. As mentioned in 2.2 Eight Limbs of Yoga, atheists and agnostic practitioners of Yoga have redefined the fifth Niyama, *Ishwar Pranidhi* to surrender/ devotion towards nature. By practising ahimsa, asteya, aparigraha, shauch, tapas an individual can foster harmony with nature and discover Santosh (contentment).

While the teachings of yoga focus on the union of the body, mind and the spirit, these practises are also likely to incite environmentally conscious behaviors. There are an increasing number of studies stating the positive impacts of the practise of yoga on the environment. The practise of ahimsa translates to a more local, plant-diet and avoids killing of animals for meat. Asteya refers to preserving the nature and its resourcing instead of stealing from nature to use the resources for personal gains and development. Aparigraha defines minimalism. By avoiding hoarding, the consumption habits become minimal and long lasting, by letting go unnecessary objects, other individuals could have access to them or recycle them for their use.

As per Weisner and Cameron (2020), improved concentration and sensory awareness through meditation impacts the environmental behavior of the individual. By bringing the physical body closer to nature, it inspires eco-friendly behaviors. Practise of yoga and meditation increase spirituality and strengthen inner values, resulting in environmentally sustainable behaviors (Ericson, et. al, 2014). Environmental conservation, especially forests, mountains, rivers, and oceans as sites of spiritual status are key element of the Yogic philosophy (Agoramoorthy, 2015). Health and wellbeing of animals are the most

commonly cited reasons to turn vegan. These rationales are in sync with the principles of yogic philosophy.

As per the research by Arif Yüce and Zozan Günes (2021), the consumption behaviors of yoga practitioners were found to be highly sustainable. These behaviors were not influenced by education but by the difference in their yoga experience. This establishes a directly proportional relationship between years of yoga practice and the tendency of sustainable consumption.

2.5.2 Impact of Yoga on the Society

In the words of Mahatma Gandhi, “Be the change you wish to see in the world.” The yogic approach has uncanny resemblance with the words of Gandhi. An approach to bring any magnitude of change begins with oneself. Yoga focuses on a deep connection of the individual with themselves. And following its principles aid this connection by elimination of unwanted elements, enabling self-concentration and mediation (Zafeiroudi, 2018a; Pandey, Ajinkya & Rajesh, 2017). The quality of life and wellbeing are also significantly enhanced by increased consciousness (Ericson, et. al, 2014). Based on the yogic approach, a self-aware human being has the potential to positively impact their own life, community, society, surroundings and the world at large. Through the practise of yamas (ethical restraints) and niyamas (observances), an individual develops a higher level of self-awareness, which results in heightened connection with nature and the beings of the nature. A positive and thoughtful approach is developed which is visible in the individual’s interactions with their surroundings. A sense of responsibility and sensitivity is reflected. Which means, that the individual is less likely to cause harm physically or verbally, treat all being with dignity and respect and is more likely to be mindful of their individual share of consumption of resources. As stated in Patanjali’s Yoga Sutras (Vivekanand, 2022), every individual irrespective of their religion, nationality, culture, age, gender or social status can practise the tenets of yogic philosophy. Yoga does not discriminate or divide, thus, aiding socially sustainable behaviors (Zafeiroudi & Yfantidou, 2021).

Additionally, the positive effects of regular yoga practice on various aspects of physical health, including cardiovascular function, muscular strength, and flexibility were demon-

strated (Sarvottam et al., 2013). Research has shown that mindfulness-based interventions, rooted in yogic principles, can be effective in managing psychological distress and improving well-being (Khoury et al., 2013). By integrating these practices into daily life, individuals can enhance their physical wellbeing, mental resilience, emotional balance, and overall quality of life.

Social sustainability is a gradual and important part of the individual's growth, which can be achieved by following the principles of Yoga.

2.5.3 Eight Limbs of Yoga and Sustainability

In the tables below, Bhagwat (2008) analyses the applications of the eight limbs of Yoga in the context of the three pillars of sustainable development.

In the first table, the appropriate code of conduct in the social, environmental and economic dimensions based on the application of the five principles of the Yamas are shared. For instance, practising ahimsa to curb exploitation of child labor as an economic practise and practising brahmacharya for population control and prevention of STDs for the environment, are promising of achieving social and environmental sustainability.

In the second table, analyzing the application of Niyamas, being content (Santosh) with small economies instead of chasing perpetual growth brings economic sustainability. This also improves environmental sustainability, highlighting the interdependence of the systems. Practising Swadhyaya by being aware of our duties as citizens, understanding impact of our actions on the environment and economic effects of our choices can truly contribute to an all rounded sustainable development.

In the third table, identifying unsustainable trends and suggesting suitable code of conducts based on the other six limbs, the impact of exercise and breath control are already evident to many. The other limbs need a deeper exploration and practise.

From the analyses presented by Bhagwat (2008), we gain perspective of the application of YP in strengthening individual commitment towards the three pillars of sustainable development. The proposed suggestions rooted in YP, showcase high moral conduct, contributing positively towards the society, environment and the economy. These are simple, yet concrete solutions that can be adopted on an individual level. By introducing

formal education programs around Yogic philosophy, there is a high potential to encourage sustainable behaviors promoted by Yogic philosophy.

Yamas	Code of Conduct Social	Code of Conduct Environmental	Code of Conduct Economic
Ahimsa (Non-violence)	Non violence of actions as well as words	Reducing environmental costs of meat consumption	Curbing exploitation of and violence to child labour
Satya (Truth)	Being honest and truthful with other fellow citizens	Preventing malpractices in environmental impact assessments	Honest pricing of goods and services
Asteya (Non-stealing)	Not stealing what does not belong to us	Not assuming high CO ₂ emissions quota; cutting emissions	Fair trading
Brahmacharya (Continence)	Not looking at sex as recreation, but as act of love and devotion	Preventing population growth; preventing causes of STDs such as HIV-AIDS	Preventing economic effects of population growth such as poverty, inequality
Aparigraha (Non-possessiveness)	Refraining from 'status anxiety' in the society	Not driving gas guzzlers	Not coveting multiple buy-to-let properties

TABLE 1: YAMAS AND THE THREE PILLARS OF SUSTAINABILITY (BHAGWAT, 2020)

Niyamas	Code of Conduct Social	Code of Conduct Environmental	Code of Conduct Economic
Shauch (Purity)	Purity of thoughts as well as actions	Cleanliness of the surroundings; preventing pollution	Keeping accounts and financial transactions clean
Santosh (Contentment)	Being satisfied with what we have; not envying others for what they have	Creating environment conducive to peacefulness around us	Being content with small economy rather than running after perpetual growth
Tapas (Austerity)	Doing our very best	Do our bit for the environment	Working hard rather than depending on state benefits
Swadhyaya (Self-study)	Being aware of our actions on other fellow citizens	Being informed about environmental effects of our actions	Being informed about economic effects of the choices we make
Ishwar Pranidhi (Devotion)	Being modest and recognising that there is a force more powerful than ourselves	Recognising that we can not conquer nature with technology alone; we need to act to avert	Donating to charities and good causes; recognising that there are people who need

TABLE 2: NIYAMAS AND THE THREE PILLARS OF SUSTAINABILITY (BHAGWAT, 2020)

Limb	Unsustainable Trend	Code of Conduct
Aasan (Physical exercises and postures)	Obesity epidemic in the West, and related diseases cost money to, for example NHS in the UK	Taking regular physical exercise
Pranayam (Breath Control)	Stress-related diseases cost lost working hours to, for example, UK economy	Overcoming stress by learning techniques to calm the mind
Pratyahar (Withdrawal of Senses)	Not stealing what does not belong to us	Being content and satisfied rather than always going after more material possession
Dharana (Concentration)	Efforts are vested in manipulating the system rather than working hard and keeping focused	Doing our best at work
Dhyaan (Meditation)	Work is looked at as a burden, lack of interest for their work among office workers	Enjoying work and developing positive outlook towards it
Samadhi (Superconsciousness)	Society that does not follow the code of conduct suggested can be in disarray	Society will become sustainable by following the code of conduct suggested

TABLE 3: LIMBS OF YOGA AND THE THREE PILLARS OF SUSTAINABILITY (BHAGWAT, 2020)

2.5.4 Contributions of Yoga towards UN Sustainable Development Goals

On 11th December, 2014 a resolution was passed in the UN General Assembly to celebrate 21st June as International Yoga (United Nations, 2014). UN Secretary, Ban Ki Moon had encouraged Yoga practise to raise awareness of the individual's role as the consumers of resources of the planet, respect neighbors and live in peace (UN News Centre, 2016). Further highlighting that the elements of Yoga are the building blocks of a sustainable future of dignity and opportunity for all. The expansive nature of Yoga and its philosophy is all encompassing the different aspects of human life. In section 2.5.3, Bhagwat (2008) analyses the applications of the eight limbs of Yoga in the context of three pillars of sustainable development. In this section, 17 Global Goals will be explored through actionable behaviors rooted in the Yogic Philosophy.

SDG 1:No Poverty

Poverty was identified as the most pressing concern, impacting large populations across the planet. The first SDG is to end poverty in all its forms.

Yogic philosophy promotes the values of Santosh (contentment), simplicity, and aparigraha (non-possessiveness). By cultivating these principles, individuals can develop a mindset of sufficiency and embrace conscious consumption. This unlocks the ecological space for those in poverty to consume more.

SDG 2: Zero Hunger

Poverty leads to hunger. SDG 2 focuses on food security by ending hunger, promoting sustainable agriculture and create access for nutritious food for all.

Austrian households produce 157,000 tonnes of preventable food waste, whereas, over 74,100 tonnes of food waste is generated by food retail trade (Federal Ministry for Sustainability and Tourism, 2019). This can be seen as hoarding of food, which could be used to feed more people. By practising the Yogic principle of Aparigraha (non-hoarding), food can be made available to the poor and the needy, before it becomes inedible, turning into food waste. This can be a constructive solution towards the fulfilment of the second SDG.

SDG 3: Good Health and Well-being

Through SDG 3, the goal is to tackle another by product of poverty, disease and lack of health care. The goal here is to promote wellbeing at all ages by promoting healthy behaviors and improving access to health care.

Yoga places great emphasis on physical, mental, and emotional well-being. Regular practice of yoga and meditation promotes stress reduction, mindfulness, and self-care, which contribute to improved health and well-being. Integrating yogic practices into healthcare systems can enhance preventive healthcare and complement traditional medical approaches.

SDG 4: Quality Education

SDG 4 is rooted in providing inclusive and equitable quality education for all, at all ages. An educated population is likely to tackle the problems of the present and the future with a more scientific temperament.

Yogic philosophy emphasizes the importance of gyaan (knowledge), svadhyay (self-discovery), self-awareness, and lifelong learning. Integrating yogic principles into educational curricula can foster holistic development, promote values such as empathy and compassion, and cultivate critical thinking skills.

SDG 5: Gender Equality

Gender equality is a pressing issue even today in many parts of the world. The fifth SDG is focussed on the empowerment of women and girls.

Yogic philosophy emphasizes the inherent equality and unity of all beings. By promoting values of respect, non-discrimination, and empowerment, yoga can contribute to creating a more inclusive and gender-equal society. Principles of ahimsa (non-violence and compassion), brahmacharya (sexual integrity) advocate against gender-based violence and sexual exploitation.

SDG 6: Clean Water and Sanitation

Access to clean water and sanitation is a basic requirement for wellbeing. SDG 6 also aligns with Shauch, the first principle of Niyama based on Ashtang Yoga.

Yogic philosophy focusses on Shauch (hygiene), which extends to the importance of sanitation for one self and for their surroundings. The principle of Karuna (compassion), encourages individuals to help those in need. By mindful usage of natural resources such as water and creating access to help the needy, YP can aid the fulfilment of SDG 6.

SDG 7: Affordable and Clean Energy

Clean, modern, sustainable and reliable energy can play a transformative role in a tech-driven society, like our. Thus, the focus of SDG 7.

Yogic philosophy emphasizes living in harmony with nature and embracing simplicity. By promoting energy conservation, renewable energy sources, and conscious energy consumption, yoga practitioners can contribute to achieving affordable and clean energy goals.

SDG 8: Decent Work and Economic Growth

Sustainable economic development requires inclusive and sustained access to employment, along with decent work and work conditions for all.

Through Satya (truth), Yogic principles promote values of ethical business practices, fairness, and social responsibility. By integrating these principles into the workplace, businesses can contribute to decent work and sustainable economic growth while fostering employee well-being. The employee, through tapas (discipline) must put in efforts to earn their livelihood and fulfil their responsibilities, aiding economic growth. However, YP also advices against excessive physical effort, which can be interpreted as excessive effort for financial gains, underlining the need for decent work conditions.

SDG 9: Industry, Innovation, and Infrastructure

SDG 9 focuses on building resilient infrastructure while fostering innovation and inclusive and sustainable industrialization. Yogic philosophy encourages creative and innovative thinking, problem-solving, and adaptability. By incorporating yogic practices in various sectors, individuals and organizations can foster sustainable innovation, infrastructure development, and technological advancements.

SDG 10: Reduced Inequalities

The imminent gap between the global North and South was discussed earlier in this paper. SDG 10 aims to reduce the inequities between countries.

Yogic philosophy promotes values of inclusivity, equality, and social justice. By fostering empathy, compassion, and understanding, individuals can contribute to reducing inequalities and creating a more equitable society.

SDG 11: Sustainable Cities and Communities

SDG 11 focuses on making inclusive, sustainable, resilient human settlements and communities. This SDG is also representative of the overlaps in the different pillars of sustainable development.

Yogic principles encourage individuals to live in harmony with their surroundings and embrace sustainable lifestyles. By promoting conscious urban planning, eco-friendly infrastructure, and community engagement, yoga practitioners can contribute to building sustainable cities and communities.

SDG 12: Responsible Consumption and Production

Consumption and production patterns have caused a great imbalance in the current society, at various levels. SDG 12 aims to promote responsible and sustainable consumption and production.

Yogic philosophy emphasizes on aparigraha (non-possessiveness) and mindful consumption. By promoting conscious consumer choices, reducing waste, and embracing sustainable production practices, yoga practitioners can contribute to responsible consumption and production patterns.

SDG 13: Climate Action

Environment is one of the three pillars of sustainable development. SDG 13 calls for immediate action to tackle the effects of the climate crisis. There are numerous organizations and frameworks in action for the same.

Yogic philosophy recognizes the interconnectedness of all beings and the importance of environmental stewardship. By adopting sustainable habits, supporting renewable energy, and advocating for climate action, yoga practitioners can contribute to mitigating climate change and preserving the environment.

SDG 14 & 15: Life Below Water & Life on Land

The next two SDGs are also environmental in nature. Protection of biodiversity under water and the life on land is essential and a part of the immediate action plan to mitigate and adapt to the effects of climate change. There is a need to conserve, protect and responsibly use the resources in the oceans and on land.

For the perceived health benefits of a planet based diet, also advocated by Ayurveda, YP encourages a plant-based diet. This further ensures the practise of ahimsa (non-

violence). Living in harmony with nature and all life forms is central to Yogic philosophy. Thus, the yogic ways can encourage individuals and societies to preserve all life forms by protecting marine and terrestrial biodiversity.

SDG 16: Peace, Justice, and Strong Institutions

Sustainable development is possible in peaceful and inclusive societies, access to justice for all and the presence of strong and effective institutions at all levels, that hold accountability. Thus, SDG 16 is a key component corresponding to social sustainability.

Inner peace, harmony, and ahimsa (non-violence) are integral. Attainment of peace and harmony are integral goals of Yoga. By cultivating these values and promoting conflict resolution, social justice, and strong institutions, yoga practitioners can contribute to creating peaceful and just societies.

SDG 17: Partnerships for the Goals

The last SDG emphasises on the need for global partnerships to truly achieve the goals and targets of sustainable development.

Yogic philosophy recognizes the power of collective effort and collaboration. By fostering partnerships between individuals, organizations, and communities, yoga practitioners can contribute to the achievement of all SDGs by sharing knowledge, resources, and working towards common goals.

As seen above, these applications of the Yogic philosophy can further be explored within different domains of life, society, environment and even the economy to further the Sustainable Development Goals. By applying the Yogic principles, more robust plans and initiatives suitable for the fulfilment of goals based on available resources and cultural contexts can be devised. The Yogic framework provides framework not just for individuals but for communities, organizations and nations to identify feasible ways towards goal fulfilment.

