# Well-being in the Digital Age: Unravelling the Influence of Team Mindfulness and Psychological Safety in Global Virtual Teams.

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This study investigates the intricate dynamics between team mindfulness, psychological safety, and well-being within the context of global virtual teams. Drawing upon a sample of 466 students from diverse nationalities participating in an international business strategy course, data was collected through online surveys conducted over four years. The study employs quantitative analysis to explore the relationships between team mindfulness, psychological safety, and individual well-being. Findings reveal a direct positive correlation between team mindfulness and individual well-being, with specific components like nonjudgmental processing playing a significant role. Additionally, team psychological safety emerges as a crucial factor shaping individual well-being, emphasizing the importance of creating a supportive environment where team members feel safe to express themselves. The study uncovers a symbiotic relationship between team mindfulness and psychological safety, although psychological safety was not found to mediate the relationship between team mindfulness and well-being. Theoretical contributions of this study include a shift from individual-level to team-level constructs in understanding well-being within virtual teams, opening avenues for future research. From a practical standpoint, the study underscores the importance of fostering team mindfulness and psychological safety to enhance well-being in global virtual teams, providing valuable insights for scholars and practitioners striving to optimize team dynamics and member well-being in virtual team settings.

Keywords: Global Virtual Team, Well-being, Team Mindfulness, Psychological Safety, Conservation of Resources Theory (COR).

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1 INTRODUCTION

This chapter provides an overview of the context of the study, objectives, and methodology. It explores the emergence of global virtual teams amidst digital transformation and outlines the study's aim to investigate the impact of team mindfulness and psychological safety on member well-being. The chapter also discusses the boundaries of the study's scope and provides a brief roadmap for the subsequent chapters.

1.1 Background

The advent of digital technology in recent years has brought about significant changes in the functioning of teams, enabling the decentralization of tasks among geographically dispersed individuals (Gajendran & Harrison 2007, 1524). The digital transition that occurred between 2000 and 2020 resulted in a notable impact, namely the increased significance and prevalence of virtual teams. The increase in remote collaboration was also expedited by the COVID-19 epidemic in 2020, which necessitated the distant work of many employees from their residential dwellings. (Gibson 2020, 166)

There are several benefits associated with global virtual teams. The economic advantages include several aspects such as financial savings and the opportunity to tap into a wide range of skilled individuals from across the world. Additionally, these platforms foster innovation and facilitate the exchange of information. They also contribute to the development of cultural sensitivity and broaden people's market worth and career prospects. Furthermore, they provide novel employment options, especially for different segments of society, including persons who may have mobility constraints or prefer flexible work arrangements. Nevertheless, global virtual teams are not devoid of obstacles. Organizations may have challenges in communication and trust due to several factors such as technology limitations, cultural disparities, language difficulties, and incompatible instruments. These obstacles may result in project failures, disagreements, and escalated expenses. Furthermore, the lack of non-verbal communication might impede comprehension, and challenges may occur in the

transmission of implicit information. Insufficient social engagement may also be a disadvantage inside global virtual team environments. (Simpson 2017, 280-283)

In virtual team research, the emphasis is primarily on understanding team processes, emergent states, team effectiveness, and individual-level factors related to virtual teamwork (Raghuram et al. 2019, 13-14). The focus on well-being within the context of virtual teams seems to have been limited (Hill et al. 2024, 4; Cañibano et al. 2022, 1; Gilson et al. 2015, 11) but is recently gaining attention. A recent study highlights that while virtual work offers freedom from traditional office constraints, it can lead to negative consequences on well-being such as social isolation, weaker relationships, diminished boundary control, and increased work intensity (Hill et al. 2024, 29). Another study revealed that the distinctive dynamics of virtual team environments could affect team members by amplifying their workload, inducing work-related stress, and triggering fatigue- all of which are adverse markers of well-being (Standaert et al. 2023, 12). Another study found that within virtual teams, participants commonly face heightened job demands coupled with diminished job resources, resulting in adverse effects on their well-being (Cañibano et al. 2022, 10).

As research on virtual teams progresses, there is a growing interest in identifying factors that can enhance well-being within global virtual teams. While existing studies have highlighted the impact of virtual work on well-being, ongoing research aims to uncover strategies and practices that promote a positive work environment and support the well-being of team members in a global virtual team. A recent study elucidated the nuanced interplay between specific job resources and team members' well-being across different team types, highlighting the universal importance of factors such as flexible working hours and leader-member exchange, while emphasizing the critical role of autonomy in workstation design and communication quality, particularly with team leaders, for virtual and hybrid teams, respectively (Grobelny 2023, 9). Furthermore, the research identified the three core e-competencies of leaders—e-communication skills, e-change management skills, and e-technological skills—as pivotal factors influencing the well-being of employees in global virtual teams, with emotional intelligence emerging as a significant moderator of this association (Chaudhary et al. 2022, 1056). Similarly, another study underscored the importance of emotional intelligence composition within virtual teams in fostering well-being, suggesting that implementing team emotional management interventions

could effectively buffer its impact (Gamero et al. 2021, 13-14). Additionally, research demonstrated that affect management training led to tangible increases in well-being among virtual team members, further underscoring the multifaceted strategies available to enhance workplace well-being (González-Anta et al. 2021, 13).

Despite the emerging body of research on the well-being implications of virtual work, there remains a notable gap in understanding how team-level factors influence individual well-being within global virtual teams. While individual-level variables have been examined, such as emotional intelligence and job resources, less attention has been paid to team-level constructs that may significantly impact the well-being of global virtual team members. This study aims to address this gap by investigating the roles of team mindfulness and psychological safety in shaping the well-being of individuals within global virtual teams. Drawing upon the Conservation of Resources (COR) theory, which posits that individuals strive to protect, maintain, and build resources to cope with stressors effectively which enhances well-being (Hobfoll 1989, 516), the proposal of this study suggests that team mindfulness— a collective awareness and attention to the present moment, as well as nonjudgmental processing within the team (Yu & Zellmer-Bruhn 2018, 326) —and psychological safety—a shared belief that one can speak up without fear of negative consequences (Edmondson 1999, 354) —may serve as critical resources that contribute to the well-being of global virtual team members.

In previous studies, it has been distinguished that mindfulness and team mindfulness represent distinct constructs. While mindfulness pertains to an individual's capacity for present-moment awareness and nonjudgmental acceptance (Germer et al. 2016, 5), team mindfulness encapsulates the collective awareness, attention, and nonjudgmental attitude toward the present moment within a team setting (Yu & Zellmer-Bruhn 2018, 326). Additionally, early scholars such as Schein and Bennis (1965, 45) and Kahn (1990, 708) focus on the individual's experience of psychological safety, while Edmondson (1999, 354) conceptualizes psychological safety at the team level. In this study, mindfulness and psychological safety will be examined as a team-level construct. On the other hand, well-being will be referred to as psychological well-being. Psychological well-being refers to a person's overall mental health and happiness, including their sense of purpose, positive emotions, coping abilities, and fulfilling relationships (Ryff & Keyes 1995, 720).

Researchers have highlighted a positive correlation between individual mindfulness and employee well-being, suggesting that fostering mindfulness among employees could enhance their overall well-being (Lomas et al. 2017, 17; Malinowski & Lim 2015, 16; Carruthers & Hood 2011, 177). Additionally, studies have indicated that organizations possess the capacity to promote employee well-being by nurturing an environment of psychological safety (Duan et al. 2020, 13; Silla & Gamero 2018, 88), wherein individuals feel secure to express themselves without fear of negative consequences. Furthermore, interventions aimed at enhancing organizational mindfulness have been shown to positively impact psychological safety within the workplace (Bonde et al. 2023, 9), underscoring the potential for organizational practices to cultivate a supportive and safe work environment.

At this stage, it is reasonable to speculate that team mindfulness and psychological safety may exert influence on individual well-being within global virtual teams. Moreover, there is intrigue in exploring the effects of specific components of team mindfulness, namely present attention and nonjudgmental awareness, on both psychological safety and well-being.

1.2   Boundary of Research

The purpose of this study lies in the exploration of the relationships between team mindfulness, team psychological safety, and the well-being of members in global virtual teams. The research aims to understand how these factors interplay and influence each other within the context of global virtual teamwork. The hypotheses formulated in the study provide a framework for testing the proposed relationships between these constructs, thereby contributing to theoretical advancements in understanding virtual team dynamics. The research method employed is quantitative, utilizing surveys as a data collection tool to gather numerical data for statistical analysis. The chosen research design is explanatory, aiming to establish causal relationships between variables derived from existing theories, particularly the Conservation of Resources theory. The pragmatic philosophy guides the study, emphasizing the practical usefulness of concepts and flexibility in employing various research methods to address the research question effectively.

The research strategy involves a cross-sectional study design, capturing a snapshot of team mindfulness, psychological safety, and well-being among global virtual team members at a specific point in time. This approach allows for a comprehensive examination of the variables in focus within the given context. The research boundaries are defined within the confines of the selected course, "KVS1: International Business Strategy," offered at the University of Turku, which provided a suitable environment for studying global virtual teams. However, the findings and implications drawn from this study may have broader applicability beyond the specific course context, offering insights for organizations seeking to optimize the functioning of virtual teams in a globalized work environment.

1.3   Research Questions and Structure of Study

The primary aim of this study is to investigate the influence of team mindfulness and team psychological safety on the well-being of individuals participating in global virtual teams. This inquiry forms the central research question guiding the investigation of this study:

"How do team mindfulness and team psychological safety influence the well-being of members in global virtual teams?"

To address this question comprehensively, this study is structured into several interrelated components, each contributing to a deeper understanding of the phenomenon under scrutiny.

The rest of the thesis is structured as follows. First, it defines the basic elements of the study. This includes explaining global virtual teams and introducing key ideas like team mindfulness, psychological safety, well-being, and Conservation of Resources theory. Then, it explores the theoretical background, reviewing existing literature to show the links between team mindfulness, psychological safety, and individual well-being. This provides a clear overview and explains the reasons behind the study's hypotheses.

Following the theoretical exploration, the discussion transitions to a methodological approach. Here, the research design, data collection methods, and

analytical techniques employed in the study are meticulously outlined. This methodological transparency is crucial for ensuring the validity and reliability of the findings. In the subsequent chapter, empirical findings derived from the analysis are presented. These findings offer valuable insights into how team mindfulness and team psychological safety impact the well-being of members in global virtual teams. Moreover, contextualizing these findings within the broader literature landscape and discussing their implications for both academic and organizational practice follows. As the conclusion of the study approaches, a critical reflection on its limitations and avenues for future research is engaged. By acknowledging the constraints inherent in the methodology and data interpretation, the aim is to pave the way for further study and refinement of understanding in this domain.

2   LITERATURE REVIEW

This section provides an overview of existing literature, focusing on topics such as global virtual teams, mindfulness from both individual and team standpoints, psychological safety, well-being, and conservation of resource theory.

2.1   Global Virtual Team

Teams are characterized as dynamic entities consisting of two or more persons who are interdependent and work together collaboratively to accomplish shared goals (Peralta et al. 2018, 5). A virtual team is often defined as a collective of persons that collaborate remotely, situated in diverse geographical places, and use various communication tools, such as email, instant messaging, video conferencing, or phone conferencing, to aid their collaborative efforts (Gibson & Gibbs 2006, 453). According to Ebrahim et al. (2009, 1578), the concept may also include collectives or units that collaborate in an asynchronous manner or across several hierarchical levels within an organization. Virtual teams may be described as groups of workers that are physically separated, work for different organizations, and operate in different time zones. These teams are brought together via the use of information and communications technology to do various activities for an organization. (Powell et al. 2004, 7)

Virtual teams are characterized by four essential components: geographic dispersion, electronic dependency, national variety, and dynamic structure. It is crucial to analyze the unique consequences of these traits individually. (Gibson & Gibbs 2006, 455) In virtual teams, the members are spread out across different locations, impacting the challenges and outcomes the team may face. For example, a virtual team with members on different continents is more dispersed than a team whose members are all in the same city. (Warshaw et al. 2016, 1) A virtual team relies heavily on computer-based communication technology, which enables its members in different locations and time zones to work together (Jarvenpaa & Leidner 1999, 792). Changes in team membership can be just as common as having stable team members, and their roles can also change over time (Li & Van Knippenberg 2021, 577). The composition of virtual teams in terms of national diversity may vary, ranging from teams consisting only of members from one country to teams that are globally diverse, including individuals

from various nations who possess a shared nationality (Gibson & Gibbs 2006, 460). In the domain of virtual teams, it is conceivable for all constituents to be geographically concentrated inside a single nation, or they may be geographically spread over diverse locations of the globe. The latter configuration is sometimes denoted as a Global Virtual Team (GVT). Global virtual teams (GVTs) refer to teams comprised of individuals from diverse nations and cultures, who rely mostly on communication technology to engage in collaborative efforts about interdependent activities (Gibbs 2009, 906).

So, a global virtual team (GVT) refers to a collective unit consisting of two or more persons who are mutually reliant on each other and collaborate towards common goals. These teams use various communication tools such as email, instant messaging, and video conferencing to support their interactions.

2.2 Mindfulness

The concept of mindfulness holds significant importance. Its roots can be traced back to the ancient teachings of Buddhism, forming a profound historical foundation. To truly grasp the essence of mindfulness, it's crucial to delve into its origins within this tradition. In Buddhism, the term for mindfulness can be linked to two sources: 'sati' in Pali and 'smṛti' in Sanskrit. Translated into English, these terms encapsulate the idea of 'paying attention without judgment.' However, within the broader landscape of philosophy and practice, they carry a much richer and more nuanced meaning, sparking extensive discussions and reflections. (Sharf 2014, 939, 941-942)

While firmly rooted in Buddhism, mindfulness has transcended geographical boundaries, finding a receptive embrace in the Western world. It has been the subject of substantial research and has been adapted to suit diverse circumstances including but not limited to psychology, neurology, and medicine. (S. Liu et al., 2020) This thesis will primarily examine the psychological dimensions of mindfulness.

Mindfulness is defined as the act of directing one's attention to the present moment, devoid of judgment while fostering kindness and curiosity (Kabat-Zinn & Hanh 2009, 1). Another insightful definition portrays mindfulness as a deliberate act of

self-regulating attention. This practice entails intentionally directing our focus toward the experiences we encounter, embracing an attitude of curiosity, openness, and acceptance (Bishop et al. 2004, 232). To truly grasp the essence of mindfulness, one must perceive it as an awareness of the moment. This awareness should extend beyond mere observation, encouraging us to approach our experiences and the world around us with kindness and without judgment (Germer et al. 2016, 5).

From the existing literature, it is apparent that mindfulness is a practice that revolves around the profound focus on the present moment, emphasizing awareness and attention. This definition is shaped by two fundamental components: the nature of attention itself (the 'what') and the characteristics defining how that attention is directed (the 'how'). These key components have been elucidated by various researchers. (Baer 2019, 3) Considering the above three definitions of mindfulness, in understanding the 'what' aspect of mindfulness, we delve into the fundamental elements that compose this state of being present and aware. One facet of the 'what' is paying explicit attention—an act that sparks awareness through this intentional focus (Kabat-Zinn & Hanh 2009, 2). Another dimension involves the self-regulation of attention, ensuring that it remains fixated on immediate experiences (Bishop et al. 2004, 234). Additionally, this encompasses an acute awareness of the current moment and what it entails (Germer et al. 2016, 5).