2.6 The Viennese Context

2.6.1 Introduction

In the context of this study, many important themes are being explored. These include sustainability, non-tech alternatives (such as yoga) with immediate potential for adaptability across large populations, and yoga and the framework of yogic philosophy. In the introduction, the gap between the Global North and Global South was discussed. A recent study revealed that citizens in developed economies are willing to make life style changes to battle the effects of climate change (Bell, Poushter, Fagan, & Huang, 2021). Hence, it was of essence to employ a representative population of the Global North to understand their alignment with the Yogic philosophy to adopt sustainable behaviors that mirror YP. Simultaneously, the political commitment of the sample population towards the 17 SDGs is of salient nature.

Vienna, the capital city of Austria with an area of 414.9 km² and a population of 1.92 million (2022), checks all the essential parameters (Stadt Wien, 2023). It has been repeatedly titled as the 'most liveable city in the world' (The Guardian, 2022). Vienna has an interesting mix of rich history, cultural heritage and a modern smart city infrastructure with heterogenous population, high-quality offerings, focus on social welfare and sustainability.

2.6.2 Environmental impact

In 2023, Austria's ecological footprint is estimated at 6.02gha, fifth highest in the European continent after Estonia (7.16gha), Denmark (6.93gha), Latvia (6.13gha) and Sweden (6.08gha) (World Population Review, 2023). The GHG emissions of Austria in 2019 amounted to 9.3 tons CO₂ equivalents per capita, well above the EU average of 8.2 tonnes of CO₂ equivalents (Statistics Austria, 2022). As the capital and the most populous city in Austria, Vienna's share in the ecological footprint is likely to be on the higher side.

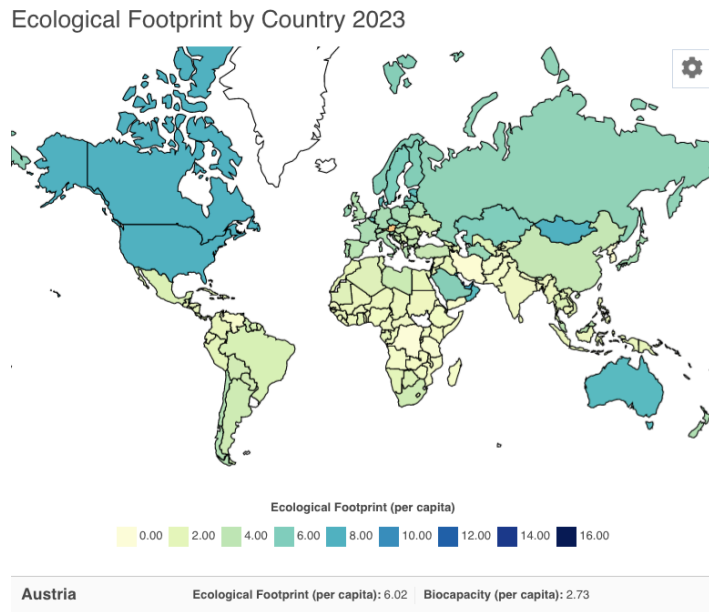


FIGURE 8 ECOLOGICAL FOOTPRINT AUSTRIA, 2023 (WORLD POPULATION REVIEW)

Based on the ecological footprint of Austria, it is of essence to investigate the attitudes of the Austrian population towards sustainability and transitioning to more sustainable lifestyle habits and choices.

2.6.3 Purchasing power of the Viennese people

Vienna is known for its high-quality of life, modern infrastructure and a robust economy. This is enabled a relatively high purchasing power of the residents, to be able to enjoy their high quality of life and economic wellbeing. Below are some factors that highlight the purchasing power and socio-economic benefits of the residents of Vienna, which enable the potential to experiment with techniques and alternative strategies to explore ways to transition to more sustainable lifestyle alternatives.

Median Income

The Viennese economy is strong and diverse, with a wide range of industries contributing to its economy. This results in higher average income for the residents of the city, along with other economic benefits such as high number of opportunities, employment security, active unions to protect the employees. According to the Austrian Federal Statistical Office, the median monthly net income in Vienna was €2,742 in 2018 (Statistik Austria, 2020). However, those with higher incomes tend to use more energy and resources, having a substantial adverse impact on the environment (City of Vienna, 2022).

The high average income of the Viennese population is reflective of their purchasing power and their potential to spend on alternatives if needed (for e.g., Yoga class, equipment, retreats).

Cost of Living

High-quality of life can be expensive and Vienna is not an exception to this rule. The cost of living is an important indicator of the purchasing power of the Viennese. This includes housing costs, transportation, utilities and other essential costs that are likely to impact the disposable income.

Mercer's 2021 Cost of Living Survey ranked Vienna as the 15th most expensive city globally, indicating a moderate cost of living compared to other global cities (Mercer, 2021). However, Vienna is more affordable than its European counterparts such as London, Paris.

Social Benefits and Welfare System

Austria has a comprehensive, well-developed social welfare system in place that can benefit all the residents, particularly the ones with lower incomes. The system includes various benefits such as healthcare coverage, education subsidies, and social security payments. These social benefits help to enhance the purchasing power and overall standard of living for those in need. While there are still issues such as income inequality, unaffordability for the cost of living and unemployment, a systemic approach is being applied to address these factors. Efforts are being made by the government and various organizations to address these disparities and ensure a more equitable distribution of wealth.

The social benefits and welfare system are also reflective of the various measures taken by the governing bodies to promote wellbeing of the population. Another indicator of the potential of incorporating the yogic lifestyle in the Viennese system.

Vienna's purchasing power is enhanced by its modern, high-quality infrastructure, connectivity to the rest of Europe and the world, economic stability, high-functioning systems of governance and the potential for growth. High quality of life, high purchasing power and access to a range of social benefits and welfare schemes reflects the availability of resources and the means to opt for change. With an expansive set of offerings, there is a massive potential to make a difference in the Viennese population.

2.6.4 Attitudes towards sustainability

Vienna is the capital of Austria, an EU member state and is committed to United Nations Sustainable Development Goals. Vienna functions individually, at a city level and in tandem with the national initiatives of Austria in fulfilling the Global Goals. Vienna's commitment to sustainable development and environmental conservation is evident in the way the city is developing, and through the various initiatives in this sector.

The commitment to sustainability- social, environmental and economic is an important aspect of the city of Vienna and its residents. The Austrian capital, through its 'Vienna Smart City Strategy' aims to acknowledge, address and achieve concrete results towards the fulfilment of SDGs. The city governance and the residents of Vienna are active participant of the various efforts and initiatives that reflect their attitudes towards sustainability, which is an integral part of the commitment. In the words of the Mayor Michael Ludwig, "Vienna's Smart City Strategy places the focus on people – as active, engaged stakeholders working together to transform our city and make it climate proof (City of Vienna, 2022)."

2.6.5 Yoga in Vienna

According to a study conducted by Statista in 2020, approximately 8% of Austrians practiced yoga on a regular basis, with a higher prevalence among females compared to males (Statista, 2020). The growth of Yoga is evident in the Austrian capital of Vienna with a wide range of offerings in the sector. Based on a Google Maps search, there are over 55 registered Yoga studios in the city of Vienna. These includes Yoga practise from different schools such as Ashtang Yoga, Vinyasa Yoga, Hatha Yoga, Bikram Yoga. Currently, physical, mental fitness and wellbeing are key motivations of interest in Yoga among the residents. However, there is a major lack of focus towards the holistic philosophy of the ancient philosophy. The interest in Yoga extends to Yoga and wellbeing retreats hosted in and around Vienna with notable participation. In the free of cost, Exercise Program announced by ÖGK for the residents of Vienna, Yoga is an integral inclusion in the program offered across districts (Bewegt im Park, 2023). This is a vital factor, particularly in the context of this study to explore the perceptions of the people living in Vienna towards the Yogic philosophy.

Based on the statistics, strategies, and initiatives of the city of Vienna, there is a major potential to fill the gap between the high per capita emissions and the actual impact of the actions towards the UN Global Goals. Thus, making it an acceptable target populations for the purpose of this study.

2.7 Conclusion

A wide range of themes, concepts and frameworks were explored in this chapter. First of all, Theory of Planned Behavior (Ajzen, 1991) was identified as the theoretical framework of this study. Yoga and yogic philosophy are primary components of this study. An introduction to Yoga, yogic philosophy, 'Ashtanga Yoga', the practice and limitations were briefly explored, providing a detailed insight into the growth, benefits and potential of this holistic discipline. This was followed by an introduction to sustainable development, the three pillars of sustainable development- social, environmental and economic and the different models that explore the relationships between these pillars were referenced. After establishing the framework of Yogic Philosophy and Sustainable development, the potential contributions of yogic philosophy towards sustainable development were explored for the three pillars and the 17 Sustainable Development Goals.

After exploring the frameworks for this study, a brief introduction of the sample population of the study was provided. Thus, highlighting the environmental impact of Austrians, purchasing power and commitment to sustainable development. Thus, indentifying factors that make the Viennese population a good fit for this study.

Based on the establish frameworks in the literature review, the research methodology and design will be extensively explored in the next section.

3 METHODOLOGY

3.1 Introduction

This section comprehensively outlines the methodology employed in this study, the characteristics, advantages and limitations of the chosen methods. The research design for this study is a fixed design strategy, also known as quantitative design. A fixed design strategy typically aligns with the post-positivist worldview of the study. The research is non-experimental in nature and applies a cross-sectional approach for data collection.

3.2 Philosophical Worldview

Post-positivism Worldview

A researcher's philosophical ideas, despite being largely hidden in the research, are responsible for the choice of research design and practise (Slife & Williams, 1995). The awareness of the worldviews that inquirers bring to the study is important to shape the research (Creswell & Clark, 2006). There are two traditional approaches to research-positivist and post-positivist. The positivist approach states that all knowledge available to science is objective, separating facts from values (Robson & McCartan, 2016). Positivists believe that knowledge obtained through direct experiences and observations is devoid of influence and is unbiased in nature. On the contrary, post-positivists believe that no research is truly objective and is influenced by the direct experiences, biases and current events. Post-positivists reject the idea of 'seeing the world as it is'.

The post-positivist approach acknowledges the potential of fallibility, imperfection of results and limited scope of the findings to the research population, instead of making board generalizations. While most scientific studies assume a rational approach of the subject of study, post positivists completely reject this assumption of a perfect situation and accept that observations in a study can be influenced by the theories, hypothesis, assumptions and background knowledge of the researcher (Reichardt & Rallis, 1994). While objectivity is always the aim and the intent, this approach acknowledges the limitations of the researcher. The post-positivist worldview is deductive in nature. It develops statements to draw upon causal relationships or explain the situations being studied. However, it also believes that the impact of socio-political factors that shape the knowledge construction process, and beliefs and biases cannot be separated from the

knowledge obtained (Phillips & Burbules, 2000). Quantitative research design is most often associated with the post-positivist approach (Creswell & Clark, 2011).

Due to the significant focus on values in the post-positivist approach, there is a heightened focus on the use of language, discourses, and power dynamics whilst overlooking the importance of available evidence in the process. Further leading to overemphasis on interpretations to explain causal relationships between variables. Adding to the critique of the post-positivist approach, the acceptance of values and social constructs in knowledge can lead to the denial of the objective truth, that exists independent of human interpretation.

Based on Creswell (2003), this study employs various characteristics of the post-positivist philosophy. This study is based on the assumption that yogic philosophy leads to sustainable behaviours, which has also been established in varying measures in different studies. The researcher's personal experiences of yoga practise and inclusion of the yogic philosophy in daily life can be considered as a primary influence in selection of this topic for study, hence suggesting a post-positive worldview. The conceptual framework of this study underlines the contributions of yogic philosophy towards UN's Global Goals. Through the RQ of this study, 'What is the perception of people living in Vienna towards sustainable behaviors promoted by Yogic philosophy?', the researcher aims to identify patterns in the sample group to deduce relevant empirical observations based for the entire Viennese population to test the theoretical framework and the causal relationship with the conceptual framework.

3.3 Research design and methodology

Design is one of the most integral aspects of a study, and must take into consideration the core components- purpose, conceptual framework, research question(s), methods and sampling (Robson, 2011). A good design requires a high level of compatibility between each of the components, as illustrated in the figure below.

By having a well-articulated theory of the phenomenon, all components of research are finalized before the process of data collection. This requires an in-depth understanding of the conceptual framework. This strategy is referred to as the fixed design strategy (Robson & McCartan, 2016). This strategy demands long periods of preparation before data collection to ensure that the preceding processes complement the various components of the research. This includes identifying the theoretical and conceptual framework,

designing a survey, identifying data collection methods and sampling strategies. The fixed design strategy is most commonly associated with quantitative research methods, however, it is not restricted to it.

In the context of this study, the conceptual framework of the contributions of the yogic philosophy to the Sustainable Developments Goals was studied in detail and a survey was designed based on the conceptual framework and theoretical framework. The outcomes of this survey will be analysed and interpreted based on the existing frameworks.

This study uses a quantitative approach to test the hypothesis. Quantitative research examines the relationship between different variables in order to test objective theories (Creswell, 1994). Variables can be recorded in the form of numerical data, to analyse them statistically. This further leads to explicit observations, making it possible to aggregate, compare, analyse and summarize data (Babbie, 2009). Therefore, quantitative methods require a measurable amount of data, to reach reliable results. The main focus of this methodology lies in aggregates and group properties. Through the statistical analysis of the collected data, patterns are observed and interpreted in the form of results. However, this also increases the potential of making inferences about individuals based on aggregates of a group, these individuals could be the outliers in the group, thus, leading to fallacy. Due to the collective nature of quantitative methods, there is a risk of failure to capture intricacies of complex human behaviour. However, the key strength is identifying overarching pattern of groups, teams, societies based on which decisions related to interventions, policy, welfare, etc can be made.

It is important to note that the size of the data (in proportion to the sample group) is directly proportional to the generalizability of the results for the chosen population. However, one of the limitations of quantitative data is that numbers despite quantification fail to achieve the richness of words and the depth of their meaning (Babbie, 2009).

Non-experimental research uses existing situations to study the phenomena/ subject of interest (Thompson & Panacek, 2007). This type of research is observational in nature with descriptive results. As in the case of this study, the attitudes, subjective norms and perceived behavioral control will be studied of the people living in Vienna towards the Yogic philosophy. The study aims to observe the existing behaviors without the manipulation of variable. For the same, a cross sectional approach within the non-experimental research will be followed. In this approach, data is collected from the selected group at a single point of time about multiple variables (attitudes, subjective norms, behaviours)

(Thompson & Panacek, 2007). The greatest advantage of cross-sectional studies is the ease of recording data, and the quality of it.

Therefore, by following the Fixed Strategy Method and employing quantitative methods with a non-experimental design, can be considered a highly acceptable strategy for the purpose of answering the research question of this study.

Several methods exist to carry out quantitative research. Survey method, correlational, development design, participant observation, longitudinal studies can be used to collect data for further studies (Williams, 2007).

Survey Methods

Surveys provide a quantitative description of trends, patterns, attitudes and opinions of a sample size of that population (Creswell, 2009). It is a commonly used tool in quantitative research to obtain numerical data from the target population. The results of this sample are used for making generalized claims about the target population (Creswell, 2014). The acquired data focuses on variables, which describe the characteristics of the subject under study. The requirement of this study is to identify the perceptions of the people living in Vienna towards Yogic philosophy. A questionnaire with close-ended questions was developed based on the theoretical framework of TPB to predict behaviors of the sample population.

Online Survey

To gather responses from a rather generic population in the city of Vienna, an online survey was the best fitted survey method. The questionnaire was adapted into the online survey tool- Google forms for the purpose of data collection for this study. Online tool bit.ly was used for QR code generation and creation of short and customized links that can be easily spelled, if required. In a society with high-speed internet accessibility and high number of smart devices such as smart phones, tablets and computers, online surveys have a better scope of reaching more people. Additionally, online surveys offer advantages such as anonymity, ease of answering and flexibility of participation. The obtained data is safely stored on cloud and can be accessed in digital formats such as excel sheets. One of the major advantages of online surveys is the ability to reach a larger and more diverse population. However, there are also limitations to this method, such as lack of reliability of virtual participants (Dillman, 2000; Schaefer & Dillman, 1998)., the inability to know if the respondents were able to comprehend the questions

correctly or were invested enough to answer the questions to the best of their abilities (Rowley, 2014). The 'self-selection bias', where some people are more likely to participate than the others can be a significant drawback of this method (Stanton, 1998; Thompson et al., 2003).

To target diverse groups from the population, social media platforms such as Facebook, Instagram, Reddit, LinkedIn, Twitter, Studo were employed to reach maximum number of people. Facebook groups for people living in Vienna, students, expats, etc. delivered a promising result in the form of survey respondents. Instagram ads targeting the sample population (Region: Vienna, Age: 18-45) was also an efficient channel of increasing survey respondents. Materials with QR codes and links to the English and German version of the survey was posted at cafés, restaurants and supermarkets in Vienna such as Truth Coffee, Café Caspar, Jonas Reindl Coffee, Kekko Sushi Bar, PROSI Restaurant and stores with their consent and co-operation.

A one-on-one approach was also applied to get respondents for the survey. Groups and individuals in public spaces in the city, such as parks, market areas and restaurants were approached to participate in the survey.

3.4 Questionnaire Design

The questionnaire was modelled based on the theoretical framework of this study, i.e., the Theory of Planned Behavior. TPB was identified as the most suitable model to answer the research question of this study, 'What is the perception of people living in Vienna towards sustainable behaviors promoted by Yogic philosophy?'. Based on the key components of TPB, the questionnaire was divided into 5 segments: i) Demographic, ii) Behaviours, iii) Attitudes, iv) Subjective Norms, and v) Perceived Behavioral Control. The 17 behavioral themes employed in this questionnaire were model on the thorough literature review of Yoga and its Philosophy.

Demographic Questions (Section 1)

In the first segment, Demographic questions including age, gender, income group, nationality, religion and ethnicity were aimed at better understanding the respondent's background and to draw co-relations with the perceptions drawn based on the results of the following sections. This section contained 8 questions, of which three (income, ethnicity and religion) were optional questions.

Behaviours, Attitudes and Subjective Norms (Section 2,3,4)

Section 2,3 and 4 of the survey presented focussed on identifying the behaviours, attitudes and subjective norms of the respondents. Actionable behaviours across 9 categories and 17 sub-categories were identified. The categories and sub-categories included physical exercise, mental wellbeing, diet (plant-based and seasonal), consumption, hygiene, work-life balance, social interaction, non-violence, and commune with nature. Based on these categories and sub-categories, opposite ends of semantic differential scale were drawn with behaviours denoting the yogic philosophy on the extreme left and the modern/ western lifestyle choices on the extreme right. The same 17 themes and scales were presented in segments 2, 3 and 4.

In segment 2, respondents were expected to pick the number that was the closest indicator of their current behavior and was framed as 'I usually...'. In segment 3, respondents were expected to pick the number that was the closest indicator of their perception. This was segment was framed as, 'I find it most beneficial to...'. In segment 4, respondents were expected to pick the number that was the closest indicator of their perceived subjective norms/ notions of their community towards the same behaviours, which was framed as 'My community thinks I should...'.

Perceived Behavioural Control (Section 5)

Segment 5 contained 34 statements with a Likert Scale with a 10 point scale ranging from 'Strongly Agree' to 'Strongly Disagree'. Here, 2 statements about the beliefs and abilities or the perceived behavioral control of the respondents were presenting, corresponding to the 17 sub-categories. For each of these statements, respondents had to rate how strongly they agreed or disagreed to the statements in question.

The questionnaire was designed with mandatory close-ended, with an optional choice of answering only for demographic questions about income, ethnicity and religious affiliation in order to reduce the error of interpretation or non-usable responses.

Semantic Differential Scale

For the purpose of this study, a semantic differential scale was employed. The SDS is one the most reliable scales in surveys and questionnaires to identify the emotional attitudes towards the subject of the study. The survey answering options are grammatically on the opposite adjectives at each end, with intermediary options in between.

The questionnaire was originally developed in English and later translated to German to make it accessible to the sample group (residents of Vienna). The German version of the survey was tested by native German speakers prior to sharing it with potential respondent groups.

3.5 Sampling

The chosen population for this study was the people living and working in the Austrian capital city of Vienna. The age group of the sample population is 18 years to 45 years. Since the study aims to understand perceptions of the population, the advantage of respondents belonging to the lower end of the spectrum of this study is the potential and promise to make suggestions that can be effective for a young population, which is the present and the future of the city. It has better potential to change and to pass on the knowledge acquired through the process.

$$\text{Sample Size} = (Z^2 * p * (1 - p)) / E^2$$

Where: Z = Z-score corresponding to the desired confidence level (e.g., 1.96 for a 95% confidence level) p = Expected proportion or prevalence of the characteristic of interest
E = Margin of error

Assuming a 95% confidence level, a margin of error of 5%, and using the maximum possible proportion (p = 0.5), let's calculate the required sample size:

$$\text{Sample Size} = (1.96^2 * 0.5 * (1 - 0.5)) / (0.05^2) \text{ Sample Size} = \mathbf{384.16}$$

The sample size of 385 is the appropriate sample size in order to generalize the results to the population of the study.

The data was collected for this study from 02 May, 2023 till 30 May, 2023. A total of 162 responses were collected, which is sufficient data for analysis, but not enough for generalization towards the sample population.

Sampling Methods

For the purpose of this study, the non-probability sampling technique was used, by deploying the Convenience Sampling and Snowball Sampling method. The key focus of non-probability sampling is to establish a clear rationale for the inclusion of individuals in

the sample, irrespective of being representative or being randomly chosen from the target population (Taherdoost, 2016). The required rationale in this study is residency in Vienna. Through the convenience sampling method, the sample group for data collection was identified through the convenience of ease and willingness to participate. In this case, accessibility through peers, online communities, emails with the link to the questionnaire and respondents available and open to participation in the city of Vienna. By the selection of this non-probability sampling method, the data collection process was simplified, through its low-cost nature and least amount of time consumed for data collection, compared to many other sampling techniques. Another advantage here would be the presence of fewer rules to adhere to. In Snowball sampling, respondents of the survey bring additional responses by referring the survey to other potential respondents in their groups. Referrals simplify and expedite topic research since they originate from reliable resources (Johnson, 2014). However, the lack of collaboration can be seen as a disadvantage of this strategy. Despite referring the survey to other participants, there is a high potential for non co-operation and refusal to participate. The limited respondents could jeopardise the results from reaching to solid conclusions (Biernacki & Waldorf, 1981).

The high risk of selection bias and the lack of representativeness of the target population through the convenience sampling technique jeopardizes the potential of a reliable result for generalization. In addition, the motives of the respondents to participate in the study could be biased and impact the reliability of responses (Stratton, 2021). However, the use of this method for testing hypothesis, generating ideas and exploratory studies, such as this particular study makes it suitable for this research paper. However promising the results, the results of this sampling lack external validity.

3.6 Data analysis

While the data was collected online through the survey tool of choice, Google Forms, it was automatically processed in a tabular format by Google. The data was further cleaned to make it appropriate for use in the data analysis software, Jamovi.

The statistics analysis software Jamovi was used to analyse the data. Before analysis the data, steps such as adjusting the data scale (ordinal and continuous), computing a mean variable and deleting unnecessary variables/information were carried out. First,

the reliability of scales were tested through Cronbach's alpha and McDonald's ω , by analysing corresponding variables of each of the 4 components of TPB. This was followed by descriptive analysis to identify the representativeness of the sample population was conducted. Then, the structural equation modelling (SEM) was deployed to predict the behavior based on the Theory of Planned Behavior, the chosen theoretical framework for this study. The survey included 17 themes observed from the lens of attitudes, subjective norm, PBC and behavioral intent. Each theme was separately analysed to test the model fit, fit indices, variance and parameter estimates. Finally, an aggregate analysis was conducted incorporating 17 observed variables all the 4 components of TPB.

In the next chapter, the results of the data analyses will be interpreted and discussed.

3.7 Conclusion

To summarize, this research is based on a fixed strategy design, following a quantitative approach. As a result, the post-positivist worldview is identified as the representative of this study approach. The quantitative approach of this study funnels down to a descriptive study, non-experimental in nature with a cross-sectional approach towards data collection. Online survey is the chosen instrument for collection of data. For the chosen sample population of this study (people living in Vienna), a mix of convenience sampling and snowball sampling strategies are deployed for data collection. Respondents for the survey were found through the university, online communities, social media platforms, availability of links in public spaces such as cafes, stores and restaurants in the city. A one-on-one approach was found to be most effective in the process. The final sample size obtained is 162.

In the next chapter, the results of the analysed data will be interpreted and discussed to answer the research question of this study.

4 RESULTS AND DISCUSSION

4.1 Introduction

In this section, the results for the analysed data will be interpreted and discussed to answer the research question, 'What is the perception of people living in Vienna towards sustainable behaviors promoted by Yogic philosophy?'

The final sample size (n) for this study was 162. Based on the questionnaire design, the first segment of the questionnaire identified the demographics of the respondents. 17 themes identifying with everyday practices based in yogic lifestyle were identified, which were framed and designed to suit the semantic differential scale. These 17 themes were investigated through the components of TPB- behavior (intent), attitude, subjective norms and perceived behavioral control to test the theory of planned behavior.

The collected dataset had 8 demographic variables and 85 observed behaviors from 17 themes in the questionnaire, corresponding to 4 latent variables- attitude (A1:17), subjective norms(S1:17), perceived behavioral control (PBC1:34) and intention (B1:17) (components of TPB). For each of the 17 themes, there were 2 corresponding values in PBC. An additional variable, C(1:17) was computed by calculating the mean of the two corresponding variables for each of the 17 themes, to get a single value.

4.2 Sample Representativeness

The sample of a study is representative of the population. Higher representativeness implies a higher potential to generalize the results of the study to the population. Based on the demographic data of the respondents, the representativeness of the population was analysed. The target population for this study was people living in Vienna, of all genders between the 18 to 45 age group. Based on the ratios of the national demographic population of Austria, due to unavailability of direct and reliable data for the city of Vienna the following results were obtained.

Representation of age

Of the 162 respondents of this survey, 88 respondents were between the age of 27 to 40 years, 53 respondents belonged to the 18-26 years age group and 21 respondents

were of the age 41 years and above. To test the age-wise representativeness of the sample, ratios were drawn based on the population of Vienna (Statistics Vienna, 2022).

Level		Count	Proportion			
18 - 26 years	Observed	53	0.3272			
	Expected	18.6	0.115			
27 - 40 years	Observed	88	0.5432			
	Expected	46.6	0.287			
41 - 60 years	Observed	18	0.1111			
	Expected	59.6	0.368			
60 and above	Observed	3	0.0185			
	Expected	37.2	0.230			
				χ^2 Goodness of Fit		
				χ^2	df	p
				161	3	1.18e-34

TABLE 4: AGE WISE REPRESENTATION OF SAMPLE POPULATION

The chi square at 161 identifies a significant variance in the observed and expected data. Further solidified with a p value of less than 0.001 making the observed sample data a poor fit for generalization. However, it must be noted that through convenience sampling, there was a conscious effort in targeting the younger age groups 18-26 years and 27 to 40 years for the purpose of this study, which was also the chosen target population as specified in 3.5. Therefore, the bias in responses and the age population was expected.

Representation of gender

There were 96 female respondents, 65 male respondents and 1 non-binary respondent to this survey. This was then tested against the gender ratios of the Viennese population (Statistics Vienna, 2022).

Level		Count	Proportion			
Female	Observed	96	0.59259			
	Expected	82.62	0.5100			
Male	Observed	65	0.40123			
	Expected	77.76	0.4800			
Non-binary	Observed	1	0.00617			
	Expected	1.62	0.0100			
				χ^2 Goodness of Fit		
				χ^2	df	p
				4.50	2	0.106

TABLE 5: GENDER WISE REPRESENTATION OF SAMPLE POPULATION

Based on the population statistics, the **chi square 4.50** represents a relatively low discrepancy, indicating a good fit between the observed data and expected distribution. . The p value of 0.106 is insignificant, denoting a relatively low discrepancy between the observed data. The slight skew in the number of female respondents also relates to the gender based skew of females practicing Yoga (Wei, 2016). **Based on the representation of gender, the data can be considered a good fit.**

Representation of District-wise residence

The observed sample has significant number of respondents from Bezirk 10 (23 respondents), Bezirk 3 (22 respondents), Bezirk 20 (21 respondents), Lower Austria (15 respondents and Bezirk 2 (14 respondents). City of Vienna’s district-wise population figures were used to calculate the population ratios corresponding to each district to identify the district-wise representativeness of the sample population (City of Vienna, 2023).

Level		Count	Proportion				
				Bezirk 20	Observed	21	0.12963
Bezirk 1	Observed	4	0.02469		Expected	6.898	0.04258
	Expected	1.226	0.00757	Bezirk 21	Observed	6	0.03704
Bezirk 10	Observed	23	0.14198		Expected	13.336	0.08232
	Expected	16.479	0.10172	Bezirk 22	Observed	8	0.04938
Bezirk 11	Observed	2	0.01235		Expected	16.862	0.10409
	Expected	8.278	0.05110	Bezirk 23	Observed	1	0.00617
Bezirk 12	Observed	6	0.03704		Expected	8.584	0.05299
	Expected	0.613	0.00379	Bezirk 3	Observed	22	0.13580
Bezirk 13	Observed	3	0.01852		Expected	7.358	0.04542
	Expected	4.338	0.02678	Bezirk 4	Observed	3	0.01852
Bezirk 14	Observed	3	0.01852		Expected	2.759	0.01703
	Expected	7.511	0.04637	Bezirk 5	Observed	1	0.00617
Bezirk 15	Observed	5	0.03086		Expected	4.445	0.02744
	Expected	6.285	0.03880	Bezirk 6	Observed	6	0.03704
Bezirk 16	Observed	1	0.00617		Expected	2.453	0.01514
	Expected	8.278	0.05110	Bezirk 7	Observed	1	0.00617
Bezirk 17	Observed	2	0.01235		Expected	2.606	0.01609
	Expected	4.599	0.02839	Bezirk 8	Observed	3	0.01852
Bezirk 18	Observed	3	0.01852		Expected	1.993	0.01230
	Expected	4.139	0.02555	Bezirk 9	Observed	4	0.02469
Bezirk 19	Observed	5	0.03086		Expected	3.372	0.02082
	Expected	5.825	0.03596	Lower Austria	Observed	15	0.09259
Bezirk 2	Observed	14	0.08642		Expected	15.329	0.09463
	Expected	8.431	0.05204				

 χ^2 Goodness of Fit

χ^2	df	p
159	23	2.47e-22

TABLE 6: DISTRICT-WISE REPRESENTATION OF SAMPLE POPULATION

The **chi square at 159** represents a significant variance between the observed data and expected data distribution. df of 23 denotes the number of parameters for testing. A p value of 2.47e-22 (less than .005) underlines the significant deviation from the expected values. Thus, making the observed data a poor fit for the representatives based on residence by districts in Vienna. There is an significant over-representation of District 1, 2, 3, 6, 10, 12, and 20. On the other hand, districts 5, 11, 14, 16, 21, 22 are significantly under-represented in the collected data. Districts 4, 9, 19 have the most accurate depiction in this data set.

Representation of Religion

Based on the religious affiliation of the respondents, there was major representation of Hinduism (26), Islam (21), Catholic (18) and Eastern Orthodox (14). However, a highly significant majority represented no religious affiliation (62).

This was an optional question that was answered by 160 of the 162 respondents.

Level		Count	Proportion	
Buddhism	Observed	2	0.0125	χ^2 Goodness of Fit <hr/> χ^2 df p <hr/> 1620 8 0.00
	Expected	0.499	0.00312	
Catholic	Observed	18	0.1125	
	Expected	91.809	0.57380	
Eastern Orthodox	Observed	14	0.0875	
	Expected	8.150	0.05094	
Hinduism	Observed	26	0.1625	
	Expected	0.499	0.00312	
Islam	Observed	21	0.1313	
	Expected	13.805	0.08628	
Judaism	Observed	3	0.0187	
	Expected	0.832	0.00520	
No Religious Affiliation	Observed	62	0.3875	
	Expected	37.256	0.23285	
Others	Observed	11	0.0688	
	Expected	0.499	0.00312	
Protestants	Observed	3	0.0187	
	Expected	6.653	0.04158	

TABLE 7: RELIGION BASED REPRESENTATION OF SAMPLE POPULATION

The **chi square at 1620** denotes the highest levels of variance in the observed values as opposed to the expected values, based on the demographic data of Austria. The number of Hindu respondents are significantly higher compared to their representation in the Austrian population. This could be explained as an effect of convenience sampling. The title of the survey, ‘Yoga and Sustainability’ could also be a contributing factor. Another significant group with 62 respondents in the sample population were the ones with no religious affiliation, grossly above the expected number 37. On the other and, there is a significant under-representation of Catholic, Protestant and Eastern Orthodox respondents, which constitute of the majority religious population in the country. The p value of 0 denotes the poor fit of the observed data for generalization based on population.