On the other hand, exploring the 'how' aspect of mindfulness sheds light on how one engages with the present moment. It involves a deliberate intent to be present in the current moment, devoid of judgment, and with a sense of purpose (Kabat-Zinn & Hanh 2009, 3). This also includes an orientation characterized by curiosity, openness, and acceptance, underlining the attitude one adopts while being mindful (Bishop et al. 2004, 234). Furthermore, this 'how' aspect incorporates acceptance, extending beyond mere nonjudgment to embrace a kind and friendly disposition (Germer et al. 2016, 5). It embodies an open-hearted and compassionate approach towards oneself and the surrounding world.
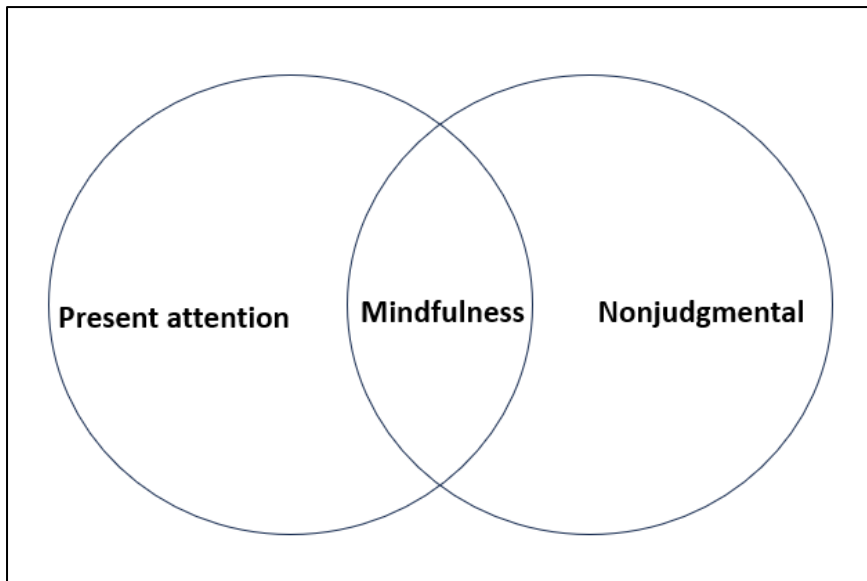
Figure 1. Mindfulness and its components

To illustrate the concept of awareness ('what') in mindfulness, consider a scenario where an individual is eating. Merely acknowledging the act of eating isn't mindfulness in itself. It's when this person deliberately and consciously tunes into the sensations, flavors, textures, and overall experience of eating, that awareness in mindfulness truly manifests. They are fully present with each bite, not lost in thought or distractions. For instance, this person actively notices the taste of the food, the texture in their mouth, the aroma, and how their body responds to each bite. If their mind starts to wander, perhaps to thoughts about work or plans for the evening, they gently and purposefully guide their attention back to the act of eating. This intentional re-centering of attention characterizes mindfulness, distinguishing it from mere acknowledgment or passive recognition of an activity. (Yu & Zellmer-Bruhn, 2018) Another example could be in a team working towards a tight deadline for a software development project, practicing mindfulness involves more than just acknowledging the work being done. It entails immersing oneself in the current task with undivided attention, focusing on coding, design, and team discussions while setting aside unrelated thoughts. Mindfulness also includes purposeful awareness—understanding the project's goals, acknowledging individual thoughts and emotions related to the work, and recognizing how one's actions contribute to the team's success. If distractions arise, such as thoughts about other tasks or concerns, the mindful team member consciously guides their attention back to the project, preventing unnecessary diversions.

On the other hand, practicing mindfulness in the 'how' aspect means trying to stay focused on what's happening right now without judging or reacting. For instance, if a driver gets cut off by another car suddenly changing lanes, being mindful is about just noticing what happened without immediately thinking it's bad or the other driver is a bad driver. It's about not jumping to conclusions and allowing things to happen without getting upset or angry. (Yu & Zellmer-Bruhn 2018, 326) Another example could be imagining a team in a meeting where one team member presents an idea that's different from the norm. The habitual reaction might be to quickly categorize the idea as 'wrong' or 'impractical' and immediately shut it down mentally. However, applying mindfulness in this situation would involve a deliberate intent to be present and open-minded. In the mindful approach, team members would actively listen to the idea without rushing to judge or label it. They would refrain from prematurely categorizing the presenter as 'misinformed' or 'out of touch.' Instead, they would focus on understanding the idea, giving it fair consideration, and appreciating the perspective it brings to the discussion. This allows for a more collaborative and open exchange of ideas within the team, promoting a respectful and non-judgmental environment.

From the discussion, it can be said that mindfulness is the intentional act of directing one's attention to the present moment, devoid of judgment, while fostering kindness, curiosity, and openness to experiences. It encourages a deep engagement with the current task or situation and a non-reactive, accepting stance toward one's thoughts, emotions, and external events.

2.3   Team Mindfulness

Within the field of organizational research, there has been a growing body of literature that investigates the importance of mindfulness in organizations. Initially, the focus was on individual mindfulness as a personal characteristic. However, more recently, there has been a recognition of the need to examine mindfulness within the context of team dynamics, as team-based structures have become increasingly prevalent in modern organizations. (Liu et al. 2022, 430) This shift in focus reflects a broader understanding of mindfulness, encompassing collective experiences and interactions within a team. Team mindfulness is defined as team members' shared perception that team interactions

are marked by awareness and attention to current occurrences, as well as experiential, nonjudgmental processing of within-team experiences (Yu & Zellmer-Bruhn 2018, 326). Essentially, it encapsulates a collective mindfulness wherein the team collectively engages with its environment and experiences with a profound sense of awareness and an absence of judgment.

It is crucial to distinguish team mindfulness from the mere aggregation of individual trait mindfulness. Team mindfulness is not simply the total of each member's mindfulness; rather, it is a distinct property that emerges from the shared beliefs and mutual understanding within the team (Yu & Zellmer-Bruhn 2018, 341). This differentiation highlights the unique nature of team mindfulness as a collective phenomenon, shaped by shared perceptions and interactions within the team.

It is clear from the definition that team mindfulness also consists of two basic components. These components are essential for developing a team's overall consciousness and better comprehending its dynamics. The first component of team mindfulness, or the "What," centers on a common view among team members. This view is supported by heightened vigilance and a sharp focus on current events during team interactions. It highlights the significance of being in the present, actively participating in what is occurring, and having a clear awareness of the continuing dynamics within the team. The basis of team mindfulness is this shared perspective, which creates the conditions for the group's experience of awareness. (Yu & Zellmer-Bruhn 2018, 327)

Consider a scenario involving a virtual project team working in a software development organization. During their regular online meetings, the members practice mindfulness deliberately. They start by minimizing potential interruptions, such as disabling notifications on their devices. Throughout their discussions on project progress, each participant actively listens and shares their insights, showing a clear understanding of the current status and challenges. When reviewing the progress of a specific feature, team members carefully analyze the complexities, potential obstacles, and how the feature fits into the overall project. They engage in a collaborative exchange of viewpoints and ideas, building on each other's contributions. This collective awareness and focused attention help the team thoroughly understand the

project's dynamics, ensuring that decisions are well-informed and aligned with the team's goals.

The sensory and nonjudgmental processing of intrateam encounters is the second component (the "How") of team mindfulness. It denotes a method of thinking about the team's internal experiences without critiquing or judging them. Team members participate in comprehending and commenting on these events through an experiential lens, enabling a greater grasp of the dynamics, relationships, and results of the team. This component promotes a culture of acceptance and learning among the team by encouraging a non-biased, open-minded attitude. (Yu & Zellmer-Bruhn 2018, 327)

Let's consider a virtual sales team operating within a global e-commerce firm. After a challenging quarter marked by numerous rejections and missed targets, the team gathers for a virtual reflective session. Instead of assigning blame or making judgments, they choose to adopt an experiential and nonjudgmental approach to their interactions. Each team member shares their experiences, focusing on the techniques they used, the obstacles they faced, and the lessons they learned. They engage in open dialogue about what worked and what didn't, avoiding any criticism of one another. Through this process, the team collectively gains insights into both successful and unsuccessful strategies, enabling them to develop a more effective and productive plan for the next quarter.

So, team mindfulness can be defined as a collective belief held by team members, emphasizing the need to be fully conscious and attentive throughout team interactions, while adopting an open and nonjudgmental attitude towards comprehending and deriving knowledge from intra-team experiences.

2.4 Team Psychological Safety

The concept of psychological safety, which was first examined by academics in the area of organizational studies during the 1960s, saw a resurgence of interest in the 1990s and has since remained a topic of great fascination for researchers and practitioners in the realm of organizational behavior (Edmondson & Lei 2014, 24). The idea was first

formulated by Schein and Bennis in 1965, as a fundamental component of the "unfreezing" process that is essential for organizational learning and transformation. The aforementioned process encompasses the act of diminishing perceived dangers, removing obstacles to facilitate change, and cultivating an atmosphere that promotes experimentation and embraces failure without adverse consequences (Schein & Bennis 1965, 45). Aligned with this viewpoint, scholarly investigations have centered on understanding the essence of psychological safety, discerning variables that contribute to it, and researching its significant consequences for people, teams, and organizations in their entirety.

Kahn (1990) posits that psychological safety is a crucial need for people to cultivate a feeling of commitment and engagement within their various job responsibilities. According to Kahn (1990, 708), psychological safety means self-expression which refers to an individual's ability to openly communicate their thoughts and ideas without apprehension about potential negative consequences on their self-perception, social standing, or professional trajectory. Moreover, the concept of psychological safety is seen as a shared perception among team members, whereby they hold the belief that the team's environment fosters an atmosphere conducive to taking interpersonal risks (Edmondson 1999, 354).

One notable observation is that Schein and Bennis (1965) as well as Kahn (1990) direct their attention toward the individual's experience of psychological safety, whereas Edmondson's (1999) early research conceptualizes psychological safety as a construct of the team. Despite having different literary origins and exploring different analytical perspectives, these significant works should be considered not as conflicting viewpoints, but rather as complementary perspectives on the same concept. They emphasize the importance of creating a work environment that minimizes perceptions of interpersonal risk. (Frazier et al. 2017, 116) As said by Edmondson and Lei (2014, 24), "a central theme in research on psychological safety—across decades and levels of analysis— is that it facilitates the willing contribution of ideas and actions to a shared enterprise"

The attributes of a psychologically secure work environment include the guarantee that colleagues will not face rejection based on their authenticity, expression of opinions, and mutual regard for each other's abilities. Moreover, it encompasses a

sincere curiosity in each other, optimistic motives, effective methods for resolving conflicts, and an environment that fosters innovation and the willingness to take risks. (Edmondson 1999, 355) The establishment of psychological safety is crucial in facilitating the advancement and progress of individuals within a team context. When workers have a sense of security and get enough support to freely express their thoughts and opinions without fear of negative consequences or criticism, they are more inclined to actively participate in their job responsibilities, generate novel ideas, and successfully cooperate with their colleagues. Furthermore, the establishment of a psychologically secure atmosphere has been shown to positively impact organizational learning, flexibility, and overall productivity, hence resulting in long-term success and expansion (Newman et al. 2017, 521).

So, psychological safety is when everyone in a group or organization believes that the space is safe for honest conversation, sharing thoughts, and taking social risks without worrying about how it will affect their self-esteem, social standing, or professional growth. It includes an environment where people feel safe enough to share their ideas, thoughts, and true selves without worrying about being judged. People respect and are interested in each other in a mentally safe environment.

2.5 Well-being

The idea of well-being is a complex and nuanced phenomenon that has drawn significant attention and academic study. The term may be conceptualized as a condition marked by feelings of contentment, well-being in both the physical and psychological domains, and overall socio-economic success. The definition provided contains a diverse array of components, making well-being a multifaceted and intricate concept. The scholarly literature regarding well-being extensively examines the many aspects of this construct, explaining its importance within diverse settings, such as the field of jobs. According to Clifton & Harter (2021), a dominant conceptualization of well-being underscores the degree to whereby individuals can satisfy their desires, attain a feeling of satisfaction, and attain a condition of harmony and contentment in their occupational domain. This idea underscores the need to achieve a harmonious equilibrium between work-related obligations and personal fulfillment to obtain overall

well-being. According to the World Health Organization (2023)[1], a holistic perspective is used when considering well-being, which is characterized as a condition including total physical, mental, and social well-being, rather than just the lack of sickness or weakness. The provided definition emphasizes the comprehensive component of well-being, including not only physical well-being but also mental and social dimensions. The concept extends beyond the simple lack of disease to cover a favorable condition of general well-being and contentment. Within the scope of the professional environment, the concept of employee well-being is often linked to the extent to which people have a sense of engagement and contentment in their respective positions (Wright & Cropanzano 2000, 91). This deals with the mental and psychological feelings of workers throughout their professional activities and their overall feeling of satisfaction inside the corporate setting.

To further explore the multifaceted nature of well-being, scholars have formulated many theoretical constructs, including subjective well-being, eudemonic well-being, and psychological well-being. The concept of subjective well-being, as stated by Diener et al. (2003, 404), pertains to an individual's cognitive evaluation and subjective experience of their emotional state. The construct encompasses positive affect, which refers to pleasant emotions like as pleasure and contentment, negative affect, which pertains to feelings of discomfort or stress, and life satisfaction, which involves an appraisal of personal standards, objectives, and successes. Subjective well-being is often used as a metric in scholarly studies and has been associated with a multitude of favorable consequences within the professional setting, including enhanced job productivity and satisfaction with work.

Eudemonic well-being adopts a philosophical standpoint, emphasizing the degree to which people are actualizing their potential and achieving their objectives (Waterman et al. 2008, 46). This concept focuses on the process of individual maturation and advancement, providing a more abstract but equally significant aspect of overall welfare. The augmentation of eudemonic well-being has the potential to substantially amplify job satisfaction and mental well-being among workers, hence contributing to a more comprehensive and harmonious work experience.

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[1] https://www.who.int/data/gho/data/major-themes/health-and-well-being

The concept of psychological well-being, as defined by Ryff and Keyes (1995, 720), centers on the degree to which people get purpose and significance from their lives, encounter happy feelings, and foster constructive interpersonal connections. This idea explores the internal experiences and emotional states of people, and it is often used in research on employee well-being. When firms place emphasis on and execute measures to improve psychological well-being, it effectively lowers stress and the likelihood of burnout, while simultaneously increasing work satisfaction. "Psychological well-being" is what will be used to describe "well-being" in this thesis.