Frequency of Income

income	Counts	% of Total	Cumulative %
< € 20000	56	39.7 %	39.7 %
> € 65001	14	9.9 %	49.6 %
€ 20001- € 35000	24	17.0 %	66.7 %
€ 35001 - € 50000	34	24.1 %	90.8 %
€ 50001 - € 65000	13	9.2 %	100.0 %

TABLE 8: INCOME WISE REPRESENTATION OF SAMPLE POPULATION

The observed frequencies also reveal that the annual income of over half of the sample population (who chose to share their income) is below the median Viennese salary of €50,400 per capita (Statistics Vienna, 2022). This is an important factor regarding the employment status and annual income of the sample population.

4.3 Reliability of Scale

Before analysing the data in the SEM in Jamovi, the reliability of the data was tested by running the Cronbach test and the McDonald's test individually for each component of TPB- attitudes, subjective norms, PBC and behavioral intentions. Cronbach's α tests how closely related are the items in a group, measuring the internal consistency in a group. A score of 0.7 or higher indicates a good consistency. McDonald's ω is another scale of internal consistency, which also takes into account the multi-dimensionality of the data.

Attitude Analysis

	Mean	SD	Cronbach's α	McDonald's ω
scale	3.56	1.54	0.911	0.915

Observed variables A1 to A17 were included to analyse the scale of reliability of attitudes towards sustainable behaviors promoted by YP. The Cronbach's α value of 0.91 and McDonald's ω at 0.91 indicate a very good consistency in the attitude scale. The mean value of 3.56 with SD at 1.54 is suggestive of a positive inclination towards YP based on attitudes. Moreover, the strong correlation between respondents' attitudes towards a wide range of lifestyle components suggests that YP indeed represents a coherent worldview, to which individuals relate to varying extents.

Subjective Norm Analysis

	Mean	SD	Cronbach's α	McDonald's ω
scale	3.82	1.49	0.912	0.916

Observed variables S1 to S17 were included to analyse the scale of reliability of subjective norms towards sustainable behaviors promoted by YP. The Cronbach's α value of 0.91 and McDonald's ω at 0.91 indicate a very good consistency in the subjective norm scale. The mean value of 3.82 with SD at 1.49 is suggestive that respondents feel that others would not be opposed to the adoption of the YP lifestyle, yet, on average, they think others hold a slightly less favourable attitude than they personally hold.

Perceived Behavioral Control Analysis

	Mean	SD	Cronbach's α	McDonald's ω
scale	2.65	1.24	0.946	0.947

Observed variables C1 to C17 were included to analyse the scale of reliability of perceived behavioral control towards sustainable behaviors promoted by YP. The Cronbach's α value of 0.94 and McDonald's ω at 0.94 indicate a very good consistency in the attitude scale. The mean value of 2.65 with SD at 1.24 is suggestive of respondents seeing the opportunity and feeling empowered to adopt a lifestyle consistent with YP.

Behavioral Intent Analysis

	Mean	SD	Cronbach's α	McDonald's ω
scale	4.64	1.21	0.827	0.834

Observed variables B1 to B17 were included to analyse the scale of reliability of behavioral intention towards sustainable behaviors promoted by YP. The Cronbach's α value of 0.82 and McDonald's ω at 0.83 indicate a good consistency in the behavioral intentions scale. The mean value of 4.64 with SD at 1.21 is suggestive of a relatively positive inclination towards YP based on attitudes.

In the below table 4, the mean values and the standard deviation can be observed for each component of the 17 themes being investigated. Based on the table, the mean values for most variables of PBC are less than 3, with a maximum standard 1.90, thus leaning towards the yogic side of the scale. The mean value of attitude ranges from 2.74 to 5.35 with the highest deviation of 2.64. The mean value of subjective norms ranges from 2.90 to 5.33 with the maximum SD of 2.73. Lastly, behavioral intentions

(also calculated as current behaviors) have mean values between the range of 3.49 to 5.86 with the highest SD of 2.73. Thus, it can be observed based on the means and SD that the attitudes, subjective norm, PBC of the sample population have positive and varying range of inclination towards behaviors aligning with YP. BI values higher than the other components are towards the center of the scale, varying in direction. This reflects the current practices lacking absolute inclination towards YP. However, the positive attitudes reflect the desire to change.

Themes		Attitudes (A)		Subjective Norms (S)		Perceived Beh. Control (C)		Behavioral Intentions (BI)	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
1	Physical Exercise	2.74	2.07	2.90	1.91	2.17	1.46	4.44	2.50
2	Mindfulness Practise	3.43	2.62	4.19	2.31	2.62	1.68	4.76	2.75
3	Plant-based diet	4.09	2.36	4.28	2.41	2.41	1.51	5.27	2.64
4	Seasonal/ Local produce	3.77	2.64	3.84	2.25	2.98	1.71	5.34	2.56
5	Minimalism	3.75	2.29	4.56	2.37	3.10	1.85	4.83	2.22
6	Frugal living	5.35	2.61	5.33	2.44	3.14	1.66	5.86	2.25
7	Optimistic thinking	2.94	2.16	2.86	2.21	2.62	1.83	4.10	2.37
8	Physical hygiene	3.57	2.41	3.73	2.11	2.90	1.89	3.89	2.23
9	Work-life balance	2.88	2.40	3.17	2.44	2.62	1.69	4.06	2.27
10	Social impact	4.23	2.57	4.75	2.73	2.87	1.77	4.72	2.36
11	Self discipline	2.75	2.04	3.39	2.39	2.44	1.60	3.49	1.94
12	Interaction with diverse groups	4.13	2.60	4.28	2.59	2.30	1.67	5.06	2.57
13	Engaging with local comm.	4.01	2.57	3.96	2.35	3.13	1.90	5.44	2.73
14	Self-image	3.80	1.95	3.44	2.01	2.26	1.65	4.52	1.94
15	Choice of words	3.11	2.33	3.57	2.32	2.22	1.67	3.78	2.12
16	Commune with nature	2.94	2.32	3.23	2.00	2.35	1.57	5.01	2.11
17	Eco-friendly choices	3.06	2.58	3.40	2.24	2.85	1.56	4.31	2.03
	Overall	3.56	1.54	3.82	1.49	2.65	1.24	4.64	1.21

TABLE 9: MEAN AND STANDARD DEVIATION IN OBSERVED VARIABLES

4.4 Alignment with Yogic Behavior

After getting an understanding of the sample population through the descriptive analyses, the next set of analyses test the Theory of Planned Behavior to predict the alignment of the Viennese population with yogic philosophy. Using the structural equation modelling (SEM) in Jamovi data analysis software, 17 themes were individually tested using the TPB model to predict behavioral intent of performing the said behaviors.

Model: Beh Int= ~ att+pbcsjn

Where BI is behavioral intent, att is attitude, pbc stands for perceived behavioral control and sjn reflects the values for subjective norms.

After individually analysing each theme, an aggregate analysis will be performed combining all observed variables.

Theme 1: Physical exercise

In the first theme, we investigate the components of TPB, attitudes, subjective norms and perceived behavioral control as the predictors of behavioral intention of getting ample exercise. The Yogic philosophy identifies aasanas (posture control) as the means to getting physical movement, this movement enables physical fitness as opposed to a sedentary lifestyle resulting from the current lifestyle trends. Getting ample exercise also contributes to SDG 3, by promoting good health and wellbeing.

Scale: 1. Getting ample exercise --- 10. Living a rather sedentary lifestyle

Model: Beh Int= ~ att+pbcsjn, i.e., B1= ~ A1+C1+S1 (Testing TPB using the SEM)

Model Test

Label	X ²	df	p	95% Confidence Intervals			
				Variable	R ²	Lower	Upper
Baseline Model	54.1	3	< .001	B1	0.284	0.170	0.403

CFI	TLI	RNI	GFI	adj. GFI	pars. GFI
1.000	1.000	1.000	1.000	1.000	0.000

The model predicting behaviour B1 (physical exercise) was **highly significant at $p < .001$** . The Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Adjusted Goodness-of-Fit Index (adj. GFI) have perfect values of 1.000, while the Root Mean Square Error of Approximation (RMSEA) is 0.000, indicating a **perfect fit of the TPB framework to the data**. The R squared value of 0.284 indicates that **A1, C1 and S1 explain 28.4% of the variance in the outcome variable, B1**.

Parameter estimates

Dep	Pred	Estimate	SE	95% Confidence Intervals		β	z	p
				Lower	Upper			
B1	A1	0.367	0.0874	0.196	0.538	0.304	4.20	< .001
B1	C1	0.602	0.1241	0.359	0.845	0.351	4.85	< .001
B1	S1	-0.315	0.0900	-0.491	-0.138	-0.241	-3.50	< .001

B1=behavioral intentions, A1= attitude, S1= subjective norm, C1= PBC

All of the TBP determinants are significant at $p < .001$. Based on the estimates, it can be observed that attitude (0.367) and perceived behavioral control (0.602) have the expected positive relation, such that more positive attitudes and more control increase behavioral intentions. Subjective norm (-0.315) on the other hand, has a significant but negative relation with behavioral intention. Counter-intuitively, the more favourably others perceive the behaviour, the less likely individuals are to engage in the behavior.

In the context of predicting intentions to get ample exercise, the **perceived behavioral control is the leading predictor** for this sample group. The higher control (time, space to exercise, financial resources, guidance, etc.) an individual thinks they possess to get ample exercise, the higher is their intention to perform the behavior. However, **if the subjective norm is higher, the individual is less likely to intend** to get exercise.

Theme 2: Mindfulness practices

In the second theme, we investigate the components of TPB, attitudes, subjective norms and perceived behavioral control as the predictors of behavioral intention of practicing forms of reflection such as meditation, journaling, therapy, etc. The Yogic philosophy identifies svadhyaya, pranayama, pratyahara, dharana and dhyaan as stages towards achieving self-actualization, making an individual more aware of their ideas, emotions

and actions, resulting in mindful individuals. As a result, practising forms of reflection contributes to SDG3, by promoting wellbeing.

Scale: 1. Practice forms of reflection (e.g., Meditation/ journaling/ therapy) ---

10. Avoid forms of quiet reflection (e.g., Meditation/ journaling/ therapy)

Model: Beh Int= ~ att+pbcsjn, i.e., B2= ~ A2+C2+S2 (Testing TPB using the SEM)

Model Test

Label	X ²	df	p	Variable	R ²	95% Confidence Intervals	
						Lower	Upper
Baseline Model	104	3	<.001	B2	0.475	0.358	0.581

CFI	TLI	RNI	GFI	adj. GFI	pars. GFI
1.000	1.000	1.000	1.000	1.000	0.000

The model predicting behaviour B2 (mindfulness practise) was **highly significant at p <.001**. The Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Adjusted Goodness-of-Fit Index (adj. GFI) have perfect values of 1.000, while the Root Mean Square Error of Approximation (RMSEA) is 0.000, indicating a **perfect fit of the TPB framework to the data**. The R squared value of 0.475 indicates that **A2, C2 and S2 explain 47.5% of the variance in the outcome variable, B2**.

Parameter Estimates

Dep	Pred	Estimate	SE	95% Confidence Intervals		β	z	p
				Lower	Upper			
B2	A2	0.6201	0.0756	0.4720	0.768	0.5899	8.204	<.001
B2	C2	0.2081	0.1138	-0.0149	0.431	0.1268	1.829	0.067
B2	S2	0.0625	0.0717	-0.0780	0.203	0.0525	0.872	0.383

B2=behavioral intentions, A2= attitude, S2= subjective norm, C2= PBC

Only attitude is significant at p <.001, perceived behavioral control with p 0.067 is slightly above the significance level <.005. Based on the estimates, all TPB determinants have

a positive relation, such that increase in attitude (0.620) and control will result in increased behavioral intent (bi). Increase in subjective norm (0.06 will also lead to an increase in BI..

In the context of practicing reflection through the means of meditation, journaling, therapy, etc., **the attitude to practice reflection** is strongest predictor of the behavior. The perceived ease of performing this behavior is also inclined positively towards practices of YP. As a **behavior that is individualistic in nature, the subjective norm is an insignificant** predictor of the intention of practicing reflection.

Theme 3: Plant-based diet

The third theme, investigates the components of TPB, attitudes, subjective norms and perceived behavioral control as the predictors of behavioral intention of eating a plant-based diet as opposed to a meat heavy diet. Ahimsa (non-violence) is a key principle of Yama, the first limb of Yoga. Ahimsa rejects killing of life, in this context animals on land and under water, as a part of dietary consumption. By opting to consume a more plant-based diet, an individual can better align with YP. This also aids sustainability, due to the drastically low resource requirement for growing plants and cultivating crops. And directly contributes to SDG 14 and 15, by protecting and conserving life under water and on land.

Scale: 1. Eat a plant-based diet --- 10. Eat a meat-heavy diet

Model: Beh Int= ~ att+pbcsjn, i.e., B3= ~ A3+C3+S3 (Testing TPB using the SEM)

Model Test

Label	X ²	df	p	Variable	R ²	95% Confidence Intervals	
						Lower	Upper
Baseline Model	122	3	< .001	B3	0.531	0.418	0.630

CFI	TLI	RNI	GFI	adj. GFI	pars. GFI
1.000	1.000	1.000	1.000	1.000	0.000

The model predicting behaviour B3 (plant-based diet) was **highly significant at p <.001**. The Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Adjusted Goodness-of-Fit Index (adj. GFI) have perfect values of 1.000, while the Root Mean Square Error of

Approximation (RMSEA) is 0.000, indicating a **perfect fit of the TPB framework to the data**. The R squared value of 0.531 indicates that **A3, C3 and S3 explain 53.1% of the variance in the outcome variable, B3**.

Parameter Estimates

Dep	Pred	Estimate	SE	95% Confidence Intervals		β	z	p
				Lower	Upper			
B3	A3	0.7456	0.0644	0.6194	0.872	0.6680	11.58	< .001
B3	C3	0.2173	0.0959	0.0293	0.405	0.1244	2.27	0.023
B3	S3	0.0775	0.0619	-0.0439	0.199	0.0709	1.25	0.211

B3=behav. intentions, A3= attitude, S3= subjective norm, C3= PBC

Two TPB determinants, attitude with $p < .001$ and PBC with $p 0.023$ are statistically significant. Based on the estimates, attitude (0.745) is a stronger predictor of behavioral intent than perceived behavioral control (0.217). The impact of subjective norm is low and insignificant in predicting the behavior.

In the context of eating a plant-based diet, **attitude is the strongest predictor**, along with perceived control to eat a plant-based diet. This indicates that the sample population **has a positive attitude towards a plant-based diet and believes they have the control to follow the dietary choice**. The subjective norm is a rather weak and insignificant predictor of diet-based preferences of the sample population.

Theme 4: Seasonal and local diet

In the fourth theme, the relation of the components of TPB, attitudes, subjective norms and perceived behavioral control as the predictors of behavioral intention of eating local/seasonal produce is analysed. The Yogic philosophy identifies the connection between the body and the environment. Seasonal and local produce provide the body the necessary nutrients to thrive in the respective environment, thus, aligning with nature and making it healthier.

Scale: 1. Eat local/ seasonal produce --- 10. Eat what I feel like at the time

Model: Beh Int= ~ att+pbpc+sjn, i.e., $B4 = \sim A4 + C4 + S4$ (Testing TPB using the SEM)

Model Test

Label	X ²	df	p	Variable	R ²	95% Confidence Intervals	
						Lower	Upper
Baseline Model	66.1	3	< .001	B4	0.335	0.217	0.453

CFI	TLI	RNI	GFI	adj. GFI	pars. GFI
1.000	1.000	1.000	1.000	1.000	0.000

The model predicting behaviour B4 (consumption of seasonal/local produce) was **highly significant at $p < .001$** . The Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Adjusted Goodness-of-Fit Index (adj. GFI) have perfect values of 1.000, while the Root Mean Square Error of Approximation (RMSEA) is 0.000, indicating a **perfect fit of the TPB framework to the data**. The R squared value of 0.335 indicates that **A4, C4 and S4 explain 33.5% of the variance in the outcome variable, B4**.

Parameter Estimates

Dep	Pred	Estimate	SE	95% Confidence Intervals		β	z	p
				Lower	Upper			
B4	A4	0.427	0.0681	0.293	0.5601	0.4390	6.26	< .001
B4	C4	0.398	0.1065	0.189	0.6068	0.2656	3.74	< .001
B4	S4	-0.109	0.0758	-0.258	0.0391	-0.0961	-1.44	0.149

B4=behavioral intentions, A4= attitude, S4= subjective norm, C4= PBC

Attitude and perceived behavioral control are the significant TPB determinants of $p < .001$. Based on the estimates, attitude (0.427) and perceived behavioral control (0.398) have the expected positive relation with behavioral control. According to standard error (SE), attitude (0.068) has a more accurate estimate compared to PBC (0.106). Subjective norm (-0.109) as a determinant has negative relation with behavioral intent with an insignificant p at 0.149.

This translates to **attitude and the perceived control (access to local/season produce, affordability, knowledge, etc.)** being strong predictors of the **behavioral intention of eating local/seasonal produce**. An increase in attitude and PBC will lead to an increase in intention to eat local or seasonal produce. **On the other hand, an increase in subjective norm could lead to a possible decrease in** consumption of local and

seasonal produce. This could indicate the community’s inclination away from eating local and season produce, as perceived by the respondents.

Therefore, **attitude and PBC are strong indicators to predict** the behavioral intent of eating local and seasonal produce. Subjective norm is a weak indicator of control and has an inverse and insignificant relation with the behavioral intent.

Theme 5: Consumption I Non-hoarding

The fifth theme, investigates the components of TPB, attitudes, subjective norms and perceived behavioral control as the predictors of behavioral intention of living minimally and discarding clutter. The Yogic philosophy identifies aparigraha (non-hoarding) as a key principle of the Yamas. By embracing minimalism and discarding clutter, an individual is more likely to make choices based on need and utility, as opposed to impulsive buying and hoarding resources which could further increase demand for production. This also aligns with SDG 12 ensuring sustainable consumption and responsible production.

Scale: 1. live minimally and discard clutter --- 10. surround myself with material possessions

Model: Beh Int= ~ att+pbcs+sjn, i.e., B5= ~ A5+C5+S5 (Testing TPB using the SEM)

Model Test

Label	X ²	df	p	Variable	R ²	95% Confidence Intervals	
						Lower	Upper
Baseline Model	46.6	3	< .001	B5	0.250	0.140	0.369

CFI	TLI	RNI	GFI	adj. GFI	pars. GFI
1.000	1.000	1.000	1.000	1.000	0.000

The model predicting behaviour B5 (minimalist living) was **highly significant at p <.001**. The Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Adjusted Goodness-of-Fit Index (adj. GFI) have perfect values of 1.000, while the Root Mean Square Error of Approximation (RMSEA) is 0.000, indicating a **perfect fit of the TPB framework to the data**. The R squared value of 0.250 indicates that **A4, C4 and S4 explain 25% of the variance in the outcome variable, B4**.

Parameter Estimates

Dep	Pred	Estimate	SE	95% Confidence Intervals		β	z	p
				Lower	Upper			
B5	A5	0.48641	0.0729	0.344	0.629	0.50180	6.6740	<.001
B5	C5	0.00636	0.0915	-0.173	0.186	0.00531	0.0695	0.945
B5	S5	-0.01151	0.0698	-0.148	0.125	-0.01227	-0.1648	0.869

B5=behavioral intentions, A5= attitude, S5= subjective norm, C5= PBC

Only attitude is a significant determinant of the behavioral intent with $p < .001$. Based on the estimate, attitude (0.486) has a positive relation in predicting behavioral intent. Perceived behavioral control with an estimate of 0 and a p value of 0.94 and subjective norm with an estimate of -0.01 and p value of 0.86 have an almost non-existent effect on the behavioral intent.

The attitude **towards living minimally and discarding clutter is the only predictor** of the intent to actually performing the behavior. The role of perceived behavioral control is negligible, similar to the role of the subjective norm. This basically indicates a positive attitude towards the idea of living minimally and discarding clutter.

Theme 6: Consumption I Moderation

In the sixth theme, the components of TPB, attitudes, subjective norms and perceived behavioral control as the predictors of behavioral intention of living frugally are analysed. Living frugally simply refers to living within your means. This is reflective of the principle of Niyama, Santosh (contentment). This can be interpreted as making conscious choices regarding consumption, instead of consumption based on factors such as competition, esteem, peer pressure, etc. This behavior also corresponds to SDG 12, encouraging sustainable consumption.

Scale: 1. live frugally --- 10. treat myself to the things I want

Model: Beh Int= ~ att+pbc+sjn, i.e., $B_6 = \sim A_6 + C_6 + S_6$ (Testing TPB using the SEM)

Model Test

Label	X ²	df	p	Variable	R ²	95% Confidence Intervals	
						Lower	Upper
Baseline Model	77.3	3	< .001	B6	0.380	0.260	0.495

CFI	TLI	RNI	GFI	adj. GFI	pars. GFI
1.000	1.000	1.000	1.000	1.000	0.000

The model predicting behaviour B6 (living frugally) was **highly significant at p <.001**. The Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Adjusted Goodness-of-Fit Index (adj. GFI) have perfect values of 1.000, while the Root Mean Square Error of Approximation (RMSEA) is 0.000, indicating a **perfect fit of the TPB framework to the data**. The R squared value of 0.380 indicates that **A6, C6 and S6 explain 38% of the variance in the outcome variable, B6**.

Parameter Estimates

Dep	Pred	Estimate	SE	95% Confidence Intervals		β	z	p
				Lower	Upper			
B6	A6	0.4775	0.0576	0.3647	0.590	0.5541	8.292	< .001
B6	C6	0.1639	0.0898	-0.0122	0.340	0.1213	1.824	0.068
B6	S6	0.0344	0.0608	-0.0848	0.154	0.0374	0.566	0.571

B6=behavioral intentions, A6= attitude, S6= subjective norm, C6= PBC

Attitude has a significant p <.001, perceived behavioral control has a p 0.068 which is slightly above the significant p <.005. Based on estimates, all TPB determinants, attitude (0.477), PBC (0.163) and subjective norm (0.034) have a positive relation with behavioral control. And the increase in any or all of the determinants will lead to an increase in the intention to perform the behavior.

In the context of living frugally, **a positive attitude towards living frugally is a fairly strong predictor of the behavioral intent**. The perceived behavioral control plays a relatively lesser role in predicting the behavioral control, whereas the role of subjective norm in predicting a frugal lifestyle is almost negligible. This also points towards the lack of importance of social norms in deciding their lifestyles in the sample population.

Theme 7: Mental hygiene

In the seventh theme, we investigate the four components of TPB, attitudes, subjective norms and perceived behavioral control as the predictors of behavioral intention of thinking optimistically. The principle Shauch (hygiene) in the Yogic philosophy entails physical and mental hygiene. Fostering negative thoughts leads to mental clutter. Laying emphasis on optimistic approaches for mental hygiene.

Scale: 1. think optimistically --- 10. think pessimistically

Model: Beh Int= ~ att+psc+sjn, i.e., B7= ~ A7+C7+S7 (Testing TPB using the SEM)

Model Test

Label	X ²	df	p	Variable	R ²	95% Confidence Intervals	
						Lower	Upper
Baseline Model	85.9	3	< .001	B7	0.412	0.292	0.524

CFI	TLI	RNI	GFI	adj. GFI	pars. GFI
1.000	1.000	1.000	1.000	1.000	0.000

The model predicting behaviour B7 (optimistic thinking) was **highly significant at p <.001**. The Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Adjusted Goodness-of-Fit Index (adj. GFI) have perfect values of 1.000, while the Root Mean Square Error of Approximation (RMSEA) is 0.000, indicating a **perfect fit of the TPB framework to the data**. The R squared value of 0.412 indicates that **A7, C7 and S7 explain 41.2% of the variance in the outcome variable, B7**.

Parameter Estimates

Dep	Pred	Estimate	SE	95% Confidence Intervals		β	z	p
				Lower	Upper			
B7	A7	0.4296	0.0925	0.248	0.611	0.3920	4.645	< .001
B7	C7	0.4358	0.0976	0.244	0.627	0.3365	4.463	< .001
B7	S7	-0.0217	0.0780	-0.175	0.131	-0.0203	-0.279	0.781

B7=behavioral intentions, A7= attitude, S7= subjective norm, C7= PBC

Both attitude and perceived behavioral control are significant TPB determinants of $p < .001$. Based on the estimates, attitude (0.429) and PBC (0.435) have a positive relation with behavioral intentions. According to standard error (SE), attitude (0.092) is more accurate than PBC (0.097). Subjective norm (-0.021) has a negative relation with behavioral intent but is insignificant with $p = 0.781$.

In the context of thinking optimistically, **the perceived behavioral control to think optimistically and a positive attitude towards the behavior** are predictors of the behavioral intent to think optimistically. The **increase in subjective norm has a limited potential of decreasing the behavioral intent** to think optimistically, which is indicative of the perceived subjective norm being inclined towards self-loathing behaviors.

Theme 8: Physical hygiene

In the eighth theme, we investigate the four components of TPB, attitudes, subjective norms and perceived behavioral control as the predictors of behavioral intention of spending long time on personal hygiene routine. The principle Shauch (hygiene) in the Yogic philosophy entails both, physical and mental hygiene. Spending time on personal hygiene helps in elimination of factors contributing to diseases and also promotes well being. This also contributes to SDG 3 promoting health and wellbeing.

Scale: 1. spend a long time on my personal hygiene routines ---

10. spend as little time as possible on personal hygiene

Model: Beh Int= ~ att+pbcsjn, i.e., $B8 = \sim A8 + C8 + S8$ (Testing TPB using the SEM)

Model Test

Label	X ²	df	p	Variable	R ²	95% Confidence Intervals	
						Lower	Upper
Baseline Model	203	3	< .001	B8	0.715	0.632	0.782

CFI	TLI	RNI	GFI	adj. GFI	pars. GFI
1.000	1.000	1.000	1.000	1.000	0.000

The model predicting behaviour B8 (spending time on personal hygiene routines) was **highly significant at $p < .001$** . The Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Adjusted Goodness-of-Fit Index (adj. GFI) have perfect values of 1.000, while the Root Mean Square Error of Approximation (RMSEA) is 0.000, indicating a **perfect fit of the TPB framework to the data**. The R squared value of 0.715 indicates that **A8, C8 and S8 explain 71.5% of the variance in the outcome variable, B8**.

Parameter Estimates

Dep	Pred	Estimate	SE	95% Confidence Intervals		β	z	p
				Lower	Upper			
B8	A8	0.77130	0.0463	0.6805	0.862	0.83121	16.646	< .001
B8	C8	0.02921	0.0574	-0.0833	0.142	0.02473	0.509	0.611
B8	S8	0.00619	0.0515	-0.0947	0.107	0.00584	0.120	0.904

B8=behavioral intentions, A8= attitude, S8= subjective norm, C8= PBC

Attitude is the only significant determinant of TPB with $p < .001$. Based on the estimate, all TPB determinants, attitude (0.771), PBC (0.029) and subjective norm at (0.006) have a positive relation with the behavioral intent. An increase in any TPB determinant will increase the intention of performing the behavior.

In context of spending long time on personal hygiene routines, **attitude is the most significant indicator, with a relatively low impact of perceived behavioral control**. The estimates of PBC can also be reflective of a more positive attitude and desire of spending more time on personal hygiene routines that the perceived control factors such as costs, time, resources, etc. The role of subjective norm in spending long time on personal hygiene is non-existent, which could be explained by individual agency and the personal nature of the behavior. However, hygiene behaviors and grooming are an important part of the social dimension, to make a good impression on the community. Making the lack of impact of this component rather intriguing.

Theme 9: Work-life balance

In the ninth theme, we investigate the four components of TPB, attitudes, subjective norms and perceived behavioral control as the predictors of behavioral intention of balancing personal, professional and social commitments. The Yogic philosophy is centered

on the principle of balance and flexibility. This essentially means that all domains of an individual’s life hold equal importance including personal, professional, and social aspects. Balancing commitments allows individuals to live a fulfilled life. This also aligns with SDG 8, focussed on decent work conditions, which include fixed work hours.

resulting from the current lifestyle trends.

Scale: 1. balance my personal, professional and social commitments --- 10. find that one activity dominates my schedule

Model: Beh Int= ~ att+psc+sjn, i.e., B9= ~ A9+C9+S9 (Testing TPB using the SEM)

Model Test

Label	X ²	df	p	Variable	R ²	95% Confidence Intervals	
						Lower	Upper
Baseline Model	87.4	3	< .001	B9	0.417	0.298	0.529

CFI	TLI	RNI	GFI	adj. GFI	pars. GFI
1.000	1.000	1.000	1.000	1.000	0.000

The model predicting behaviour B9 (balancing commitments) was **highly significant at p <.001**. The Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Adjusted Goodness-of-Fit Index (adj. GFI) have perfect values of 1.000, while the Root Mean Square Error of Approximation (RMSEA) is 0.000, indicating a **perfect fit of the TPB framework to the data**. The R squared value of 0.417 indicates that **A9, C9 and S9 explain 41.7% of the variance in the outcome variable, B9**.

Parameter Estimates

Dep	Pred	Estimate	SE	95% Confidence Intervals		β	z	p
				Lower	Upper			
B9	A9	0.4511	0.0661	0.322	0.5806	0.4754	6.828	< .001
B9	C9	0.4092	0.0930	0.227	0.5914	0.3038	4.401	< .001
B9	S9	-0.0577	0.0619	-0.179	0.0637	-0.0620	-0.931	0.352

B9=behavioral intentions, A9= attitude, S9= subjective norm, C9= PBC

Attitude and perceived behavioral control are significant at $p < .001$. Based on the estimates, attitude (0.451) and PBC (0.409) have a positive relation with behavioral intent. An increase in attitude and control will lead to increase in the intention to perform the behavior. Subjective norm (-0.057) has a negative effect on the behavioral intent, but is insignificant with $p = 0.352$. An increase in SN will decrease the intention to perform the behavior.

In context of balancing personal, professional and social commitments, **a positive attitude towards work-life balance and perceived behavioral control can predict** the behavioral intention to balancing commitments. However, an increase in subjective norm could reduce the behavioral intention to balance commitments. The inclination of the perceived subjective norm of the sample group towards having one activity dominating schedules is potentially reflective of the poor representation of the Viennese population, or a poor perception, even a bias towards the perceived community perceptions.

Theme 10: Purpose

In the tenth theme, the components of TPB, attitudes, subjective norms and perceived behavioral control as the predictors of behavioral intention of choosing work that makes the biggest social impact are analysed. Tapas (discipline) and Svadhyay (self study) in YP emphasise on efforts that are driven by purpose. While financial gains are seen as material gains, social impact aids self-actualization of an individual. Choosing work with the biggest social impact aids the larger goal of sustainable development.

Scale: 1. choose work that makes the biggest social impact --- 10. choose work that brings the greatest financial rewards

Model: Beh Int= ~ att+pbcsjn, i.e., $B_{10} = \sim A_{10} + C_{10} + S_{10}$ (Testing TPB using the SEM)

Model Test

Label	X ²	df	p	Variable	R ²	95% Confidence Intervals	
						Lower	Upper
Baseline Model	152	3	< .001	B10	0.609	0.506	0.696

CFI	TLI	RNI	GFI	adj. GFI	pars. GFI
1.000	1.000	1.000	1.000	1.000	0.000

The model predicting behaviour B10 (choosing work that makes biggest social impact) was **highly significant at $p < .001$** . The Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Adjusted Goodness-of-Fit Index (adj. GFI) have perfect values of 1.000, while the Root Mean Square Error of Approximation (RMSEA) is 0.000, indicating a **perfect fit of the TPB framework to the data**. The R squared value of 0.609 indicates that **A10, C10 and S10 explain 60.9% of the variance in the outcome variable, B10**.