2.6 Conservation of Resources (COR) Theory

The theory of Conservation of Resources (COR) was introduced by Dr. Stevan E. Hobfoll in the year 1989. The new approach to comprehending stress integrates both environmental and cognitive approaches. This theoretical framework posits that individuals engage in proactive efforts to obtain, safeguard, and enhance resources that have significance to them. Furthermore, individuals see possible or existing depletion of these esteemed resources as a source of risk. (Hobfoll 1989, 516)

Within this theoretical framework, there are two primary approaches to attaining these objectives. One such strategy is pursuing instant benefits within the present circumstances. However, an alternative and more effective approach entails the cultivation and maintenance of individual attributes (such as aptitudes or self-assurance) and societal conditions (such as robust interpersonal connections) that enhance the likelihood of attaining benefits while minimizing the risk of giving up these attributes and situations. The COR model is based on the second approach. The meaning of stress in this framework is derived directly from the concept: Psychological stress occurs in situations when individuals perceive a potential loss of resources exceeding their potential gains, experience actual resource loss, or fail to get anticipated gains after investing in such resources. This phenomenon might manifest as either a subjective perception of loss or an objective reality of loss.

In the present setting, resources play a pivotal role in comprehending the phenomenon of stress. Resources include a wide range of assets, including human attributes, tangible items, circumstances, or sources of power, which have value for

individuals and facilitate the attainment of their objectives. Examples of instances include proficiencies, self-worth, economic solvency, and occupation. Occasionally, environmental conditions have the potential to jeopardize or exhaust individuals' resources. These risks include potential consequences such as the erosion of an individual's social status, financial security, interpersonal relationships, fundamental values, or personal sense of worth. The significance of these losses lies in the fact that resources possess both functional values, aiding in the attainment of our objectives, and symbolic worth, contributing to the formation of our distinct identities. (Hobfoll 1989, 516)

The theoretical underpinning introduced herein encompasses the 'Resource Caravans and Resource Caravan Passageways Principles' alongside the associated 'Corollaries' (Hobfoll et al. 2018, 106). This conceptual framework posits that resources, whether about individuals or organizations, do not subsist in isolation but rather aggregate within collectives or caravans. Additionally, the notion of "Resource Caravan Passageways" suggests that ecological conditions exert a considerable influence on the facilitation or hindrance of resource creation and sustainability. Integral to this theoretical construct are the corollaries, elucidating the intricate dynamics governing resources. Corollary 1 asserts the heightened resilience of entities possessing greater resources, rendering them less vulnerable to losses and more adept at accumulation. Corollary 2 delves into the cyclicality of resource loss, emphasizing its self-perpetuating ramifications over successive iterations. Complementary to this, Corollary 3 accentuates the gradual and relatively subdued trajectory characterizing resource gain spirals. Collectively, these corollaries substantially contribute to an enhanced understanding of the multifaceted landscape of resource management. They furnish valuable insights into strategic considerations aimed at fortifying resilience, fostering adaptability, and charting a course toward sustained success within the dynamic realm of resource dynamics.

In simpler terms, the conservation of resources concept posits that individuals are driven to acquire more resources to safeguard themselves against potential future losses and enhance their overall well-being. This motive compels individuals to use their current resources to enhance their existing assets.

2.7 Hypothesis Development

In this section, the hypotheses planned for investigation in this study will be outlined. These hypotheses are designed to explore how team mindfulness and its elements relate to psychological safety and well-being. The focus will be on examining the connections between team mindfulness and its components with psychological safety, as well as examining whether psychological safety acts as a mediator between team mindfulness and its components and well-being in the context of the global virtual team.

2.7.1 Team Mindfulness and Well-being

The Conservation of Resources (COR) theory suggests that people strive to protect, maintain, and enhance their resources to successfully cope with stresses (Hobfoll 1989, 516). Mindfulness, recognized as an individual asset, enhances one's consciousness of both professional and personal assets, enabling people to embrace and adjust to changes in their environment. Mindfulness facilitates the development of a nonjudgmental and receptive state of mind towards the current moment, enabling workers to discern and use alternate resources. This, in turn, helps to alleviate the negative effects of resource depletion on employee motivation. Consequently, this fosters the development of flexible and forward-thinking behaviors in ever-changing professional environments. (Kroon et al. 2015, 639)

The fundamental notion of individual mindfulness was used as the framework for understanding team mindfulness (Yu & Zellmer-Bruhn 2018, 332). The conceptualization of mindfulness as a personal resource implies that team mindfulness may be seen as a shared communal resource within a team. Similar to how individual mindfulness assists in the preservation of personal resources, team mindfulness plays a role in safeguarding the collective cognitive and emotional resources within a team. The practice of individual mindfulness may lead to the development of a "decentered perspective" as a means of coping with personal pressures (Good et al. 2016, 18). Similarly, team mindfulness has the potential to cultivate a shared decentering experience among team members. The collective ability to perceive and react to potentially difficult situations in the workplace with an impartial and composed mentality has the potential to enhance the overall positivity of the team dynamic. As a

result, team members may encounter a decrease in overall stress levels, therefore cultivating a state of well-being within the team.

In addition, the practice of mindfulness enhances an individual's resilience by effectively separating external stimuli from involuntary physiological and psychological damage (Good et al. 2016, 18). In the context of a team environment, this increased resilience may be seen via the team's capacity to promptly rebound from adversities and obstacles. The team's collective mindfulness potentially plays a role in fostering a shared sense of confidence when faced with stresses in the workplace. This, in turn, may facilitate the development of adaptive coping strategies and enhance the team's overall resilience. Moreover, it is crucial to note that positive emotions play a critical role in the process of individual recovery from unfavorable occurrences (Fredrickson 2000, 1). Similarly, within the framework of a team, a team that practices mindfulness may collectively encounter a greater abundance of pleasant feelings, even when confronted with difficult circumstances. The establishment of a pleasant emotional environment has the potential to positively impact team dynamics, fostering collaboration and mutual support. These aspects are strongly associated with the overall welfare of the team. Furthermore, the concept of mindfulness has considerable importance as it provides an alternate strategy for effectively managing stressful circumstances via the process of unraveling ingrained responses and promoting adaptable cognitive patterns (Good et al. 2016, 18). In the context of a team environment, this might manifest as a heightened ability to adapt and collaborate in the process of resolving problems, therefore mitigating conflicts and enhancing the overall welfare of team constituents.

Given the above discourse, it is plausible to argue that team mindfulness plays a role in promoting improved welfare in the context of global virtual teams, coinciding with the tenets of the Conservation of Resources (COR) theory. Consequently, the following hypothesis is proposed:

H1a: Team mindfulness is positively correlated with team members' well-being in global virtual teams.

Team mindfulness is encapsulated by the collective perception among team members that their interactions are characterized by heightened awareness, coupled with thoughtful and nonjudgmental processing of shared experiences within the team

(Yu & Zellmer-Bruhn 2018, 326). A compelling argument can be made, therefore, that both the facets of present attention and nonjudgmental processing, integral components of team mindfulness, are intrinsically linked to the positive augmentation of team members' well-being. In light of these premises, the following hypotheses are formulated:

H1b: *Present attention, as a constituent of team mindfulness, exhibits a positive correlation with the well-being of team members in global virtual teams.*

H1c: *Nonjudgmental processing, as a vital aspect of team mindfulness, demonstrates a positive correlation with the well-being of team members in global virtual teams.*

2.7.2 Team Psychological Safety and Well-being

The primary principle of the Conservation of Resources (COR) theory is centered on the notion that humans possess an intrinsic motivation to amass resources as a strategy to safeguard themselves against probable resource depletion (Hobfoll 1989, 516). According to the conservation of resources theory, the presence or absence of four key categories of resources has a crucial role in influencing an individual's level of stress or well-being. The resources in question comprise several elements, including object resources, conditions, energy, and personal characteristics. Personal characteristics include distinct attributes, abilities, or proficiencies that often contribute to one's ability to effectively cope with stress. Social support is often seen as a personal resource due to its impact on promoting good self-perception and the conviction that individuals can successfully navigate difficult circumstances. (Hobfoll 1989, 517)

Psychological safety may be seen as a manifestation of social support, particularly noteworthy in its significance. The concept of social support encompasses the provision of resources by people to assist others in managing stresses and attaining their goals (Cohen & Syme 1985, 4). Whereas, psychological safety refers to the perception that individuals possess the ability to openly articulate their thoughts, engage in calculated risks, and commit errors without the presence of imminent negative repercussions (Edmondson 1999, 354). Therefore, the development of

psychological safety follows from social support, as psychological safety is one kind of support that people may get from others to help them feel secure and supported, which in turn enhances overall well-being.

Additionally, the conservation of resources model suggests that people undergo stress not just in situations when they encounter real resource depletion, but also when they evaluate their available resources and anticipate possible losses (Hobfoll 1989, 518). Psychological distress is commonly experienced by individuals when they are compelled to engage in behaviors that contradict their fundamental self-concept or core values. The potential endangerment of these fundamental principles might lead to feelings of worry and emotional distress. Therefore, the theory posits that the impression of a decrease in resources or the presence of danger may induce stress, resulting in adverse effects on an individual's overall state of being. (Hobfoll 1989, 520) The establishment of psychological safety within a given context facilitates an atmosphere whereby people can openly communicate their thoughts and behaviors by their own beliefs. This, in turn, serves as a protective mechanism against the perceived depletion of resources and stress, eventually leading to enhanced holistic well-being.

Prior studies have explored the correlation between psychological safety and well-being in conventional teams and organizations that are physically situated in the same place. Numerous studies have repeatedly shown that individuals within a team who possess a heightened perception of psychological safety are inclined to report decreased levels of stress, worry, and burnout. Concurrently, individuals in this context exhibit heightened levels of work satisfaction, engagement, and general well-being. (Obrenovic et al. 2020, 12; Idris & Dollard 2014, 6) The aforementioned results highlight the crucial significance of psychological safety in influencing the cognitive and affective well-being of individuals within a team.

In the realm of global virtual teams, which are distinguished by their geographical dispersion, varying time zones, and heightened dependence on digital communication, there exist distinct challenges and prospects (Lechner & Mortlock 2022, 2) that can profoundly impact the dynamic relationship between psychological safety and well-being. In teams characterized by restricted physical closeness and face-to-face encounters, the significance of psychological safety is heightened since it plays a crucial role in preserving the well-being of individuals and promoting productive

cooperation. There is a contention that under such contexts, individuals within a team who sense elevated levels of psychological safety may encounter enhanced well-being. Therefore, the following hypothesis has been proposed:

H2: *Team Psychological safety is positively correlated with team members' well-being in a global virtual team.*

2.7.3 Team Mindfulness and Psychological Safety

The COR theory posits that resources are not isolated entities but rather travel together in interconnected packs or "caravans." Personal resources, such as self-esteem, optimism, and self-efficacy, are often intertwined and co-develop due to shared environmental factors, including supportive social conditions within families and workplaces. (Hobfoll et al. 2018, 107)

Psychological safety is characterized by a shared belief among team members that the team context encourages the expression of ideas, the admission of mistakes, seeking help, and discussing problems without fear of punishment or retribution (Edmondson 1999, 354). This aligns with the COR theory, emphasizing the interplay between personal resources and supportive social conditions.

Team mindfulness, as an emergent state, shares similarities with psychological safety. Team mindfulness pertains to the collective understanding among team members that team interactions involve being attentive and aware of current events, along with the experiential and nonjudgmental processing of internal team experiences (Yu & Zellmer-Bruhn 2018, 326). This aligns with the COR theory, as mindfulness can be viewed as a cognitive resource that helps teams manage and conserve their mental and emotional resources effectively.

Team mindfulness, as a construct, is linked to psychological safety but distinct from each other (Yu & Zellmer-Bruhn 2018, 332). Both concepts underscore the importance of a conducive team environment that fosters open communication, learning from mistakes, and a sense of security. While psychological safety primarily aligns with the experiential and nonjudgmental processing dimension of team mindfulness, it also emphasizes the team's actions and does not explicitly address

present-moment attention and awareness. Mindfulness practices enable teams to create cognitive "space" between observations and subsequent attributions, promoting less biased interpretations of knowledge, beliefs, and opinions. (Yu & Zellmer-Bruhn 2018, 332)

Moreover, by cultivating high-quality relationships through mindfulness practices, teams may establish a workplace climate characterized by emotional carrying capacity, resilience, and openness, fostering an environment conducive to psychological safety where employees feel comfortable expressing their thoughts and ideas (Good et al. 2016, 15). Drawing on interdisciplinary evidence from psychology, neuroscience, and medicine, Good et al. (2016, 2) highlight the positive impact of mindfulness on attention, cognition, emotions, behavior, and physiology. This evidence further supports the notion that team mindfulness, as a collective cognitive resource, may contribute to the enhancement of team psychological safety in global virtual teams. So,

H3a: Team mindfulness is positively correlated with team psychological safety in global virtual teams

The hypothesis integrates COR theory by emphasizing the interconnectedness of resources, both personal and team-based, and proposes that team mindfulness plays a pivotal role in fostering an environment that is positively correlated with team psychological safety in the context of global virtual teams. A persuasive case can be constructed, asserting that both the dimensions of present attention and nonjudgmental processing, integral components of team mindfulness, are intricately tied to the positive enhancement of team members' psychological safety. Given these considerations, the following hypotheses are put forward:

H3b: The practice of present attention, as a fundamental element of team mindfulness, displays a positive correlation with psychological safety in global virtual teams.

H3c: Engaging in nonjudgmental processing, as a critical aspect of team mindfulness, reveals a positive correlation with psychological safety in global virtual teams.

2.7.4 Team Mindfulness, Psychological Safety and Well-being

The first corollary of the conservation of resources theory suggests that possessing more resources mitigates the negative impact of losing them and enhances the ability to acquire additional resources, which ultimately reduces stress and enhances well-being (Hobfoll et al. 2018, 106). Both team mindfulness and psychological safety contribute to creating a conducive team environment. Team mindfulness involves being present in the moment, fostering nonjudgmental processing, and developing cognitive "space" between observations and attributions. On the other hand, psychological safety emphasizes creating an atmosphere where team members feel safe to express themselves, take risks, and make mistakes without fear of negative consequences. While psychological safety aligns with certain aspects of team mindfulness, such as experiential and nonjudgmental processing, it does not explicitly address present-moment attention and awareness. Mindfulness practices, however, facilitate the development of cognitive space, allowing team members to interpret information less biasedly. (Yu & Zellmer-Bruhn 2018, 332) This, in turn, leads to improved processing of knowledge, beliefs, and opinions. The link between team mindfulness and psychological safety is crucial for understanding the potential impact on well-being in global virtual teams. When team members feel psychologically safe, they are more likely to concentrate on the present moment, be mindful, and contribute to a positive team environment. This alignment between mindfulness and psychological safety is supported by research, such as it has been found that mindfulness-based interventions (MBIs) positively influence workplace social capital and psychological safety (Bonde et al. 2023, 01). Therefore, psychological safety acts as a mediating factor between team mindfulness and well-being in global virtual teams. The reasoning is that the development of mindfulness within a team contributes to psychological safety, ultimately enhancing the well-being of team members.

H4a: Team psychological safety acts as a mediating factor between team mindfulness and team members' well-being in global virtual teams.