Parameter estimates

Dep	Pred	Estimate	SE	95% Confidence Intervals		β	z	p
				Lower	Upper			
B10	A10	0.5786	0.0499	0.4809	0.6764	0.6301	11.597	< .001
B10	C10	0.3545	0.0729	0.2117	0.4973	0.2661	4.865	< .001
B10	S10	0.0114	0.0446	-0.0761	0.0988	0.0132	0.255	0.799

B10=behavioral intentions, A10= attitude, S10= subjective norm, C10= PBC

Attitude and perceived behavioral control are significant at $p < .001$. Based on the estimates, all TPB determinants, attitude (0.578) and PBC (0.353) and subjective norm (0.011) have a positive relation with behavioral intent. An increase in any TPB determinant will lead to increase in the intention to perform the behavior.

In the context of choosing work with higher social impact, a **positive attitude** towards creating social impact and the **perceived behavioral control of choosing work** are the predictors of choosing work with high social impact. The role of subjective norm in choosing work based on the purpose is low and insignificant.

Theme 11: Self-discipline

In the first theme, we investigate the four components of TPB, attitudes, subjective norms and perceived behavioral control as the predictors of behavioral intention of working with discipline and learning through the process. Svadhyay (self study) and tapas (discipline) are principles of Niyama that are centered on the importance of disciplined efforts and

learning in the process towards self-actualization. Commitment to work is essential to the growth of the economy, learning is essential for self growth. This behavior corresponds to SDG 4, that aims at enabling education at all ages; SDG 8 focussed on decent work and economic growth.

Scale: 1. work with discipline and learn through the process --- 10. slack at work because I know the job too well

Model: Beh Int= ~ att+pbcsjn, i.e., B11= ~ A11+C11+S11 (Testing TPB using the SEM)

Model Test

Label	X ²	df	p	Variable	R ²	95% Confidence Intervals	
						Lower	Upper
Baseline Model	55.3	3	<.001	B11	0.289	0.175	0.408

CFI	TLI	RNI	GFI	adj. GFI	pars. GFI
1.000	1.000	1.000	1.000	1.000	0.000

The model predicting behaviour B11 (working and learning with discipline) was **highly significant at p <.001**. The Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Adjusted Goodness-of-Fit Index (adj. GFI) have perfect values of 1.000, while the Root Mean Square Error of Approximation (RMSEA) is 0.000, indicating a **perfect fit of the TPB framework to the data**. The R squared value of 0.289 indicates that **A11, C11 and S11 explain 28.9% of the variance in the outcome variable, B11**.

Parameter estimates

Dep	Pred	Estimate	SE	95% Confidence Intervals		β	z	p
				Lower	Upper			
B11	A11	0.3362	0.0842	0.171	0.5013	0.3546	3.993	<.001
B11	C11	0.3495	0.0947	0.164	0.5352	0.2888	3.689	<.001
B11	S11	-0.0543	0.0626	-0.177	0.0685	-0.0669	-0.867	0.386

B11=behavioral intentions, A11= attitude, S11= subjective norm, C11= PBC

Attitude and perceived behavioral control are significant at p <.001. Based on the estimates, attitude (0.336) and PBC (0.349) have a positive relation with behavioral intent. According to standard error (SE), attitude (0.084) is more accurate than PBC (0.094). An

increase in attitude and control will lead to increase in the intention to perform the behavior. Subjective norm (-0.054) has a negative effect on the behavioral intent, but is insignificant with p 0.386. An increase in SN will decrease the intention to perform the behavior.

In the context of working with discipline and learning through the process, **both attitude and perceived behavioral control are significant predictors** of behavioral intent. However, an increase in subjective norm can decrease the behavioral intent to work with discipline and learn.

Theme 12: Social interaction | Diversity

In the twelfth theme, the components of TPB, attitudes, subjective norms and perceived behavioral control as the predictors of behavioral intention of interacting with diverse groups are analysed. Focused on the flexibility of the mind, seeking interactions with diverse groups increases exposure of the mind to diverse knowledge structures and cultural constructs. This helps in practising generosity towards other individuals, aiding social sustainability based on YP. Seeking interactions with diverse groups can aid SDG 10 of reducing inequalities.

Scale: 1. seek out social interactions with diverse groups --- 10. seek out interactions with like-minded individuals

Model: Beh Int= ~ att+psc+sjn, i.e., B12= ~ A12+C12+S12 (Testing TPB using the SEM)

Model Test

Label	X ²	df	p	Variable	R ²	95% Confidence Intervals	
						Lower	Upper
Baseline Model	86.2	3	< .001	B12	0.413	0.294	0.525

CFI	TLI	RNI	GFI	adj. GFI	pars. GFI
1.000	1.000	1.000	1.000	1.000	0.000

The model predicting behaviour B12 (seeking interactions with diverse groups) was **highly significant at p <.001**. The Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Adjusted Goodness-of-Fit Index (adj. GFI) have perfect values of 1.000, while

the Root Mean Square Error of Approximation (RMSEA) is 0.000, indicating a **perfect fit of the TPB framework to the data**. The R squared value of 0.413 indicates that **A12, C12 and S12 explain 41.3% of the variance in the outcome variable, B12**.

Parameter estimates

Dep	Pred	Estimate	SE	95% Confidence Intervals		β	z	p
				Lower	Upper			
B12	A12	0.5411	0.0660	0.4118	0.670	0.5479	8.202	< .001
B12	C12	0.2483	0.0997	0.0528	0.444	0.1609	2.489	0.013
B12	S12	0.0523	0.0641	-0.0732	0.178	0.0527	0.817	0.414

B12=behavioral intentions, A12= attitude, S12= subjective norm, C12= PBC

Attitude is significant at $p < .001$ and perceived behavioral control is significant with $p < 0.013$ ($< .005$). Based on the estimates, all TPB determinants, attitude (0.541) and PBC (0.248) and subjective norm (0.052) have a positive relation with behavioral intent. An increase TPB determinant will lead to increase in the intention to perform the behavior.

In the context of seeking interactions with diverse groups, **attitudes and perceived behavioral control are significant predictors of diversity of groups**. Subjective norm has a relative low impact and potential of predicting behavioral intentions of seeking interactions with diverse groups. This could be explained by the growth of social media use and exposure to diverse groups and ideas, both, the perceived control and the individuality of the space reflect in the result.

Theme 13: Social interaction I Community

In the thirteenth theme, we investigate the four components of TPB, attitudes, subjective norms and perceived behavioral control as the predictors of behavioral intention of engaging with the local community. While the path of YP is focussed on self-betterment, this further leads to benefits for the society and environment. Engaging with the local community entails consideration of their needs, while sharing of knowledge, and other resources. This behavior contributes to SDG 11 focussed on building sustainable communities.

Scale: 1. engage with people in my local community --- 10. mind my own business

Model: Beh Int= ~ att+pbcsjn, i.e., B13= ~ A13+C13+S13 (Testing TPB using the SEM)

Model Test

Label	X ²	df	p	Variable	R ²	95% Confidence Intervals	
						Lower	Upper
Baseline Model	78.8	3	<.001	B13	0.385	0.266	0.500

CFI	TLI	RNI	GFI	adj. GFI	pars. GFI
1.000	1.000	1.000	1.000	1.000	0.000

The model predicting behaviour B13 (engaging with local community) was **highly significant at p <.001**. The Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Adjusted Goodness-of-Fit Index (adj. GFI) have perfect values of 1.000, while the Root Mean Square Error of Approximation (RMSEA) is 0.000, indicating a **perfect fit of the TPB framework to the data**. The R squared value of 0.531 indicates that **A13, C13 and S13 explain 38.5% of the variance in the outcome variable, B13**.

Parameter estimates

Dep	Pred	Estimate	SE	95% Confidence Intervals		β	z	p
				Lower	Upper			
B13	A13	0.444	0.0726	0.3019	0.587	0.419	6.12	<.001
B13	C13	0.375	0.0989	0.1812	0.569	0.261	3.79	<.001
B13	S13	0.123	0.0774	-0.0291	0.274	0.105	1.58	0.113

B13=behavioral intentions, A13= attitude, S13= subjective norm, C13= PBC

Both Attitude and perceived behavioral control are significant at p <.001. Based on the estimates, all TPB determinants, attitude (0.444) and PBC (0.375) and subjective norm (0.123) have a positive relation with behavioral intent. An increase TPB determinant will lead to increase in the intention to perform the behavior.

In the context of engaging with the local community, **attitude is the leading predictor of behavioral intentions**. If the past experiences and perceived benefits (sense of belonging, support, etc) of interacting with the community are positive, it is likely to make

the respondents have a positive approach towards engaging with the community. In the recent event of the pandemic, people got a better chance to evaluate their relationship with the local community, realising the added value to their lives. Perceived control (access, language, context) to engage with the local community is a more significant predictor, compared to subjective norm.

Theme 14: Non-violence towards self

In the fourteenth theme, the components of TPB, attitudes, subjective norms and perceived behavioral control as the predictors of behavioral intention of getting ample exercise. Ahimsa (non-violence) also entails practising compassion. YP focusses on the betterment of the individual first, hence suggesting practising compassion towards self by thinking highly about themselves. This also contributes to SDG 3, promoting wellbeing.

Scale: 1. think of myself very highly --- 10. find me loathing myself

Model: Beh Int= ~ att+pbcs+sjn, i.e., B14= ~ A14+C14+S14 (Testing TPB using the SEM)

Model Test

Label	X ²	df	p	Variable	R ²	95% Confidence Intervals	
						Lower	Upper
Baseline Model	43.4	3	< .001	B14	0.235	0.128	0.353

CFI	TLI	RNI	GFI	adj. GFI	pars. GFI
1.000	1.000	1.000	1.000	1.000	0.000

The model predicting behaviour B14 (think highly of self) was **highly significant at p <.001**. The Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Adjusted Goodness-of-Fit Index (adj. GFI) have perfect values of 1.000, while the Root Mean Square Error of Approximation (RMSEA) is 0.000, indicating a **perfect fit of the TPB framework to the data**. The R squared value of 0.235 indicates that **A14, C14 and S14 explain 23.5% of the variance in the outcome variable, B14**.

Parameter estimates

Dep	Pred	Estimate	SE	95% Confidence Intervals		β	z	p
				Lower	Upper			
B14	A14	0.3722	0.0852	0.205	0.5392	0.3746	4.367	< .001
B14	C14	0.3212	0.0844	0.156	0.4866	0.2736	3.806	< .001
B14	S14	-0.0726	0.0818	-0.233	0.0877	-0.0754	-0.888	0.375

B14=behavioral intentions, A14= attitude, S14= subjective norm, C14= PBC

Attitude and perceived behavioral control are significant at $p < .001$. Based on the estimates, attitude (0.372) and PBC (0.321) have a positive relation with behavioral intent. An increase in attitude and control will lead to increase in the intention to perform the behavior. Subjective norm (-0.072) has a negative effect on the behavioral intent, but is insignificant with $p = 0.375$. An increase in SN will decrease the intention to perform the behavior.

Thinking highly of one self can be impacted by both **attitude and perceived control over one's thoughts**. This result is likely to coincide with the self-care approach of Gen Z and its influence on Millennials (also forming the major respondents of this study). An increase in subjective norms may lead to an increased tendency of self-loathing.

Theme 15: Non-violence towards others

In the fifteenth theme, we investigate the components of TPB, attitudes, subjective norms and perceived behavioral control as the predictors of behavioral intention of mindful choice of words. Ahimsa is not limited to physical violence. The most commonly practised form of violence in the present day is through words. By being mindful of the impact of our words on others, we can show compassion; also contributing to SDG 3 promoting wellbeing and SDG 10 of reducing inequalities.

Scale: 1. choose my words mindfully --- 10. speak as I will without thinking about the consequences

Model: Beh Int= \sim att+pbcsjn, i.e., B15= \sim A15+C15+S15 (Testing TPB using the SEM)

Model Test

Label	X ²	df	p	Variable	R ²	95% Confidence Intervals	
						Lower	Upper
Baseline Model	88.9	3	< .001	B15	0.422	0.304	0.534

CFI	TLI	RNI	GFI	adj. GFI	pars. GFI
1.000	1.000	1.000	1.000	1.000	0.000

The model predicting behaviour B15 (choice of words) was **highly significant at p <.001**. The Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Adjusted Goodness-of-Fit Index (adj. GFI) have perfect values of 1.000, while the Root Mean Square Error of Approximation (RMSEA) is 0.000, indicating a **perfect fit of the TPB framework to the data**. The R squared value of 0.422 indicates that **A15, C15 and S15 explain 42.2% of the variance in the outcome variable, B15**.

Parameter estimates

Dep	Pred	Estimate	SE	95% Confidence Intervals		β	z	p
				Lower	Upper			
B15	A15	0.4132	0.0625	0.291	0.5357	0.4538	6.608	< .001
B15	C15	0.4531	0.0810	0.294	0.6120	0.3561	5.591	< .001
B15	S15	-0.0560	0.0592	-0.172	0.0601	-0.0612	-0.945	0.344

B15=behavioral intentions, A15= attitude, S15= subjective norm, C15= pbc

Attitude and perceived behavioral control are significant at p <.001. Based on the estimates, attitude (413) and PBC (0.453) have a positive relation with behavioral intent. According to standard error (SE), the estimate for attitude (0.062) is more accurate than PBC (0.081). An increase in attitude and control will lead to increase in the intention to perform the behavior. Subjective norm (-0.056) has a negative effect on the behavioral intent, but is insignificant with p 0.344. An increase in SN will decrease the intention to perform the behavior.

In the context of choosing words mindfully, **perceived control over the choice of words** and the positive attitude towards being mindful in interactions are significant predictors of behavioral intent to choose words mindfully. By wanting to be a better person, and caring about those we interact with could help exercise caution while selecting words.

Communication is everything in the current times with increased mediums of expression- instant messaging, social media platforms, etc. Words can be recorded for a long time. Also making caution is a necessary skill. The role of perceived control is stronger than attitude. However, an increase in subjective norm could instead increase the behavioral intent of speaking without thinking about the consequences.

Theme 16: Commune with nature

In the sixteenth theme, we investigate the components of TPB, attitudes, subjective norms and PBC as the predictors of behavioral intention of spending enough time in nature. Nature is integral to the philosophy of Yoga and an individual’s union with nature is one of the primary goals of YP. This can also be seen as living in harmony with nature. Spending a lot of time in nature is significant of an individual’s positive relation with the environment. This contributes to environmental sustainability, by first taking into consideration the importance of the environment.

Scale: 1. spend a lot of time in nature --- 10. spend all my time indoors

Model: Beh Int= ~ att+psc+sjn, i.e., B16= ~ A16+C16+S16 (Testing TPB using the SEM)

Model Test

Label	X ²	df	p	Variable	R ²	95% Confidence Intervals	
						Lower	Upper
Baseline Model	34.8	3	< .001	B16	0.193	0.094	0.309

CFI	TLI	RNI	GFI	adj. GFI	pars. GFI
1.000	1.000	1.000	1.000	1.000	0.000

The model predicting behaviour B16 (spending time in nature) was **highly significant at p <.001**. The Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Adjusted Goodness-of-Fit Index (adj. GFI) have perfect values of 1.000, while the Root Mean Square Error of Approximation (RMSEA) is 0.000, indicating a **perfect fit of the TPB framework to the data**. The R squared value of 0.193 indicates that **A16, C16 and S16 explain 19.3% of the variance in the outcome variable, B16**.

Parameter estimates

Dep	Pred	Estimate	SE	95% Confidence Intervals		β	z	p
				Lower	Upper			
B16	A16	0.3747	0.0795	0.219	0.531	0.4111	4.712	< .001
B16	C16	0.0450	0.1131	-0.177	0.267	0.0334	0.398	0.691
B16	S16	0.0224	0.0875	-0.149	0.194	0.0212	0.255	0.798

B16=behavioral intentions, A16= attitude, S16= subjective norm, C16= pbc

Attitude is the only significant TPB determinant with $p < .001$. Based on the estimates, all TPB determinants, attitude (0.374) and PBC (0.045) and subjective norm (0.022) have a positive relation with behavioral intent. An increase in any TPB determinant will lead to increase in the intention to perform the behavior.

Spending a lot of time in **nature can be predicted by a positive attitude** or a liking to spend time outdoors, in natural environments (parks, green spaces, river side). PBC and subjective norm are of little significance in predicting behavioral intent to spend time in nature. This could perhaps be an outcome of the high number of parks, green spaces and natural environment in Vienna. As an individualistic choice, the subjective norm is immaterial. Another factor to consider while interpreting these results is the period of the survey. This survey was recorded during the spring-summer season where the access to green spaces is higher as opposed to fall or winter.