A convincing rationale emerges, indicating that team psychological safety functions as a mediator, bridging the connection between both the aspects of present attention and nonjudgmental processing—integral components of team mindfulness—

and the well-being of team members. In consideration of these premises, the following hypotheses are crafted:

H4b: Team psychological safety serves as a mediating factor between present attention, a constituent of team mindfulness, and the well-being of team members in global virtual teams.

H4c: Team psychological safety serves as a mediating factor between nonjudgmental processing, a constituent of team mindfulness, and the well-being of team members in global virtual teams.

2.8   Research Model

The present study investigates the interplay between team mindfulness, team psychological safety, and team members' well-being in the context of global virtual teams. The research model is guided by ten main hypotheses, each exploring specific relationships among these key constructs. The conceptual framework depicted in Figure 2 illustrates the relationships proposed by the hypotheses. It visualizes the direct links between Team Mindfulness, Team Psychological Safety, and Team Members' Well-being, as well as the potential mediating role of Psychological Safety. Table 1 presents a synthesis of the outlined hypotheses
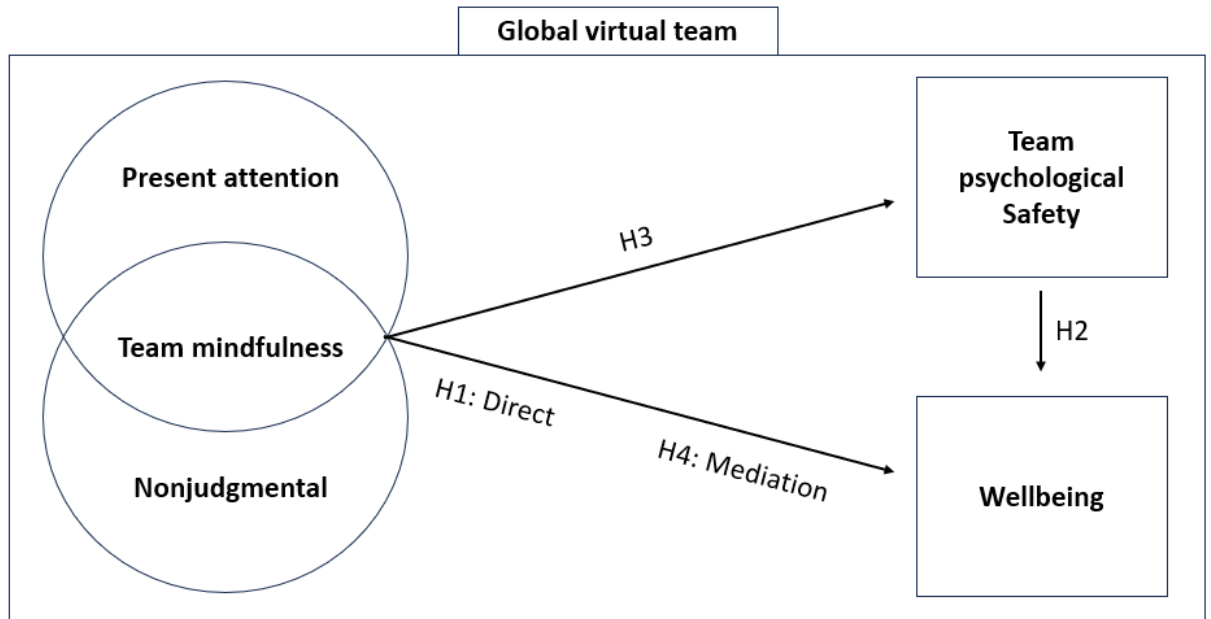
Figure 2. Research model with hypotheses

Table 1. Summary of the Proposed Hypotheses

	Hypotheses
H1a	Team mindfulness is positively correlated with team members' well-being in global virtual teams.
H1b	Present attention, as a constituent of team mindfulness, exhibits a positive correlation with the well-being of team members in global virtual teams.
H1c	Nonjudgmental processing, as a vital aspect of team mindfulness, demonstrates a positive correlation with the well-being of team members in global virtual teams.
H2	Team Psychological safety is positively correlated with team members' Well-being in a global virtual team.
H3a	Team mindfulness is positively correlated with team psychological safety in global virtual teams

H3b:	The practice of present attention, as a fundamental element of team mindfulness, displays a positive correlation with psychological safety in global virtual teams.
H3c	Engaging in nonjudgmental processing, as a critical aspect of team mindfulness, reveals a positive correlation with psychological safety in global virtual teams.
H4a	Team psychological safety acts as a mediating factor between team mindfulness and team members' well-being in global virtual teams.
H4b	Team psychological safety serves as a mediating factor between present attention, a constituent of team mindfulness, and the well-being of team members in global virtual teams.
H4c	Team psychological safety serves as a mediating factor between nonjudgmental processing, a constituent of team mindfulness, and the well-being of team members in global virtual teams.

3 RESEARCH METHOD

In this chapter, research methods for the study will be explored, following the research onion modified from Saunder et al. (2012, 128). This includes detailing the research design, research philosophy, research approach, methodological choice, research strategy, and time horizon. These components collectively provide the framework within which the study will be conducted, guiding the methods and approaches to ensure rigorous and effective research.
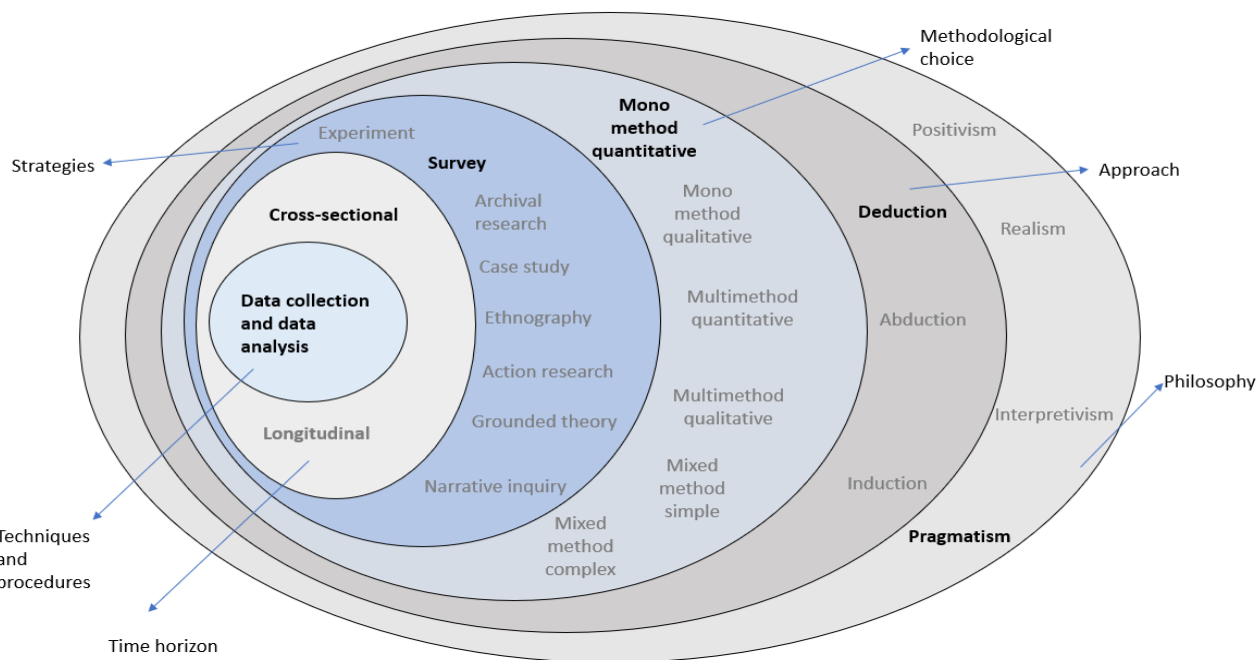
Figure 3. 'Research onion' modified from Saunder et al. (2012, 128)

In Figure 3, the research method used in this study has been highlighted.

3.1 Research Design

Research design is the systematic and strategic framework that guides the entire research process by outlining the approach to answering research questions, incorporating well-defined objectives, specifying data sources and collection methods, addressing ethical considerations, and anticipating and addressing constraints (Saunder

et al. 2012, 159). Thus, the research design serves as the structure utilized to address the research questions and demonstrate the credibility of the study to readers. Its purpose is to clarify the selected methodology and provide justification for the choice.

This study follows an explanatory research design. Explanatory research entails establishing causal relationships between variables by studying a situation or problem, emphasizing the elucidation of these relationships, and utilizing a framework, derived from literature and personal expectations, to guide data analysis (Saunder et al. 2012, 172-549). This choice is substantiated by the study's central focus on establishing causal relationships and understanding the dynamics between variables. The ten formulated hypotheses suggest a hypothesis-driven approach aimed at testing specific relationships, emphasizing the need for explanatory investigation. Conservation of resource theory serves as the guiding theoretical lens, indicating a commitment to building upon established theories. In essence, the chosen research design seeks to explain, validate, and extend existing theories by exploring the intricate connections between team mindfulness, team psychological safety, and well-being in a global virtual team setting.

3.2   Research Philosophy

The chosen philosophy for this study is pragmatism. Pragmatism is a philosophy that values the practical usefulness of concepts, adapting philosophical stances based on research questions, recognizing the flexibility to employ various positions, and emphasizing practical consequences in interpreting ideas or research findings, with a focus on flexible research methods to collect relevant and reliable data (Saunder et al. 2012, 130).

From the ontological perspective, which delves into the examination of researchers' assumptions regarding the fundamental nature of reality and their commitment to particular perspectives on how the world functions (Saunder et al. 2012, 130), pragmatism suggests that reality is external and multiple (Saunder et al. 2012, 140). In this study, the focus is on the relationship between team mindfulness, psychological safety, and well-being in global virtual teams. Within this framework, team mindfulness and psychological safety emerge as intrinsic components shaping the

team's dynamics. The acknowledgment of external realities, coupled with an understanding of diverse perspectives, becomes pivotal in comprehending how these elements influence the overall well-being of the team in its global and virtual context.

On the other hand, from the epistemological perspective which serves as the lens through which a researcher perceives the parameters of acceptable knowledge (Saunder et al. 2012, 132). In this context, pragmatism asserts that valid sources of knowledge can come from either observable phenomena (things that can be directly observed or measured) or subjective meanings (individual interpretations, experiences, or perspectives). The acceptability of these sources is contingent upon the particular research question being addressed. In other words, depending on the nature of the research question, either observable facts subjective understandings, or a combination of both, may be considered valid and useful for acquiring knowledge. (Saunder et al. 2012, 140)

This study incorporates both subjective and objective elements. It recognizes the subjective nature of constructs like well-being, team mindfulness, and psychological safety allowing for an exploration of individual experiences. Simultaneously, it adopts an objective stance by employing quantitative methods and accepted measurement scales to quantify and analyze relationships between variables. This dual perspective, seamlessly integrating subjective exploration and objective analysis, contributes to an exhaustive examination of the intricate interplay between personal experiences and quantitative measurements within the expansive landscape of global virtual teams—a manifestation of the pragmatic approach being embraced.

3.3   Research Approach

The study utilizes a deductive research approach, which is a systematic scientific method focused on theory development and testing. This approach involves creating testable hypotheses, deducing propositions, scrutinizing logic, collecting and analyzing data, and evaluating results. It explores causal relationships, operationalizes concepts for measurement, follows reductionism for clarity, and emphasizes careful sample selection for generalizability. Deductive research aims to refine or support theories

through empirical evidence, thereby contributing to the advancement of scientific knowledge. (Saunder et al. 2012, 145)

In adopting a deductive approach, the study initiates its inquiry by drawing upon established theory, specifically the conservation of resources, from which hypotheses about team mindfulness, psychological safety, and well-being are systematically formulated. These hypotheses will then undergo empirical scrutiny and quantitative analysis to assess their validity. By employing deductive reasoning, the research seeks to confirm or refute the formulated hypotheses, thus substantively contributing to the existing body of knowledge in the field. The findings are expected to shed light on the factors influencing team members' well-being and offer practical insights for organizations seeking to optimize the functioning of virtual teams in today's globalized work environment.

3.4   Methodological Choice

The chosen method for this study is quantitative. Quantitative research can be defined as a form of empirical investigation into a societal occurrence or human challenge. This process involves assessing a theory comprised of quantifiable variables, utilizing numerical measurements, and employing statistical analysis to ascertain whether the theory effectively elucidates or forecasts the phenomena under consideration. (Yilmaz 2013, 311) The decision to employ a quantitative research method in this study is rooted in several key considerations.

The research design for this study aims to conduct an explanatory study, investigating the intricate relationships between team mindfulness, team psychological safety, and the well-being of members in global virtual teams. Quantitative methods are well-suited for explanatory studies, providing a systematic and statistical approach to explore and explain these relationships (Yilmaz 2013, 312).

In pragmatism-driven research, the emphasis is on adopting the most effective and efficient methods to address the research question and achieve practical results (Saunder et al. 2012, 130). Therefore, quantitative methods, involving numerical data,

statistical analysis, and precise measurement, are well-suited for obtaining objective and quantifiable results within the chosen philosophical perspective for this study.

Moreover, a deductive research approach, central to this study, involves systematically testing hypotheses derived from existing theory (Saunder et al. 2012, 145). Quantitative methods are inherently deductive, allowing for the structured examination of relationships and the validation or rejection of proposed hypotheses (Saunder et al. 2012, 162).

3.5 Research Strategy

A research strategy is a systematic plan that serves as a methodological bridge, outlining how a researcher will address their research question by connecting their philosophical standpoint with the methods chosen for data collection and analysis. In the realm of different strategies, experiments, and surveys are specifically connected to the structure of quantitative research. (Saunder et al. 2012, 173)

The chosen method for this study is quantitative aiming to test hypotheses and gather numerical data to analyze the relationships between team mindfulness, team psychological safety, and well-being. Surveys are an excellent method for collecting quantitative data as they allow for the systematic measurement of variables. A survey is a cost-effective data collection method utilizing questionnaires to gather standardized information from a large population, allowing for easy comparisons and widely accepted as an authoritative approach in research and data analysis (Saunder et al. 2012, 177).

The chosen research approach for this study is deductive, meaning that it starts with theoretical propositions and tests them with empirical data. Surveys are well-aligned with deductive reasoning, as they provide a structured way to collect data that can be analyzed statistically to support or refute hypotheses (Saunder et al. 2012, 176). Moreover, the choice of survey is well-suited for explanatory studies to explore relationships and explain phenomena (Malhotra & Grover 1998, 409).

3.6   Time Horizon

In the context of this thesis, a cross-sectional study has been selected as the preferred research design from a time horizon perspective. A cross-sectional study is a research design focused on examining a specific phenomenon at a particular point in time (Saunder et al. 2012, 190). The decision to adopt a cross-sectional study for investigating the relationship between team mindfulness, psychological safety, and well-being in global virtual teams is aligned with the inherent nature of the research question and objectives. The research question posited in the thesis is concerned with understanding the interplay between team mindfulness, psychological safety, and well-being at a particular point in time within the context of global virtual teams. This aligns with the "snapshot" time horizon characteristic of cross-sectional studies.