Theme 17: Eco-friendliness

In the last theme, the components of TPB, attitudes, subjective norms and PBC as the predictors of behavioral intention of making eco-friendly choices are analysed. Making eco-friendly choices relates to a holistic consideration of YP as it entails accounting for every Yogic principle (ref. Eight Limbs of Yoga) that further contribute to sustainability. In the context of SDGs, this behavior corresponds directly with SDG 12 promoting sustainable consumption and production. However, a consideration of the other 16 SDGs is also of essence.

Scale: 1. make eco-friendly choices --- 10. fail to consider my environmental impacts

Model: Beh Int= ~ att+pbc+sjn, i.e., B17= ~ A17+C17+S17 (Testing TPB using the SEM)

Model Test

Label	X ²	df	p	Variable	R ²	95% Confidence Intervals	
						Lower	Upper
Baseline Model	62.3	3	< .001	B17	0.319	0.203	0.438

CFI	TLI	RNI	GFI	adj. GFI	pars. GFI
1.000	1.000	1.000	1.000	1.000	0.000

The model predicting behaviour B17 (making eco-friendly choices) was **highly significant at p <.001**. The Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Adjusted Goodness-of-Fit Index (adj. GFI) have perfect values of 1.000, while the Root Mean Square Error of Approximation (RMSEA) is 0.000, indicating a **perfect fit of the TPB framework to the data**. The R squared value of 0.319 indicates that **A17, C17 and S3 explain 31.9% of the variance in the outcome variable, B17**.

Parameter estimates

Dep	Pred	Estimate	SE	95% Confidence Intervals		β	z	p
				Lower	Upper			
B17	A17	0.3690	0.0661	0.2394	0.499	0.4697	5.580	< .001
B17	C17	0.1466	0.1069	-0.0628	0.356	0.1124	1.372	0.170
B17	S17	0.0389	0.0798	-0.1175	0.195	0.0430	0.488	0.626

B17=behavioral intentions, A17= attitude, S17= subjective norm, C17= pbc

Attitude is the only significant TPB. Determinant at p <.001. Based on the estimates, all TPB determinants, attitude (0.369) and PBC (0.146) an subjective norm (0.079) have a positive relation with behavioral intent. An increase in any TPB determinant will lead to increase in the intention to perform the behavior.

In the context of making eco-friendly choices, **attitude is the single significant predictor** of behavioral intent. PBC, in this case availability, feasibility and affordability of the eco-friendly alternatives is also likely to have some positive impact on the behavioral intention. The impact of subjective norm in predicting intent to make eco-friendly choices is very low and insignificant.

Summary

The analyses of the 17 behaviors individually have revealed some interesting patterns in the observed data set. Attitude is the single variable that has a consistently positive and significant impact on behavior across each of the 17 themes. PBC has been marginally less impactful in predicting behavioral intent. PBC was positive with a statistically significant relation with BI in 11 out of the 17 behaviors. SN, on the contrary, were statistically insignificant in 16 out of the 17 themes, bearing an inverse effect in many of the themes. Thus, indicating degree to which the components of TPB impact behaviour, with attitude emerging as the strongest determinant. It must be considered, however, that the positive attitudes may be subject to self-reporting and social desirability biases. Eating a plant-based diet (0.74) and spending long time on personal hygiene routines (0.77) were the themes with the highest estimates, meaning the greatest impact of attitudes. In both case, the effect of SN and PBC was low and insignificant.

The PBC values reflect the perceived agency/ease of the respondents in carrying out specific behaviors. Based on the mean values across the 17 themes, PBC had the lowest values, thus suggesting that respondents perceive few obstacles preventing them from engaging in these sustainable behaviors. Based on the SEMs, control had the largest impact on the behaviours of getting ample exercise, thinking optimistically, working with discipline and learning in the process, and mindful choice of words during interactions. In all of the four cases where the perceived control is the strongest, a negative relation exists with subjective norms. In the case of getting exercise, the effect of SN is both negative and significant. In the other three themes, SN is statistically insignificant yet has a negative impact on BI.

A consistent finding across behaviours is that respondents routinely rated their attitude as more favourable than the subjective norm. This holds on average (3.56 vs. 3.82) and for all individual behaviours except for three approximate ties and for the theme of self image, where the SN (3.44) was more favourable than the attitude (3.80). This raises two possibilities. If the sample is representative, then the average attitudes are the actual SN, meaning that respondents routinely and systematically mis-assess the community attitudes as less favourable than they really are. Alternatively, if the respondents' assessment of the SN is accurate, then the sample is not representative and is skewed towards yoga-positive respondents.

It is also interesting to observe that behavioral intents, which were recorded as current behaviors (I usually...), have higher mean scores than attitudes, indicating an attitude-

behavior gap. Although the SN was generally insignificant, the often negative estimates may explain this. If the SN are indeed mis-assessed by respondents, addressing this perception could go some way to closing the attitude-behavior gap.

The high levels of individualism, weak subjective norms and strong attitudes towards self-care practises are reflective of the characteristics of respondents, potentially as a strong generational trait based on the age group of respondents.

Dependent Variable		Attitude	SN	PBC
Physical Exercise	B1	0.367**	-0.315**	0.602**
Mindfulness Practise	B2	0.620**	0.06	0.208
Plant-based diet	B3	0.745**	0.077	0.021*
Seasonal/ Local produce	B4	0.427**	-0.109	0.398**
Minimalism	B5	0.486**	-0.011	0.006
Frugal living	B6	0.477**	0.034	0.163
Optimistic thinking	B7	0.429**	-0.021	0.435**
Physical hygiene	B8	0.771**	0.006	0.029
Work-life balance	B9	0.451**	0.057	0.409**
Social impact	B10	0.578**	0.011	0.354**
Self discipline	B11	0.336**	-0.054	0.349**
Interaction with diverse groups	B12	0.541**	0.052	0.248*
Engaging with local comm.	B13	0.444**	0.123	0.375**
Self-image	B14	0.372**	-0.072	0.321**
Choice of words	B15	0.413**	-0.056	0.453**
Commune with nature	B16	0.374**	0.022	0.045
Eco-friendly choices	B17	0.369**	0.038	0.146
Overall		0.504	0.021	0.148

TABLE 10: TABLE OF OBSERVED ESTIMATES TO PREDICT BEHAVIORAL INTENTION (BI)

** (statistically significant at <.001) *(statistically significant at <.005)

Theory of Planned Behavior for alignment with yogic philosophy

Based on the cumulative score for the variables behavior, attitude, subjective norms, and perceived behavioral control for 17 themes, below are the findings based on the structural equation modelling.

$$\text{MODEL: ATT} = \sim A1 + A2 + A3 + A4 + A5 + A6 + A7 + A8 + A9 + A10 + A11 + A12 + A13 + A14 + A15 + A16 + A17$$

$$\text{S.JN} = \sim S1 + S2 + S3 + S4 + S5 + S6 + S7 + S8 + S9 + S10 + S11 + S12 + S13 + S14 + S15 + S16 + S17$$

$$\text{PBC} = \sim C1 + C2 + C3 + C4 + C5 + C6 + C7 + C8 + C9 + C10 + C11 + C12 + C13 + C14 + C15 + C16 + C17$$

$$\text{BEHINT} = \sim B1 + B2 + B3 + B4 + B5 + B6 + B7 + B8 + B9 + B10 + B11 + B12 + B13 + B14 + B15 + B16 + B17$$

behint \sim att + sjn + pbc (Testing TPB using the SEM)

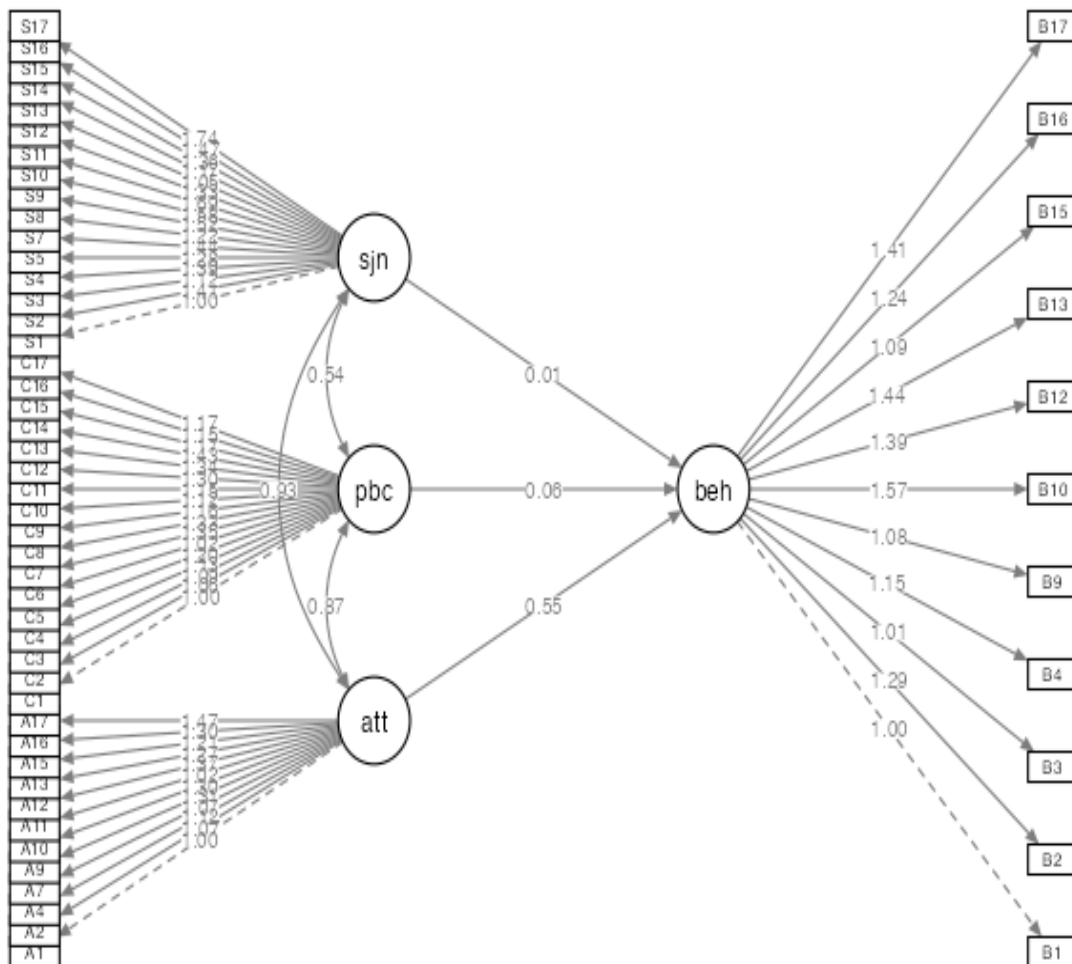


FIGURE 9: PATH DIAGRAM FOR THE CUMULATIVE DATA STUDY

Model Fit

Label	X ²	df	p	95% Confidence Intervals				
				SRMR	RMSEA	Lower	Upper	RMSEA p
User Model	8431	2204	< .001					
Baseline Model	12843	2278	< .001	0.101	0.132	0.129	0.135	< .001

	Model
Comparative Fit Index (CFI)	0.411
Tucker-Lewis Index (TLI)	0.391
Bentler-Bonett Non-normed Fit Index (NNFI)	0.391
Relative Noncentrality Index (RNI)	0.411
Bentler-Bonett Normed Fit Index (NFI)	0.343
Bollen's Relative Fit Index (RFI)	0.321
Bollen's Incremental Fit Index (IFI)	0.415
Parsimony Normed Fit Index (PNFI)	0.332

The aggregated model predicting YP behaviours was **highly significant at p <.001**. The Standardized Root Mean Square Residual (SRMR) is at 0.101 and the Root Mean Square Error of Approximation (RMSEA) is 0.132, which indicates a fair fit of the model to the observed data. However, the RMSEA p-value is less than .001, suggesting that the model does not fit the data perfectly, as there is some discrepancy between the observed and model-implied covariance matrices. Despite the Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) being 1.000 for all individual behaviors, in the case of aggregates the CF1 at 0.411 and TLI at 0.391 indicate a very poor fit of the model, with little improvement even after omission of certain variables.

Parameter Estimates

Dep	Pred	Estimate	SE	95% Confidence Intervals		β	z	p
				Lower	Upper			
behint	att	0.5040	0.1243	0.2603	0.748	0.6806	4.054	< .001
behint	sjn	0.0210	0.0823	-0.1403	0.182	0.0216	0.255	0.798
behint	pbc	0.1487	0.0896	-0.0269	0.324	0.1458	1.659	0.097

Based on the parameter estimates for all latent variables combines, attitude is the only statistically significant predictor of the aggregate behavior intent, estimated at 0.50. Subjective norm estimated low at 0.02 and PBC estimated at 0.14 have statistically insignificant p values at 0.79 and 0.09 respectively.

The cumulative findings of this study align with the individual findings for each of the 17 behaviors. Attitude is the most significant predictor of behavioral intent. While the impact

of PBC and SN were insignificant in the aggregated model, the individual models are perhaps more instructive, as individuals are likely to approach and consider the behaviours individually, rather than as a package.

4.5 Conclusion

To summarize the results of the analysed data, the following findings were noted:

1. Sample population based on the gender was representative of the target population. However, based on age, district and religion there is a severe lack of representation with certain minority groups being over-represented.
2. The reliability scale tests reveal that the various items relating to diverse lifestyle aspects were combined and showed a Cronbach's alpha of 0.91 for attitude, suggesting that the Yogic philosophy is a coherent concept (SN=0.91, PBC=0.94).
3. The mean values suggest an overall mean of 3.56 with SD of 1.54 for attitudes, mean of 3.82 with SD 1.49, PBC mean of 2.65 and SD of 1.24 and BI mean of 4.64 with SD of 1.21 based on the observations, suggesting an inclination towards YP. The high BI values, which were recorded as current behavior reflect the attitude-behavior gap.
4. Based on the analyses of the 17 themes individually, attitude had a positive and significant relation with behavioral intent for all 17 behaviors and was the dominant predictor of 13 behaviors. PBC was a dominant predictor of 4 out of 17 behaviors, was a positive and significant predictor of 11 behaviors. Subjective norms (SN) were insignificant in predicting 16 of the 17 behaviours, yet commonly displayed an unexpected negative effect on behavioural intentions, which may partly explain the observed attitude-behaviour gap.
5. The R square values vary from 0.193 to 0.715, explaining 19.3% to 71.5% variance in the the outcome in the 17 individual themes.
6. Even though the CFI and TLI were a perfect 1 for all individual themes, the aggregate model scored 0.411 and 0.391 respectively, making TPB a poor fit for the aggregate model.
7. Attitudes emerged as the only significant predictor of behavioral intent in the aggregate model, with positive but insignificant values for SN and PBC.

5 CONCLUSION

This study focuses on establishing the potential of utilizing the Yogic philosophy for transition to sustainable development. The discourse on sustainability projects deep concern for gravity of climate change and societal inequities. As established in the Brundtland report, development of the economy, growth of societies and protection of the environment cannot be viewed independently. The increasing gap between the Global North and the Global South is deepening the impact of climate change and social inequities. The growing population of the South and the unsustainable consumption patterns of the North are prominent contributors. While the discourse on the need for sustainability is strong, the influence of 'technological fetishism' is alarming. Stakeholders at all levels, in large numbers globally, are dependent on technological innovations in the near future to tackle the effects of climate change. There is a pressing need to take immediate measures that can be adopted by a large population at a relatively low cost.

Based on the literature review, the ancient wisdom of yoga and its philosophy can be considered key contenders of existing wisdom that can aid low-tech and low-cost solutions to sustainable development. The 'Eight Limbs of Yoga' contain guidelines for moral and ethical conduct that result in improved living of an individual, eventually impacting the society and the environment. There are numerous studies that establish the benefits of yoga on physical and mental wellbeing. However, the potential of yoga and its philosophy to achieve the sustainable developments goals is untapped to its complete potential.

This study builds upon an in-depth analysis of existing literature to explore the potential applications and adaptability of Yogic philosophy within the Viennese community. By addressing the research question, "**What is the perception of people living in Vienna towards sustainable behaviors promoted by Yogic philosophy?**" this research aims to shed light on the prevailing attitudes and opinions towards this ancient philosophy in the Austrian capital.

For the same, the Theory of Planned Behaviour (Ajzen, 1991) was chosen as the theoretical framework. The research design focuses on a quantitative research model through an online survey for the Viennese population, between the age group of 18-45

years. Based on the literature review and the TPB framework, a questionnaire was designed to study the attitudes, subjective norms, perceived behavioural control and behavioural intent towards 17 themes of sustainable behaviours promoted by YP.

The main answers of this study are structured according to the scale reliability, attitudes, perceived behavioural control, and the subjective norms. Findings for each of these constructs are presented, along with the study limitations that they suggest and their implications in the future.

5.1 Scale Reliability

The TPB determinants, which encompass attitudes, subjective norms, and perceived behavioral control, exhibit notably high Cronbach's alpha values, demonstrating significant levels of internal consistency, and affirming the cohesive nature of the Yogic Philosophers.

Thus, partially answering the research question assuming the sample is representative, **“The perception of the people living in Vienna towards sustainable behaviors promoted by Yogic philosophy is that they see the philosophy as a coherent concept.”**

5.2 Attitudes

The attitudes towards Yogic philosophy are reflected in the low mean scores across all 17 themes, indicating a favorable perception. As attitude consistently emerges as a significant and positive predictor of behavior, this finding strengthens the understanding. However, the lower value of attitudes compared to that of behaviour suggest an existing attitude-behaviour gap, that requires careful consideration and intervention.

Thus, effectively addressing the research question pertaining to the perceptions of the Viennese residents regarding the integration of sustainable behaviors derived from Yogic philosophy, presuming the sample is representative of the population.

5.3 Perceived Behavioural Control

Very low mean scores of PBC suggest that there's little impediment to adoption of behaviours. Therefore, suggesting high levels of (perceived) control in adopting sustainable behaviours promoted by the Yogic philosophy.

The accessibility of Yoga plays an important role in lowering the barriers to adopting Yogic behaviours. The growth of Yoga in Vienna, accessibility through different mediums (online training, apps, retreats, etc.) are key contributing factors. Additionally, the cost-of-transition is relatively low owing to the flexibility of YP, and a focus on basics, use of available resources, and a minimalistic approach. In the Viennese context, the high quality of life, high purchasing power, social benefits, commitment of the governance and residents towards adoption of sustainable behaviours also play a pivotal role in eliminating barriers and increasing control towards adoption of Yogic philosophy.

The low mean scores indicate high levels of control, and yet, hint at the prevalence of some barriers towards adoption of sustainable behaviours. Based on SEM outcomes, PBC is generally a positive and significant predictor of behaviour. Therefore, it is suggested to eliminate the remaining barriers in order to induce and enable more people to adopt the Yogic philosophy. Implications to lower barriers would include increase accessibility to Yoga and its philosophy by offering free Yoga education across Vienna (district-wise/community-wise/ in organizations).

5.4 Subjective Norms

The mean scores for subjective norms are relatively low, although higher in comparison to attitudes. This suggests that individuals rate their personal attitudes towards yogic behaviors more positively than they perceive the prevailing attitudes within their community. SN is generally insignificant, yet often has a negative influence on behaviour. Thus, it can be inferred that individuals do not perceive societal resistance towards yogic practices, but rather a sense of ambiguity and mixed perspectives prevailing in society.

5.5 Difference between attitudes and subjective norms

The discrepancy between the attitudes and the subjective norms are reflective of the limitations of this study, questioning the representativeness of the sample.

Firstly, the sample size (n)= 162 participants, as opposed to the requirement of 385 participants as suggested in the sampling section, highlights the small size of the sample as a key limitation of this study.

Secondly, an in-depth demographic analysis indicates that while the sample adequately represents gender, it falls short in accurately reflecting other demographic variables (age, religion, income, district of residence, etc.). As a result, this limitation serves as a notable aspect of the research.

Finally, the results are skewed in the favour of the Yogic philosophy. However, the difference between attitudes and SN raises concerns regarding the sample's representativeness of the population's views towards yoga. The presence of self-selection bias is likely, as the study may have attracted individuals who are already interested in or hold positive perceptions of the Yogic philosophy. Moreover, the limitation of social desirability bias suggests that respondents may have provided answers they believed would present them in a favorable light.

Based on the limitations of this study, it is strongly recommended that future research endeavors focus on conducting a more substantial study with a representative sample. By doing so, researchers can ensure the inclusion of diverse demographics and obtain a comprehensive understanding of people's viewpoints on adopting the yogic philosophy.

Implications for a representative sample

There is an evident incoherence between attitudes and subjective norms. If the sample population is an accurate representation of the broader community, attitudes essentially become the prevailing societal norms. Assuming the attitudes of all societal members are considered equally in assessing subjective norms, the average attitude value should equal the average subjective norm value. The difference in this case and the individualistic character of the society, suggests a societal disconnect.

Assuming that the sample is representative, the difference between attitudes and SN suggests that respondents systematically assess the SN as less favourable than it actually is. To bridge the gap between attitudes and behaviors, it is crucial to rectify this misjudgement. By increasing the visibility and accessibility of Yoga practices, individuals will have the opportunity to witness the society's positive approach towards the Yogic philosophy. This heightened (positive) exposure is expected to lead to a re-evaluation and potential positive reinterpretation of subjective norms by individuals. Increase in community-based Yoga activities can help in facilitating exposure and positive assessment of societal attitudes towards YP.

Implications for a non-representative sample

A non-representative sample suggests skewed inclination towards Yoga positivity within the sample group, which can be attributed to the self-selection bias. However, the existence of the attitude-behavior gap indicates the presence of an underlying subjective norm. This implies that the society as a whole may not assign the same level of positivity and importance to the performance of yogic behaviors as individuals in the sample do.

Therefore, if the sample is non-representative, the primary focus of the implications should revolve around altering the attitudes and perceptions of the Viennese community towards Yogic philosophy. Efforts must be dedicated to fostering a more widespread and inclusive comprehension of Yogic principles within the Viennese population.

A viable implication for the purpose would involve the comprehensive education of the Viennese society regarding Yoga, encompassing its philosophy, potential, and benefits. This can be achieved through the collaboration of various stakeholders, including civic bodies, public and private organizations, educational institutions, communities, and individuals. The implementation of a well-structured curriculum, interactive educational activities, events, and programs dedicated to Yoga can effectively create awareness among the Viennese community. By emphasizing the practical application and advantages of incorporating Yogic philosophy into daily practices such as fitness activities, reflection, dietary choices, consumption patterns, work-life balance, and community interactions, accessibility to Yoga can be significantly enhanced. Additionally, the development of services based on Yogic principles, such as apps and AI tools, can further contribute to making Yoga more accessible to a wider audience.

Another significant implication arising from this study's findings is the need to establish key indicators for evaluating the effectiveness of implementing Yogic philosophy in relation to Sustainable Development Goals. This can potentially avail the quantification of the impact of YP, scope for modification of the methods employed and adapting to the results accordingly. The exploration of these indicators can take place at both governance and institutional levels. Emphasizing the need for financial investment, it is crucial to allocate funds and subsidies to facilitate the progress of Yoga-based research and other related activities.

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Appendix 1: Questionnaire (English)



Yoga & Sustainability

Hello!

Thank you for taking time to participate in this study.

The following survey is part of my Master Thesis at Modul University, Vienna and aims at understanding the perceptions of people living in Vienna towards the yogic philosophy to identify its potential in transitioning to more sustainable lifestyle habits.

By continuing with the survey, you consent to having the information you provide collected and stored for the duration of the study. Your responses will be known only to the researcher, who can be contacted at: 62005094@modul.ac.at

Approx time: 12-15mins

Kindly read through the questions carefully and pick the number that indicates the your accurate answer on the given scale.

Your age... *

You identify as... *

Your educational qualification... *

Your Nationality... *

Your answer

Your Net Annual Income...

District of residence in Vienna *

Your Ethnicity...

Your religious affiliation...

Your Behaviours

The questions in this section are focused on identifying your behaviours based on the given options.

Read both ends of the scale carefully and pick the number closest to your real-life activity.

I usually... *

	1	2	3	4	5	6	7	8	9	10	
... get ample physical exercise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	... live a rather sedentary lifestyle

I usually... *

	1	2	3	4	5	6	7	8	9	10	
... practise forms of reflection (e.g.meditation/ journaling/ therapy)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	... avoid forms of quiet reflection (e.g.meditation/ journaling/ therapy)

I usually... *

	1	2	3	4	5	6	7	8	9	10	
... eat a plant-based diet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	... eat a meat-heavy diet

I usually... *

1 2 3 4 5 6 7 8 9 10

... live minimally and discard clutter ... surround myself with material possessions

I usually... *

1 2 3 4 5 6 7 8 9 10

... think optimistically ... think pessimistically

I usually... *

1 2 3 4 5 6 7 8 9 10

... balance my personal, professional and social commitments ... find that one activity dominates my schedule

I usually... *

1 2 3 4 5 6 7 8 9 10

... choose work that makes the biggest social impact ... choose work that brings the greatest financial rewards

I usually... *



I usually... *



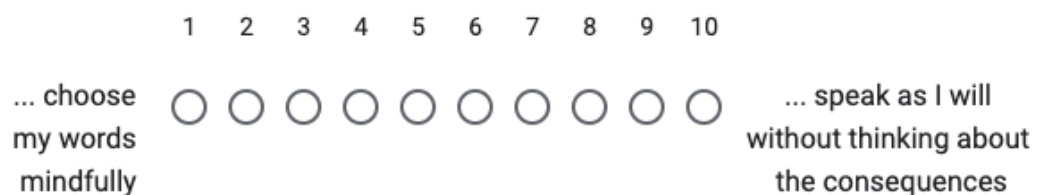
I usually... *



I usually... *



I usually... *



I usually... *

1 2 3 4 5 6 7 8 9 10

... spend a lot of time in nature ... spend all my time indoors

I usually... *

1 2 3 4 5 6 7 8 9 10

... make eco-friendly choices ... fail to consider my environmental impacts

Your Attitudes

The questions in this section are focused on identifying your attitudes (how you individually perceive the given behaviour) based on the given options.

Read both ends of the scale carefully and pick the number closest to your real-life perception.

I find it most beneficial to... *

1 2 3 4 5 6 7 8 9 10

... get ample physical exercise ... live a rather sedentary lifestyle

I find it most beneficial to... *

1 2 3 4 5 6 7 8 9 10

... practise forms of reflection (e.g.meditation/ journaling/ therapy) ... avoid forms of quiet reflection (e.g.meditation/ journaling/ therapy)

I find it most beneficial to... *



I find it most beneficial to... *



I find it most beneficial to... *



I find it most beneficial to... *



I find it most beneficial to... *



I find it most beneficial to... *

1 2 3 4 5 6 7 8 9 10

... spend a long time on my personal hygiene routines ... spend as little time as possible on personal hygiene

I find it most beneficial to... *

1 2 3 4 5 6 7 8 9 10

... balance my personal, professional and social commitments ... find that one activity dominates my schedule

I find it most beneficial to... *

1 2 3 4 5 6 7 8 9 10

... choose work that makes the biggest social impact ... choose work that brings the greatest financial rewards

I find it most beneficial to... *

1 2 3 4 5 6 7 8 9 10

... work with discipline and learn through the process ... slack at work because I know the job too well

I find it most beneficial to... *



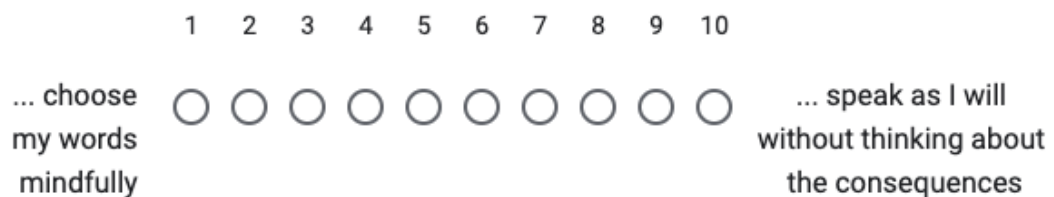
I find it most beneficial to... *



I find it most beneficial to... *



I find it most beneficial to... *



I find it most beneficial to... *



I find it most beneficial to... *

1 2 3 4 5 6 7 8 9 10

... make eco-friendly choices ... fail to consider my environmental impacts

Your Community

The questions in this section are focused on identifying the subjective norms (belief of your community) based on the given options. Here, **community refers to people around you.**

Read both ends of the scale carefully and pick the number closest to your real-life estimation.

My community thinks I should... *

1 2 3 4 5 6 7 8 9 10

... get ample physical exercise ... live a rather sedentary lifestyle

My community thinks I should... *

1 2 3 4 5 6 7 8 9 10

... practise forms of reflection (e.g.meditation/ journaling/ therapy) ... avoid forms of quiet reflection (e.g.meditation/ journaling/ therapy)

My community thinks I should... *

1 2 3 4 5 6 7 8 9 10

... eat a plant-based diet ... eat a meat-heavy diet

My community thinks I should... *

1 2 3 4 5 6 7 8 9 10

... eat local/
seasonal
produce ... eat what I feel
like at the time

My community thinks I should... *

1 2 3 4 5 6 7 8 9 10

... live
minimally and
discard clutter ... surround myself
with material
possessions

My community thinks I should... *

1 2 3 4 5 6 7 8 9 10

... live
frugally ... treat myself to the
things I want

My community thinks I should... *

1 2 3 4 5 6 7 8 9 10

... think
optimistically ... think
pessimistically

My community thinks I should... *

1 2 3 4 5 6 7 8 9 10

... spend a long
time on my
personal hygiene
routines ... spend as little
time as possible
on personal
hygiene

My community thinks I should... *

1 2 3 4 5 6 7 8 9 10

... balance my personal, professional and social commitments ... find that one activity dominates my schedule

My community thinks I should... *

1 2 3 4 5 6 7 8 9 10

... choose work that makes the biggest social impact ... choose work that brings the greatest financial rewards

My community thinks I should... *

1 2 3 4 5 6 7 8 9 10

... work with discipline and learn through the process ... slack at work because I know the job too well

My community thinks I should... *

1 2 3 4 5 6 7 8 9 10

... seek out social interactions with diverse groups ... seek out interactions with like-minded individuals

My community thinks I should... *

1 2 3 4 5 6 7 8 9 10

... engage with people in my local community ... mind my own business

My community thinks I should... *

1 2 3 4 5 6 7 8 9 10

... think of myself very highly ... find me loathing myself

My community thinks I should... *

1 2 3 4 5 6 7 8 9 10

... choose my words mindfully ... speak as I will without thinking about the consequences

My community thinks I should... *

1 2 3 4 5 6 7 8 9 10

... spend a lot of time in nature ... spend all my time indoors

My community thinks I should... *

1 2 3 4 5 6 7 8 9 10

... make eco-friendly choices ... fail to consider my environmental impacts

Ability & Belief

The questions in this section are focused on identifying your ability and beliefs for the given statements.

Read each statement carefully and pick the number that best indicates your agreement or disagree to the given statement.

I have the ability to get sufficient exercise. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I believe that physical exercise makes a difference. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I have the ability to practise self-reflection through my preferred medium (journaling/therapy, etc). *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I believe that self reflection makes a difference. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I have the ability to choose my diet. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I believe that my diet makes a difference. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I have the ability to choose local seasonal produce. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I believe that eating seasonal produce makes a difference. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I have the ability to live clutter-free. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I believe that living clutter-free makes a difference. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I have the ability to live frugally. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I believe that moderation in spending makes a difference. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I have the ability to think optimistically. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I believe that positive thoughts makes a difference. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I have spare time that I could use for personal grooming. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I believe that personal grooming makes a difference. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I have the ability to draw boundaries between my professional life and personal life *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I believe that work-life balance makes a difference *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

When choosing work, I have the ability to consider more than just financial benefits. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I believe that investing my efforts in making a social impact makes a difference. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I believe that working with discipline improves learning. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I have the ability to work with discipline. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I have the ability to interact with diverse groups. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I believe that non-discrimination makes a difference. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I have the ability to be an active community member. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I believe that engagement with the community makes a difference. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I have the ability to believe in myself. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I believe that positive self image makes a difference. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I have the ability to choose my words mindfully. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I believe that choice of words makes a difference. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I have the ability to spend time in nature. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I believe that spending time in nature makes a difference. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I have the ability to make eco-friendly choices. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree

I believe that choosing eco-friendly alternatives makes a difference. *

1 2 3 4 5 6 7 8 9 10

Strongly Agree Strongly Disagree