Typically, a cross-sectional study employs surveys to describe the occurrence of a phenomenon or elucidate relationships between factors in different contexts (Saunder et al. 2012, 190). In alignment with this, the survey strategy chosen for this thesis proves to be well-suited for capturing a snapshot of team mindfulness, psychological safety, and well-being among global virtual team members at a specific moment. This approach resonates with the chosen quantitative and explanatory research design, allowing for an efficient and comprehensive examination of the variables in focus.

4   DATA COLLECTION

In this chapter, the focus turns to data collection for this thesis. This section will delve into the sources of the data utilized, the methodologies employed for data collection, the identification of different variables, and the profiles of the participants involved. By systematically exploring these aspects, a robust understanding of the empirical framework supporting this study will be established.

4.1   KVS1 - International Business Strategy

The data for this thesis was collected from the course titled "KVS1: International Business Strategy". It was a comprehensive and engaging academic endeavor offered at the University of Turku. This 6-credit course extended its reach beyond the University of Turku, incorporating students from Monterrey University in Mexico, Tartu University in Estonia, and Stellenbosch University in South Africa. Additionally, the course attracted exchange students from various countries, enriching the international diversity of the participants. While physically hosted at the University of Turku campus, the course embraced a virtual dimension, allowing students from partner universities to participate remotely.

The course spanned a duration of four months, attracting a substantial enrollment of approximately 120 to 130 students. The participant profile varied widely, encompassing advanced BSc students, MSc students, and even executive participants, contributing to a dynamic and multi-faceted learning environment.

Structured around four lectures held weekly, the core content of the lectures revolved around establishing a shared understanding of International Business Strategy concepts and the art of strategizing. Apart from the class lecture, the course design incorporated four team assignments, providing a collaborative and practical dimension to the learning experience. The initial assignment involved introductory group work, set within a one-week timeframe, and demanded adherence to a specified format. The subsequent three assignments focused on team consulting, drawing on case studies in the realm of international business. These assignments, characterized by their complexity, necessitated information gathering, conceptual thinking, and team

development. The submissions involved a two-week timeline and a unique presentation format: a 7-minute video uploaded to YouTube.

Embedded within the course structure were discussion classes, strategically interspersed between assignments and exams. These sessions served as platforms for dissecting the given cases and preparing for the impending home exam, fostering an interactive and engaging learning atmosphere. Beyond the conventional evaluation methods, the course introduced a reflective essay and survey component. Following the completion of each assignment, students were tasked with submitting reflective essays and participating in online surveys, reflecting on their experiences in organizing, managing, and leading Global Virtual Teams (GVT). This post-assignment reflection was allotted a three-day window, adding a critical self-awareness aspect to the learning process.

The formation of teams was a meticulous process undertaken by the instructors. Teams comprised five to six members each and were deliberately crafted to embody heterogeneity, drawing on diverse backgrounds, nationalities, and time zones. These multinational teams were expected to conduct their collaborative work virtually, emphasizing the challenges and opportunities associated with geographical dispersion and diverse team dynamics.

4.2 Survey

The online surveys conducted after each assignment (three case studies) serve as the data source for this study. Conducting online surveys was convenient because students were in different locations. The surveys included demographic information about the participants, followed by data on organizing, managing, and leading Global Virtual Teams (GVT). Demographic data included name, gender, age, education, work, country of residence, nationality, language, international experience, GVT experience, etc.

To gather data on organizing, managing, and leading GVT, several aspects were chosen, such as well-being, team mindfulness, psychological safety, team cohesion, team learning behavior, team conflict, etc. This study specifically focused on

understanding the relationship between team mindfulness, psychological safety, and well-being, so only responses related to these three components will be used.

All data were collected through Likert-style rating questions. A Likert-style rating question is a type of survey inquiry that presents respondents with a statement and a scale of response options, typically ranging from "strongly disagree" to "strongly agree" (Saunder et al. 2012, 674). Creating scales involves treating each question as a scale item. In a Likert-type scale, the overall score is calculated by summing up the scores of selected rating questions. A practical approach is to use or adapt existing scales, given the multitude of scales developed since the 1930s for measuring attitudes and personal attributes. (Saunder et al. 2012, 439) Considering this, existing scales were used for these surveys.

Respondents were given a minimum of three days to complete the survey, mitigating potential participant errors. Participant error refers to any factor that negatively influences a participant's performance. For instance, requesting a participant to fill out a questionnaire just before a lunch break may impact their responses differently than choosing a less sensitive time. (Saunder et al. 2012, 192)

The ethical considerations surrounding the collection, storage, and use of data in this research were paramount to ensuring the protection of participants' rights and privacy. Participants were fully informed about the purposes of data collection, storage, and use. They were made aware that their participation was voluntary and that they had the right to withdraw at any stage. The purposes for which the data would be used were clearly outlined, including its role in academic assessment, research, and potential publication in scientific journals. Steps were taken to anonymize all collected data to ensure confidentiality and privacy. Individuals could not be directly identified from the data, and access to identifiable information was restricted to authorized personnel only. Data was stored securely using trusted service providers and within the University of Turku's secure infrastructure. Access to the data was limited to designated personnel involved in the research project. Data was stored only for the duration necessary to achieve the research objectives, with a specified endpoint for its destruction. This ensured that data was not retained indefinitely and was only used for its intended purpose. Participants were informed of their rights, including the right to withdraw consent and request the exclusion of their data from further analysis. Procedures for

exercising these rights were communicated. The research adhered to the ethical guidelines and recommendations set forth by the University of Turku, Finland, ensuring that ethical standards were maintained throughout the research process. If participants had any further questions or concerns regarding the ethical aspects of the research, they were encouraged to contact the designated personnel for clarification.

4.3   Variables

A variable represents a distinct element or characteristic for which data have been amassed (Saunder et al. 2012, 684). In research or statistics, a variable is a characteristic or property that can vary, and it serves as a measurable factor that can be studied, analyzed, or observed. Variables in research encompass various types, including independent, dependent, mediating, moderator, control, and confounding variables (Saunder et al. 2012, 174). In the context of a study, the selection and consideration of specific types of variables are determined by the underlying hypothesis. For instance, this study is focused on independent, dependent, and mediating variables based on the hypothesis each playing a distinct role in the research framework.

4.3.1   Independent variable (IV)

The independent variable is a variable deliberately manipulated or altered in an experiment or study to investigate and quantify its impact on a dependent variable (Saunder et al. 2012, 174). This variable serves as the focal point for researchers or experimenters, allowing them to systematically assess its influence on the outcome, represented by the dependent variable. In the present study, the independent variables encompass the construct of team mindfulness, inclusive of its constituent elements, namely present attention and nonjudgmental.

The measurement of team mindfulness in this study employed a 10-item scale developed by Yu and Zellmer-Bruhn (2018). This scale comprises two subdimensions, with five items each, representing the attention and nonjudgmental aspects of team mindfulness (Yu & Zellmer-Bruhn 2018, 347). Sample items from the scale include

statements such as "It is difficult for the team to stay focused on what is happening in the present" and "The team criticizes members for having irrational or inappropriate thoughts or emotions." Respondents, i.e., team members, assessed their agreement with each statement using a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). Notably, seven out of the 10 items underwent reverse coding, a method employed to mitigate response bias by inversely scoring select items on a Likert scale. The summation of individual item scores yielded a Summated Rating Score or Likert Scale value for each respondent (Willits et al. 2016, 127).

It is imperative to note that, in this study, the construct level for team mindfulness is at the team level, whereas the individual serves as the source of data. Following Chan's (1998) referent-shift consensus model, team members' responses were aggregated to the team level, drawing on individual assessments of team experiences (Yu & Zellmer-Bruhn 2018, 332). This methodological approach facilitates the examination of team mindfulness as a collective phenomenon, enriching the understanding of its impact on the dependent variable within the study's framework.

4.3.2 Dependent variable (DV)

A dependent variable is a variable that has the potential to change in response to variations in other variables (Saunder et al. 2012, 174). It represents the observed outcome or result arising from the intentional alteration or manipulation of another variable within an experiment or study. In this study, the dependent variable is the well-being of team members.

The quantification of team members' well-being in this study is operationalized through the utilization of a 3-item scale known as the WHO-5. Originating from a presentation at a World Health Organization (WHO) meeting in Stockholm in February 1998, the WHO-5 was initially conceived as part of a broader initiative focused on measuring well-being in patients within primary healthcare settings (Topp et al. 2015, 168). The scale incorporates statements such as "Have you felt cheerful and in good spirits?" and "Has your daily life been filled with things that interest you?" as indicative of the measured constructs. Respondents, in this case, team members, gauged their

concurrence with each statement on a 5-point Likert scale, ranging from 1 (never) to 5 (most of the time), with no utilization of reverse coding.

4.3.3 Mediating variable (MV)

A mediating variable plays a crucial role in research by acting as a link between the independent and dependent variables. Its purpose is to clarify the relationship between these variables by explaining the observed connection (Saunder et al. 2012, 174) In the context of this study, the mediating variable under consideration is team psychological safety. This variable operates as a dependent variable when examining its relationship with team mindfulness and as an independent variable when exploring its connection with team members' well-being.

To measure team psychological safety in this study, a 6-item scale developed by Edmondson (363, 1999) was utilized. The scale includes statements such as "When someone makes a mistake in this team, it is often held against him or her" and "It is completely safe to take a risk on this team." Respondents, who are team members in this case, expressed their level of agreement with each statement using a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). Importantly, three out of the six items underwent reverse coding, adding a layer of nuance to the measurement process.

4.4 Participants

This study relies on online surveys conducted over four years following the conclusion of the last case study, serving as the primary data source. This study involved the participation of a total of 466 students, comprising 215 females and 251 males. The age range of participants spanned from 18 to 55, with an average age of 28.72 and a standard deviation of 8.17.

The study encompassed individuals from 41 different nationalities, with notable representation from Finnish (29.61%), Mexican (18.24%), Estonian (7.08%), and Irish (6.22%) nationals. The remaining 38.84% comprised participants from diverse

European, Asian, North American, and Australian backgrounds. Geographically, the students were distributed across 18 countries, with 53.22% residing in Finland, 22.75% in Mexico, 12.23% in Estonia, 6.22% in Ireland, and the remaining 5.58% in different parts of the world.

Linguistically, the participants had diverse mother tongues, encompassing 32 languages. Finnish (29.18%), Spanish (22.53%), and English (7.73%) were the most prevalent, while other languages such as Estonian, French, German, Persian, Latvian, Russian, Italian, Czech, Nepali, Vietnamese, Hindi, and Irish were also represented.
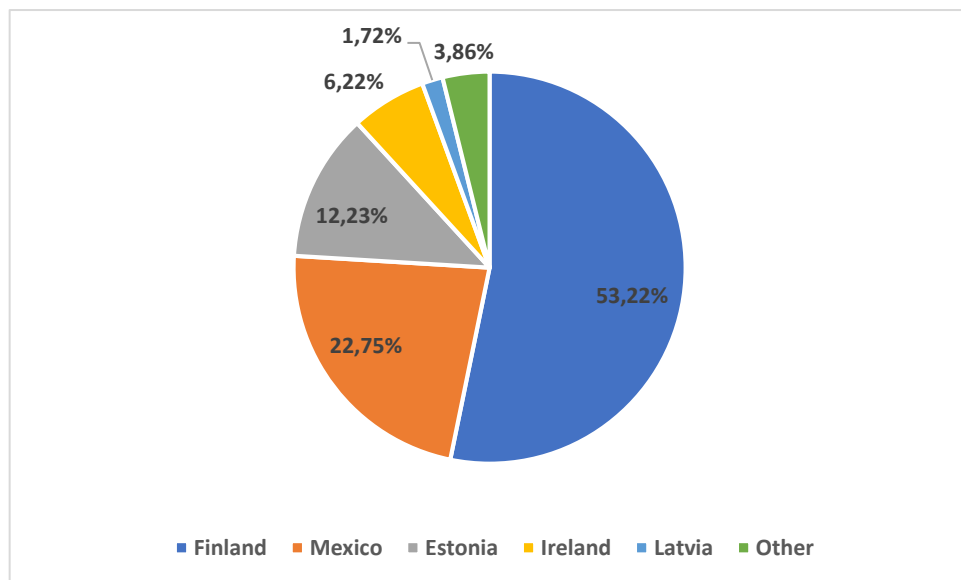
Figure 4. Country of living of overall participants

Given the necessity for participants to collaborate across linguistic boundaries, English was adopted as the primary medium of communication. English proficiency levels varied, assessed on a scale from 1 to 5, with 1 indicating poor proficiency and 5 representing native-like proficiency. The observed proficiency ranged from 2 to 5, with an average score of 4 and a standard deviation of 0.60.

All the 466 participants were organized into 96 teams, each comprising 3 to 6 members with an average team size of 4.85 individuals. In strict adherence to the specified criteria, requiring a minimum of two individuals to form a team (Peralta et al. 2018, 5), every participating team not only met but surpassed these requirements.

Notably, the majority of teams exhibited a balanced gender distribution, with both male and female members, except for three teams where all participants shared a singular gender identity.

Concerning the teams' national composition, a remarkable diversity was observed. Specifically, 31 teams comprised individuals from 5 different nationalities, while 50 teams featured 4 members originating from disparate nations.
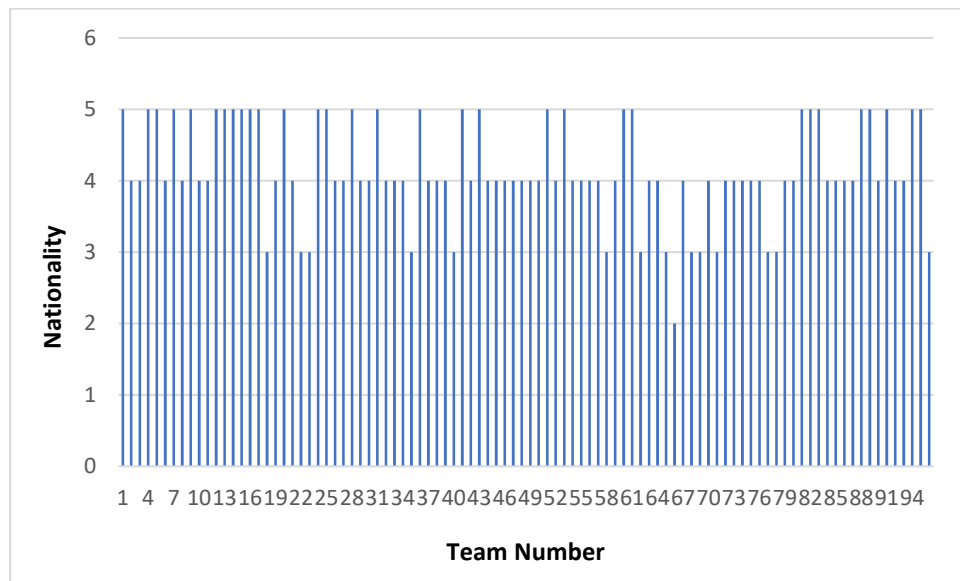
Figure 5. Nationality of team members

Furthermore, each team encompassed a cross-border dimension. A subset of 18 teams extended this international component, consisting of 4 members living in distinct countries, while 8 teams took it a step further with all 5 members residing in different countries.
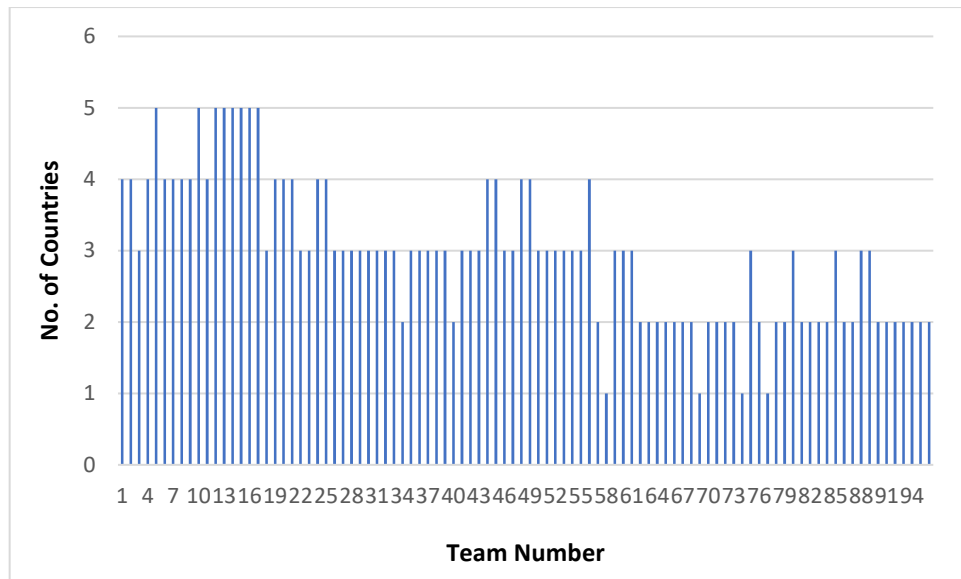
Figure 6. Country of living of team members

Examining linguistic diversity within teams, it was observed that each team exhibited a rich tapestry of mother languages. At a minimum, 3 team members possessed diverse mother tongues, and in many instances, this linguistic diversity extended to all 4 to 5 members within a team.

Considering the framework of Global Virtual Teams (GVTs), defined as teams comprising individuals from diverse nations and cultures, relying primarily on communication technology for collaborative interdependent activities (Gibbs 2009, 906), all teams demonstrated the characteristics of a GVT. Members from different nationalities and cultures, residing in various parts of the world, collaborated using communication media such as email, WhatsApp, Zoom, etc., accomplishing tasks within the given two-week timeframe. The teams exemplified the essence of a global virtual team, navigating boundaries through effective virtual collaboration.

5 DATA ANALYSIS

This study relies on data analysis conducted through IBM SPSS Statistics 29 and MS Excel. This section will elucidate the background analyses performed, the approach taken for variable aggregation, and the statistical methods employed.

5.1 Preparing Data

This research draws upon online surveys conducted at the end of the fourth assignment over four years. A total of 440 out of 466 responses were gathered from 96 teams across these four years. Table 2 displays the number of participants year-wise.

Table 2. Number of Participants

Year	Teams	Participants
1	30	133
2	26	120
3	18	84
4	22	103
	96	**440**

Out of 96 teams, at least 4 members responded from 91 teams. Yet, no team yielded fewer than three responses in all three surveys, eliminating the need to exclude any team from the analysis. Consequently, the team composition aligns with the definition of a team and proves reliable for measuring the team environment concerning team mindfulness, psychological safety, and well-being.

In the measurement scale of team mindfulness, there are 7 reverse-scored statements out of 10 items. Conversely, in team psychological safety, there are 3 reverse-scored statements out of 6 items. Therefore, it is essential to rephrase the wording of the reverse items to align with the normal response scale. Both team mindfulness and psychological safety employ a 7-point Likert scale. For reverse-scored items, responses need to be reversed, with 7 equating to 1, 6 to 2, 5 to 3, 4 to 4, 3 to 5, 2

to 6, and 1 to 7 (Hughes 2009, 80). It's noteworthy that no reverse-scored statement is present in the well-being measurement scale.

5.2   Aggregation

The dataset utilized in this study is rooted in individual-level data. To explore team dynamics, the individual-level data has been consolidated into team-level data for this analysis. The hypotheses formulated for this thesis are grounded in mean-aggregated variables related to team mindfulness, including components such as present attention and nonjudgmental attitude, as well as team psychological safety. These variables serve as the bedrock for the subsequent findings in the following chapter. To ensure the validity of the team-aggregated measure, it is imperative that the results accurately reflect the collective response of the teams rather than merely the average response of individuals within the same team (Yu & Zellmer-Bruhn 2018, 326). This distinction is crucial because assuming that the average score of team members represents the team's unified opinion might be misleading, considering that responses are based on individual perceptions, which can vary among group members.

One commonly employed method to assess agreement among team members and thereby justify aggregation is the use of the Rwg index, along with ICC (1) and ICC (2) scores (Woehr et al. 2015, 20). The Rwg index measures group members' consensus, making it a widely accepted metric to infer that the aggregation of team members' scores accurately represents the team's collective viewpoint (Biemann et al. 2012, 67).

Furthermore, apart from demonstrating within-group agreement, it is crucial to establish consistency among raters, a goal achieved through the use of ICC (1) and ICC (2) measures (Bliese 1998, 359). ICC (1), or Intraclass Correlation Coefficient (1), describes the proportion of variance in a variable attributable to differences between higher-level entities, such as teams or divisions. This metric elucidates the extent to which individuals within the same team exhibit similarity regarding the variable under consideration. Additionally, ICC (1) signifies the degree to which the value of any team member can be considered a reliable estimate of the overall variable for that team. ICC (2), or Intraclass Correlation Coefficient (2), offers an estimate of the reliability of the

group means for teams within a sample. In contrast to ICC (1), ICC (2) accounts for the influence of team size. Specifically, ICC (2) adjusts ICC (1) for the number of lower-level observations per team. Consequently, ICC (2) values tend to be higher when there are more individual team members, reflecting the impact of team size on the reliability of the team's group means. This adjustment acknowledges the role of group size in shaping the reliability of higher-level unit outcomes, particularly within the team context. (Woehr et al. 2015, 3)

The scores derived from Intraclass Correlation Coefficients (ICC) serve as indicators of effect size. Traditionally, an ICC (1) score exceeding 0.25 has been conventionally recognized as indicative of a strong effect (LeBreton & Senter 2008, 838). Similarly, ICC (2) values, resembling reliability indices, have prompted the proposal of cutoff values ranging from 0.70 to 0.85 (Woehr et al. 2015, 4). In the realm of inter-rater agreement, an Rwg score of 0.70 or higher is generally deemed acceptable for justifying aggregation (Biemann et al. 2012, 67). However, it is noteworthy that researchers are increasingly exploring alternatives to the traditional 0.70 cutoff. Notably, LeBreton and Senter (2008, 836) advocate against a simplistic dichotomous cutoff and introduce categories of values to enhance the interpretation of the Rwg index. These categories encompass a spectrum of agreement levels, ranging from lack of agreement (Rwg = 0.00-0.30) to very strong agreement (Rwg = 0.91-1.00), providing a nuanced perspective on the degree of agreement.

Table 3. Rwg, ICC (1), and ICC (2) Scores for Interrater Reliability and Agreement

	Rwg	ICC (1)	ICC (2)
Present Attention	0.64	0.18	0.50
Nonjudgmental	0.83	0.34	0.69
Team Mindfulness	0.83	0.29	0.65
Psychological safety	0.82	0.29	0.65

N=440

After a comprehensive analysis of the data in this study presented in Table 3, it is evident that the Rwg scores associated with the measured constructs—Nonjudgmental, Team Mindfulness, and Psychological Safety— surpass the conventional cutoff of 0.70. However, the present attention scores show only moderate agreement. This signifies a commendable level of agreement among raters, thereby providing a robust rationale for the aggregation of data within these constructs.

However, it is important to note that the ICC (1) score for present attention (0.18) falls below the typical criterion of 0.25, indicating a relatively weaker effect size for this specific construct. In contrast, the ICC (1) scores for nonjudgmental (0.34), team mindfulness (0.29), and psychological safety (0.29) are higher and suggest considerable effect size. Furthermore, the ICC (2) values fall below the proposed cutoff range of 0.70-0.85. Although the ICC values may not meet the stipulated criterion, the decision to aggregate team members' responses at the team level remains justified given the notably high Rwg scores (Liu et al. 2022, 437).

5.3   Correlation Analysis

Correlation refers to the relationship between two variables, which can be expressed statistically in three ways: positively related, meaning that as one variable increases, the other variable also increases (e.g., practicing guitar improves playing ability); not related at all, meaning that changes in one variable do not affect the other variable (e.g., practicing guitar has no effect on playing ability); or negatively related, meaning that as one variable increases, the other variable decreases (e.g., practicing guitar worsens playing ability). Correlation is a measure of the strength and direction of this relationship, and it can be quantified using measures such as covariance and the correlation coefficient. (Field 2009, 167)

There are different types of correlation coefficients, with the Pearson correlation coefficient being the most common. Pearson correlation coefficient, denoted by r, ranges from -1 to 1. A positive correlation means that both variables tend to increase or decrease together, while a negative correlation means that as one variable increases, the other tends to decrease. It's important to note that correlation does not imply causation. Just because two variables are correlated does not mean that changes in one variable

cause changes in the other. Correlation only describes the relationship between variables, not the reason behind it. (Field 2009, 170) In this study, correlation analysis will be used to identify the relationship between team mindfulness, its components (present attention and nonjudgmental), psychological safety, and well-being.

5.4   Regression Analysis

Regression analysis is a statistical method used to model the relationship between one or more independent variables (predictors) and a dependent variable (outcome). It is commonly employed to understand and quantify the relationship between variables and to make predictions based on this relationship. (Field 2009, 198)

The two most common regression analyses—linear regression and multiple linear regression—will be used in this study to measure the relationships among the variables. Linear regression is defined as the involvement of one independent variable and one dependent variable, with the relationship modeled using a straight line. On the other hand, multiple linear regression is defined as the involvement of two or more independent variables and one dependent variable, with the relationship modeled using a linear equation with multiple predictors. (Field 2009, 199)

5.5   Mediation Analysis

Mediation is a technique employed to elucidate the connection between an independent and dependent variable, utilizing a third variable (Hayes 2017, 78). In this study, the Preacher and Hayes process tool in SPSS will be used to investigate whether the influence of team mindfulness and its components on well-being is channeled through psychological safety. This analysis will be conducted using Preacher and Hayes model 4, which examines whether an independent variable impacts a dependent variable using one or more mediators, while also computing the direct effect of the independent variable on the dependent variable (Preacher & Hayes 2004, 717).

According to the model, by running multiple regressions across various models and bootstrapping the samples to enhance precision, effects alongside 95% confidence

intervals will be derived, aiding in identifying significant relationships. Bootstrapping entailed resampling to generate new data points based on the sample distribution, further reinforcing confidence that the true coefficients reside within the confidence interval. If the bootstrapped confidence intervals of the model exclude 0 as a value for the different coefficients, statistical significance can be inferred. This suggests that with 95% certainty, it can be asserted that the estimated effect deviates from 0, signifying the presence of a relationship between the variables.

5.6   Evaluation of the Study

Research quality refers to the credibility and reliability of research findings. It involves assessing the robustness of the methodology employed, the validity of the data collected, and the soundness of the conclusions drawn. Evaluating research quality typically involves criteria such as reliability and validity. (Saunder et al. 2012, 191) In the following sub-chapters, the validity and reliability of this thesis will be discussed.

5.6.1 Validity

Validity refers to the proof that a study or test enables accurate conclusions about the intended question or conceptually measures what it was designed to measure (Field 2009, 795). Validity can be categorized into three essential dimensions: internal validity, construct validity, and external validity (Saunder et al. 2012, 192). In the following subsections, detailed insights into the internal, construct, and external validity of our model will be discussed.

5.6.1.1 Internal Validity

Internal validity in research refers to the ability of a study to demonstrate a genuine cause-and-effect relationship between two variables (Saunder et al. 2012, 193). However, this may be challenging in cross-sectional research due to the lack of experimental manipulation, hindering the ability to establish direct causation between variables. Observing variables at a single point in time without manipulation makes it

challenging to determine the cause-and-effect relationships, as other factors may influence the observed associations. (Field 2009, 7)

In this thesis, these other factors, encompassing individual aspects like nationality, age, motivation, cognitive abilities, and intelligence, as well as team-oriented elements like team processes, engagement, and collaboration, may serve as confounding variables. Acknowledging the presence of these confounding factors, this study does not aspire to create an exhaustive model encompassing all conceivable variables related to well-being in global virtual teams. Instead, the focus is on a specific subset—team mindfulness and psychological safety.

5.6.1.2 Construct Validity

Construct validity refers to the degree to which the measurements and assessments utilized in a research study accurately and effectively capture the intended constructs or concepts (Saunder et al. 2012, 193). In essence, it assesses the extent to which the research instruments or tools genuinely measure the specific aspects or variables they are designed to evaluate. The focus of construct validity is on ensuring that the chosen measures align closely with the conceptualization and definition of the constructs under investigation, thus providing a reliable basis for drawing meaningful conclusions from the research findings.

This thesis investigates the interplay between team mindfulness, psychological safety, and well-being within global virtual teams. Team mindfulness was measured using a 10-item scale developed by Yu and Zellmer-Bruhn (2018). To validate this construct, the researcher employed exploratory factor analyses (EFAs) and Confirmatory factor analyses (CFAs). Factor analysis is a statistical method aiming to uncover underlying relationships among variables. There are two commonly used types of factor analysis: exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Exploratory Factor Analysis (EFA) is a statistical technique selected in situations where there is inadequate evidence supporting the predetermined factor structure, or when the primary research goal is to identify common factors and their corresponding loadings. Confirmatory Factor Analysis (CFA), on the other hand, is a statistical method utilized when there is sufficient evidence to specify how observed

variables should load onto predetermined common factors. (Norris & Lecavalier 2010, 8)

While proposing the scale the researchers also incorporated a nomological network to establish relationships between team mindfulness and other theoretically associated variables. A nomological network refers to the systematic arrangement of relationships between a specific construct or variable and other variables within a theoretical framework (Westen & Rosenthal 2003, 608). A Likert scale survey involving 263 undergraduates was conducted for this purpose.

The exploratory factor analysis unveiled a two-factor structure representing present-moment attention and awareness (Factor 1) and receptive, open, and nonjudgmental experiential processing (Factor 2). These factors collectively explained 74% of the total variance, exhibiting a high intercorrelation (r = 0.78). Confirmatory factor analyses were then conducted with 201 MBA students, confirming the two-factor model with a second-order factor. The team mindfulness construct was distinct from alternative models, supporting its validity. Then the researchers delved into the nomological network by assessing team mindfulness's relationships with psychological safety, team learning behaviors, constructive controversy, and individual mindfulness. Team mindfulness demonstrated significant associations with psychological safety, constructive controversy, and individual mindfulness, while its relationship with team learning behaviors was not statistically significant. Confirmatory factor analyses reinforced the distinctiveness of team mindfulness from other constructs.

To measure team psychological safety in this study, a 6-item scale developed by Edmondson (363, 1999) was utilized. The researcher ensured the construct validity of the psychological safety scale through a thorough process. They designed a scale to measure team members' perception of safety, incorporating items from theoretical constructs identified in qualitative interviews. This scale was then included in a comprehensive survey administered to all team members. To validate the scale, factor analyses were conducted, revealing a distinct and clear factor structure for psychological safety. The analysis confirmed that the scale effectively captured the intended construct. Discriminant validity was established by comparing correlations between items measuring psychological safety and those from other sections in the survey, ensuring that the scale specifically measured psychological safety. Discriminant

validity is defined as the degree to which a measurement truly reflects a unique and distinct construct, ensuring that it is not merely a reflection of another variable (Voorhees et al. 2016, 120). The consistent convergence between the scale and interview variables provided further assurance of its construct validity.

The quantification of team members' well-being in this study is operationalized through the utilization of a 3-item scale known as the WHO-5. The WHO-5 has demonstrated sufficient validity for both screening depression and assessing outcomes in clinical trials. Analyzing item response theory in studies involving both younger and elderly individuals suggests that the measure exhibits strong construct validity as a unidimensional scale gauging well-being in these diverse populations. (Topp et al. 2015, 169)

5.6.1.3 External validity

External validity pertains to the inquiry of whether the research findings of a study can be extended or generalized to other pertinent settings or groups (Saunder et al. 2012, 194). This study, conducted as part of the "KVS1: International Business Strategy" course at the University of Turku, involves 142 students from diverse nationalities. The participants, ranging from 18 to 55 years old, engaged in virtual teamwork across various countries, languages, and time zones. The study focuses on the relationships between team mindfulness, psychological safety, and well-being in global virtual teams. Using Likert-style rating questions in online surveys, data was collected after each of the three case study assignments. These surveys explored participants' experiences in organizing, managing, and leading Global Virtual Teams (GVT). Teams, composed of 4 to 5 members, were intentionally diverse in terms of nationality and linguistic backgrounds. English served as the primary communication medium, and teams collaborated virtually using tools like email, WhatsApp, and Zoom. Demographically, participants represented 41 nationalities, with notable diversity in age, gender, and language proficiency. Teams were formed with attention to gender balance and national diversity, embodying the characteristics of Global Virtual Teams.

While the study provides insights into the dynamics of virtual teamwork and the interplay between mindfulness, psychological safety, and well-being, caution is advised

in generalizing findings to real-world corporate scenarios. The study may have limitations in its ability to be broadly applicable or generalizable to settings beyond the specific conditions under which the data were collected. While it provides valuable insights into the relationships between team mindfulness, psychological safety, and well-being in the context of an academic course with diverse student participants engaged in virtual teamwork, caution is advised when extending these findings to real-world corporate environments. Factors contributing to the study's limited generalizability include the academic setting, the specific characteristics of student participants, and the structured nature of the assignments within the course. Real-world global virtual teams in professional settings may exhibit different dynamics, challenges, and outcomes compared to the academic context of this study. In essence, the study's findings should be interpreted within the context of an educational environment, and care should be taken when applying them to broader organizational or corporate contexts.

5.6.2 Reliability

Reliability measures the stability and repeatability of research outcomes, ensuring that the obtained data remains consistent under varying circumstances or when undertaken by diverse researchers (Saunder et al. 2012, 192). Reliability pertains to the degree of consistency in the results obtained through specific data collection methods and analytical procedures. It assesses whether conducting the same procedures on separate occasions or replicating them with a different researcher would yield similar and dependable findings. Reliability faces various challenges, primarily categorized as threats stemming from participant errors and biases, as well as those originating from researcher errors and biases (Saunder et al. 2012, 192). These factors introduce potential sources of inconsistency and can undermine the dependability of research outcomes.

Participant error refers to any external influence or factor that negatively impacts the performance or responses of a participant in a research study or experiment (Saunder et al. 2012, 192). These influences can alter the participant's behavior, responses, or overall performance, leading to skewed or inaccurate data. For instance,

factors like timing, environmental conditions, or the participant's emotional state can introduce participant error, affecting the reliability of the research findings. In this study, the aim was to minimize participant errors by granting respondents a minimum of three days to complete the survey. By offering this extended timeframe, the objective was to diminish the impact of external factors like time pressure or fatigue on participants' responses, thereby reducing potential errors in the data. This approach aimed to enhance the reliability of this study's findings by allowing participants ample time to thoughtfully and accurately respond to the survey questions.

Participant bias, on the other hand, refers to the distortion or alteration of responses given by participants in a research study or experiment due to external factors that influence their behavior or perception (Saunder et al. 2012, 192). These factors can lead participants to provide inaccurate or false responses, thereby skewing the data collected. For example, interviewing in an open space may induce participants to give false positive answers out of fear of being overheard, compromising the anonymity they expect. Such biases can undermine the accuracy and reliability of the research findings by misrepresenting participants' true thoughts, attitudes, or behaviors.

In the data collection process for this study, an online survey was conducted with participants being assured of the anonymity of their responses. This approach was implemented to mitigate potential participant bias, ensuring that respondents felt comfortable providing genuine and honest feedback without fear of repercussions or judgment. By explicitly stating at the outset of the survey that participant data would be used anonymously, the goal was to address concerns regarding privacy and external influences. This approach aimed to decrease the probability of participants altering their responses to align with perceived expectations or social norms. This commitment to anonymity helped to foster a more transparent and unbiased data collection process, enhancing the reliability and validity of the information gathered for this study.

Finally, researcher error refers to any factor that influences the interpretation of data or findings by the researcher, potentially leading to misinterpretation or misunderstanding. Researcher bias, on the other hand, refers to any factor that introduces bias into the researcher's recording and interpretation of responses. (Saunder et al. 2012, 192) In this quantitative research study, established scales were used to measure team mindfulness, psychological safety, and well-being. All participants

received the same questionnaire, employing a standardized approach to minimize researcher error and ensure consistency in data collection and interpretation. By utilizing established scales and administering identical questionnaires to all respondents, the aim was to decrease the potential influence of researcher bias on response recording and interpretation, thereby enhancing the reliability of the study findings.

6   RESULTS

In this chapter, the initial step entails conducting background analyses of the data to ascertain its alignment with the assumptions of regression and mediation analyses. Following this, descriptive statistics for the variables are presented alongside a correlation matrix. The subsequent sections delve into the examination of regression results and mediation analysis. Ultimately, the chapter concludes by summarizing the findings and their alignment with the developed hypotheses.

6.1   Conditions for Multiple Regression and Mediation Analysis

Given that multiple regression hinges upon numerous assumptions, it is imperative to evaluate whether the data adheres to these assumptions to ensure meaningful generalizations. Consequently, before initiating the regression analyses, an assessment was conducted to determine if the data was affected by issues including missing values, outliers, normally distributed errors, linearity, multicollinearity, homoscedasticity, and autocorrelation.

6.1.1   Missing Value

Missing data is a common challenge in research, arising from various reasons such as questionnaire errors, mechanical faults, or participant reluctance to answer sensitive questions. Despite efforts to collect complete data, missing values can occur, affecting the integrity of the dataset. However, researchers can still utilize available data, albeit with statistical challenges, to derive meaningful insights and mitigate the impact of missing observations. (Field 2009, 77)

The study encompasses a robust sample of 96 teams, surpassing the recommended ratio of 10 observations per independent variable in analyses (Kotrlik & Higgins 2001, 48). This ensures that the sample size is more than adequate for the research. After aggregating the independent, dependent, and mediating variables, the dataset was meticulously examined for missing observations. Encouragingly, no missing values (0%) were found. This achievement was facilitated by utilizing an

online data collection tool, as respondents were required to provide all necessary information to progress through the survey, effectively eliminating the possibility of missing data.

6.1.2 Outliers

Outliers are values within a dataset that significantly deviate from the rest of the data. Outliers have the potential to violate the assumption of linearity in regression analysis. Therefore, it is essential to detect and potentially exclude outliers from the dataset to ensure the validity of the regression analysis. (Saunder et al. 2012, 497, 524) When outliers are detected in the data, various strategies can be employed to mitigate their impact. The three most common approaches include removing the outlier cases, transforming the data, or adjusting the outlier scores. However, any action taken must be supported by valid justification. (Field 2009, 153)
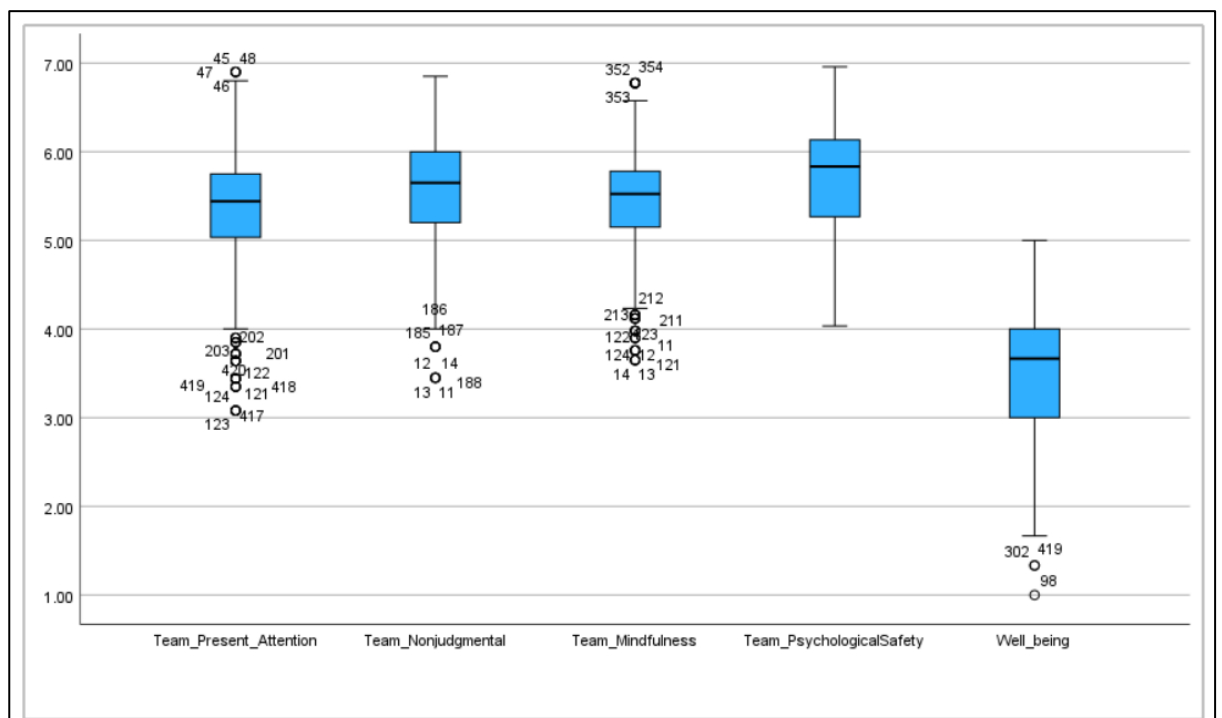
Figure 7. Outliers

Figure 7 presents the outliers analysis for this thesis using a box plot. A box plot, also referred to as a box-and-whisker diagram, is a powerful graphical tool used to summarize numerical data by visually depicting key features such as the median, quartiles, and range. It provides a concise representation that aids in comparing the distributions of different datasets and detecting potential outliers or skewness in the data distribution. (Field 2009, 99) A common technique for identifying outliers is the "1.5xIQR" rule, which flags values lying outside specified upper and lower thresholds (Eiweck et al. 2010, 5).

Upon analyzing the dataset using box plots, outliers were detected for the dataset used in this study. However, further examination revealed that most of these outliers originated from five or six teams, rendering their impact insignificant. Moreover, upon closer scrutiny, these outliers in the dataset appeared reasonable. Consequently, the decision was made not to remove outliers, considering them valid data points representative of the population. This decision aligns with the viewpoint that retaining suspected legitimate outliers enhances the data's representativeness of the overall population. (Osborne & Overbay 2019, 6).

6.1.3 Normal distributers errors and linearity

The normality of errors has been assessed by examining their skewness and kurtosis values. Skewness is a statistical measure used to quantify the asymmetry of a frequency distribution. In symmetric distributions, where the data is evenly distributed around the mean, the skewness value is zero. Positive skewness occurs when the majority of scores are concentrated at the lower end of the distribution, with a tail extending towards higher or more positive scores. Conversely, negative skewness occurs when most scores are clustered at the higher end of the distribution, with a tail extending towards lower or more negative scores. (Field 2009, 794) A benchmark for identifying significant deviations from normality is defined as an absolute skew value exceeding 2 (Kim 2013, 53).

On the other hand, Kurtosis is a statistical measure that quantifies the degree to which scores cluster in the tails of a frequency distribution. A positive kurtosis (leptokurtic, kurtosis > 0) indicates that there are more scores in the tails than expected

for a normal distribution, resulting in a peaked distribution. Conversely, a negative kurtosis (platykurtic, kurtosis < 0) suggests that there are fewer scores in the tails than expected, resulting in a flatter distribution. (Field 2009, 794) A standard for identifying notable deviations from normality is characterized by an absolute proper kurtosis value exceeding 7 (Kim 2013, 53).

Table 4. Descriptive Statistics: Skewness and Kurtosis

	Skewness	Kurtosis
Team present attention	-0.80	1.08
Team nonjudgmental	-0.83	0.77
Team mindfulness	-0.71	0.64
Team psychological safety	-0.50	-0.34
Well-being	-0.17	-0.44

The data for all variables for this thesis presented in Table 4 exhibit some degree of skewness, mostly towards the left, indicating asymmetry. Additionally, the kurtosis values vary, with some variables showing moderate to significant peakedness (leptokurtic) and others exhibiting relatively flat distributions (platykurtic). However, it's worth noting that the skewness and kurtosis values fall within the range proposed by Kim (2013, 53) for substantial departure from normality. Despite these deviations from a perfect normal distribution, the data still provides valuable insights for analysis.

6.1.4 Multicollinearity

Multicollinearity, a phenomenon in regression analysis, occurs when predictor variables within the model exhibit a high correlation with each other. This situation can introduce complications in interpreting regression coefficients and may result in unreliable estimates of their effects. (Field 2009, 223) The model of this thesis comprises two primary predictors: team mindfulness and psychological safety. Additionally, the aim is to explore the relationship between the components of team mindfulness, specifically present attention and nonjudgmental, with well-being. Hence, it is crucial to ensure that these independent variables maintain a balanced linear relationship. This can be assessed by examining their correlation and calculating variance inflation factors (VIF)

and tolerance values. High correlation coefficients, typically exceeding 0.80 or 0.90, between predictor variables in the correlation matrix suggest multicollinearity. (Field 2009, 223) The correlation coefficient of 0.85 (Figure 8) between team mindfulness and psychological safety suggests the presence of multicollinearity.

Correlations		Team_Mindfulness	Team_Psychological Safety
Team_Mindfulness	Pearson Correlation	1	.850**
	Sig. (2-tailed)		<.001
	N	440	440
Team_PsychologicalSafety	Pearson Correlation	.850**	1
	Sig. (2-tailed)	<.001	
	N	440	440
**. Correlation is significant at the 0.01 level (2-tailed).			

Figure 8. Correlations to check multicollinearity between team mindfulness and psychological safety

Conversely, the correlation between present attention and team psychological safety (Figure 9) falls within acceptable bounds. However, the correlation coefficient between nonjudgmental and psychological safety shows evidence of collinearity.

Correlations

		Team_Present_ Attention	Team_Nonjudg mental	Team_Psychological Safety
Team_Present_Attention	Pearson Correlation	1	.684**	.738**
	Sig. (2-tailed)		<.001	<.001
	N	440	440	440
Team_Nonjudgmental	Pearson Correlation	.684**	1	.828**
	Sig. (2-tailed)	<.001		<.001
	N	440	440	440
Team_PsychologicalSafety	Pearson Correlation	.738**	.828**	1
	Sig. (2-tailed)	<.001	<.001	
	N	440	440	440

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

Figure 9. Correlations to check multicollinearity between the components of team mindfulness and psychological safety

To confirm the absence of multicollinearity, it is checked that VIF values are below 10 (Alin 2010, 371) and tolerance levels are above 0.1 (Field 2009, 224). Upon examination (figure 10), both team mindfulness and psychological safety exhibit tolerances of 0.278 and VIF values of 3.593, meeting the established criteria. Thus, multicollinearity does not pose a significant concern for this model, ensuring a confident interpretation of regression coefficients in predicting Well-being.

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	Team_Mindfulness	.278	3.593
	Team_PsychologicalSafety	.278	3.593

a. Dependent Variable: Well_being

Figure 10. Checking multicollinearity between team mindfulness and psychological safety through tolerance levels and VIF

Furthermore, when considering the components of team mindfulness—present attention and nonjudgmental traits—alongside psychological safety in predicting well-being, tolerance values range from approximately 0.259 to 0.439, with corresponding VIF values ranging from approximately 2.279 to 3.860 (figure 11). These values confirm the absence of significant multicollinearity in this regression model, allowing for a confident interpretation of estimated coefficients in predicting well-being.

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	Team_Present_Attention	.439	2.279
	Team_Nonjudgmental	.302	3.311
	Team_PsychologicalSafety	.259	3.860

a. Dependent Variable: Well_being

Figure 11. Checking multicollinearity between the components of team mindfulness and psychological safety through tolerance levels and VIF

6.1.5 Homoscedasticity

Homoscedasticity refers to the property in a statistical regression analysis where the variance of the residual terms remains constant across all levels of the predictor variable(s). This means that the spread or dispersion of the residuals around the regression line remains consistent regardless of the values of the predictors. In contrast, heteroscedasticity occurs when the variance of the residuals changes at different levels of the predictors, resulting in a non-constant spread of residuals. Homoscedasticity is a crucial assumption in regression analysis, and violations of this assumption can lead to biased parameter estimates and inaccurate statistical inferences. (Field 2009, 220) The Breusch-Pagan test is a widely accepted test for identifying homoscedasticity (Halunga et al. 2017, 209). The data for this thesis has been tested using the Breusch-Pagan test (table 4).

Table 5. Breusch-Pagan Test for Heteroscedasticity

	LM	Sig
BP[1]	2.10	0.35
BP[2]	3.89	0.27
BP[1] – Team mindfulness, psychological safety & well-being BP[2] – Team present attention, nonjudgemental, psychological safety & well-being Null hypothesis: heteroskedasticity not present (homoskedasticity). If the sig-value less than 0.05, reject the null hypothesis.		

In analyzing the outcomes, it's customary to assess the significance (sig) values against a predefined significance level, typically set at 0.05. When the significance value falls below 0.05, it implies rejecting the null hypothesis, signaling the presence of heteroskedasticity within the model. Conversely, a significance value equal to or exceeding 0.05 leads to the non-rejection of the null hypothesis, indicating the absence of heteroskedasticity and affirming that the model's errors exhibit constant variance. In the examination, both instances yielded Breusch-Pagan test results with significance values above 0.05 (0.35 and 0.27, respectively), thus failing to reject the null hypothesis. Consequently, based on these findings, there's no indication of heteroskedasticity in the regression model, confirming that the errors maintain a consistent variance (homoskedasticity).

6.1.6 Autocorrelation

In regression analysis, the assumption of uncorrelated (or independent) residual terms between any two observations is important. This is known as the lack of autocorrelation. The Durbin-Watson test is used to assess this assumption by checking for serial correlations between errors. The test statistic ranges from 0 to 4, with 2 indicating uncorrelated residuals. A value greater than 2 suggests a negative correlation between adjacent residuals, while a value below 2 suggests a positive correlation. (Field 2009, 220)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.129[a]	.017	.012	.81649	1.961

a. Predictors: (Constant), Team_PsychologicalSafety, Team_Mindfulness

b. Dependent Variable: Well_being

Figure 12. Durbin-Watson test: Team mindfulness, psychological safety and well-being

The results of the Durbin-Watson test (figure 12 and 13) are 1.961 and 1.971, which is close to 2, indicating that there is no significant autocorrelation detected in the residuals of the regression analysis. This is generally considered favorable as it suggests that the assumption of independent errors in the regression model is not violated.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.141[a]	.020	.013	.81605	1.971

a. Predictors: (Constant), Team_PsychologicalSafety, Team_Present_Attention, Team_Nonjudgmental

b. Dependent Variable: Well_being

Figure 13. Durbin-Watson test: Components of team mindfulness, psychological safety and well-being

6.2 Descriptive Statistics

In the descriptive table below (Table 6), an overview is presented of the minimum, maximum, mean value, and standard deviation for the independent variables as well as the dependent variable used in the hypothesis testing presented later in this chapter.

Table 6. Descriptive statistics

	Minimum	Maximum	Mean	Std. Deviation
Team Present Attention	3.08	6.90	5.29	0.71
Team Nonjudgmental	3.45	6.85	5.53	0.63
Team Mindfulness	3.65	6.78	5.41	0.62
Team Psychological Safety	4.03	6.96	5.70	0.67
Well-being	1.00	5.00	3.52	0.82

N=440

The team's present attention exhibits a broad spectrum of responses, ranging from 3.08 to 6.90, with a mean value of 5.29 (SD = 0.71). This signifies a notable diversity in the levels of engagement across teams, suggesting potential variances in their focus and attentiveness during collaborative activities. In contrast, team nonjudgmental behavior demonstrates a narrower range, spanning from 3.45 to 6.85, with a mean of 5.53 (SD = 0.63). This indicates a prevailing tendency towards high levels of nonjudgmental interactions within teams, coupled with a relatively low degree of variability, suggesting consistent adherence to nonjudgmental principles.

Team mindfulness showcases moderate variability, with responses ranging from 3.65 to 6.78 and a mean of 5.41 (SD = 0.62). This variability suggests a nuanced landscape of mindfulness practices within teams, reflecting varying degrees of mindfulness integration into team processes and interactions. Similarly, Team Psychological Safety demonstrates a noteworthy range from 4.03 to 6.96, with a mean value of 5.70 (SD = 0.67). This indicates an overall favorable climate of psychological safety within teams, albeit with discernible fluctuations across team contexts, implying differential levels of comfort and security among team members.

Individual well-being presents a wide-ranging distribution, spanning from 1.00 to 5.00, with a mean value of 3.52 (SD = 0.82). This divergence underscores the heterogeneous nature of individual well-being experiences within the sample, suggesting a complex interplay of factors influencing individual perceptions of personal welfare.

The correlation matrix offers a concise overview of the interrelationships between the various variables, serving as a preliminary gauge of support for the hypotheses. In Table 7 below, the coefficients reveal the degree and direction of correlation between pairs of variables. These correlation coefficients, derived from mean aggregation, are denoted by symbols such as **, *, or ^ to signify their statistical significance, highlighting noteworthy correlations.

Table 7. Correlation: Team mindfulness, psychological safety and well-being

		1	2	3
1	**Team Mindfulness**			
2	**Team Psychological Safety**	0.850**		
3	**Well-being**	0.119*	0.127**	

N = 440

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

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

The correlation matrix reveals associations among three key variables team mindfulness, psychological safety, and well-being. A robust positive correlation (r = 0.850, p < .01) is observed between team mindfulness and psychological safety, indicating that heightened levels of team mindfulness are significantly linked to increased perceptions of psychological safety. Contrary to expectations, team mindfulness showed a weaker but statistically significant positive correlation with individual well-being (r = 0.119, p < 0.05), suggesting that higher team mindfulness may contribute positively to individual well-being. Conversely, a moderately positive correlation (r = 0.127, p < .01) is identified between psychological safety and well-

being, indicating that enhanced perceptions of psychological safety are associated with heightened levels of individual well-being.

Table 8. Correlation: Components of team mindfulness, psychological safety and well-being

		1	2	3	4
1	**Team Present Attention**				
2	**Team Nonjudgmental**	0.684**			
3	**Team Psychological Safety**	0.738**	0.824**		
4	**Well-being**	0.086	0.137**	0.127**	

N = 407

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

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

Furthermore, the objective involves investigating the association between two facets of team mindfulness—specifically, team present attention and team nonjudgmental behavior—in conjunction with team psychological safety, and their joint influence on well-being. The correlation matrix (table 8) reveals a positive correlation ($r = 0.738$, $p < 0.01$) between team present attention and psychological safety, suggesting that a greater focus on present attention is associated with higher perceptions of psychological safety among team members. There is also a strong positive correlation ($r = 0.824$, $p < 0.01$) between team nonjudgmental behavior and psychological safety, indicating that teams characterized by nonjudgmental behavior tend to have higher perceptions of psychological safety.

Regarding well-being, statistically significant but relatively weak positive correlations were found with both team nonjudgmental behavior ($r = 0.137$, $p < 0.01$) and psychological safety ($r = 0.127$, $p < 0.01$). This suggests that while well-being is positively associated with nonjudgmental behavior and psychological safety within the team, these relationships are not as strong as those observed among the other variables.

The overall relationship between team mindfulness and well-being appears to be weak, as indicated by the correlation coefficient (r = 0.086) between team mindfulness and well-being in Table 8. However, upon examining the relationship at the component level in Table 8, it is evident that team nonjudgmental behavior demonstrates a slightly significant association with well-being (r = 0.137, p < 0.01), while team present attention does not exhibit a statistically significant relationship with well-being. This suggests that within the context of team mindfulness, the specific component of nonjudgmental behavior may have a more notable impact on well-being compared to the component of present attention in a global virtual team.

6.3   Hypotheses Testing

In this section, the results of the regression analyses are presented. For each regression, tables containing statistical outcomes are provided, which are interpreted based on confidence intervals, p-values, F-ratios, adjusted R-squared values, standardized beta values, and T-statistics.

A confidence interval is a statistical range of values that is believed to contain the true value of a population parameter, with a specified level of confidence. The most common confidence interval used is 95%. A 95% confidence interval indicates that if the same questions are posed to various groups of people repeatedly, the answer probably falls within a specific range approximately 95% of the time. It helps in understanding the level of certainty regarding the obtained answer. (Field 2009, 43)

The p-value, or probability value, measures the likelihood that any observed difference between groups is due to chance. For instance, a significance level of .05 implies a 5% risk of concluding a difference exists when there isn't one. Researchers often include the p-value in hypothesis tests, allowing readers to interpret statistical significance themselves—a method known as the p-value approach. Significance levels, typically set at 5%, 1%, or 0.1%, correspond to confidence levels of 95%, 99%, and 99.9%, respectively. In social science, p-values ≤ .1 are often considered significant due to data heterogeneity. In experiments, p-values are typically calculated at the 5% level. Results with p-values ≤ .05 are deemed significant; those > .05 are not. However, the .05 threshold is arbitrary, and p-values alone should not guide clinical or scientific

decisions, as significance does not equate to clinical relevance or meaningful findings. (Shrestha 2019, 1)

The F-ratio or F statistic is a test statistic characterized by a known probability distribution, the F-distribution. It represents the ratio between the average variability in the data that a given model can explain and the average variability left unexplained by the same model. This statistic is used to assess the overall fit of the model in both simple and multiple regression analyses, as well as to evaluate overall differences between group means in experimental settings. For instance, if the F-ratio is 99.59 and significant at $p < .001$, it indicates that there is less than a 0.1% chance of observing an F-ratio of this magnitude if the null hypothesis is true. (Field 2009, 207-785)

Adjusted R-squared, a metric indicating the reduction in predictive capability or regression shrinkage quantifies the extent to which the variance in the result is explained if the model is constructed from the entire population rather than just the sample. (Field 2009, 781)

Standardized beta values, labeled as Beta (β_1) in SPSS, indicate the extent to which the outcome changes in terms of standard deviations due to a one-standard-deviation change in the predictor variable. These values are expressed in standard deviation units, ensuring direct comparability among them and thereby offering a more insightful understanding of the predictor's significance within the model. (Field 2009, 239)

The T-statistic, also known as Student's t, is a statistical measure with a well-defined probability distribution (the t-distribution). In regression analysis, it evaluates whether a regression coefficient (denoted as b) significantly deviates from zero. In experimental settings, it assesses whether the differences between two means are significantly different from zero. (Field 2009, 795)

6.3.1 The Relationship Between Team Mindfulness and Well-Being

Based on the hypothesis (H1a) positing a positive correlation between team mindfulness and team members' well-being in global virtual teams, regression analysis is conducted to investigate this relationship. The model summary (Figure 14) reveals

that the regression model is statistically significant at a 95% confidence level, with an F statistic of 6.340 and a corresponding p-value of 0.012. This suggests that variations in team mindfulness explain a small but statistically meaningful proportion of the variability in team members' well-being. The adjusted R-squared value of 0.012 indicates that approximately 1.2% of the variance in well-being can be attributed to team mindfulness, while the overall R-squared value of 0.014 signifies that the model explains about 1.4% of the variability.

Model Summary

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.119[a]	.014	.012	.817	.014	6.340	1	438	.012

a. Predictors: (Constant), Team_Mindfulness

Figure 14. Regression model summary: Team mindfulness and well-being

Specifically examining the coefficients (Figure 15), the regression coefficient (β) for team mindfulness is 0.159, with a T-statistic of 2.518 and a p-value of 0.012. This indicates a statistically significant positive relationship between team mindfulness and team members' well-being.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	2.657	.345		7.707	<.001	1.979	3.335
	Team_Mindfulness	.159	.063	.119	2.518	.012	.035	.284

a. Dependent Variable: Well_being

Figure 15. Regression coefficients: Team mindfulness and well-being

The analysis provides support for the hypothesis that team mindfulness is positively associated with team members' well-being in global virtual teams. Increasing team mindfulness may therefore contribute to enhanced well-being among team members in virtual work environments.

6.3.2 The Relationship Between Team Present Attention and Well-Being

The hypothesis (H1b) posits a positive correlation between present attention, a component of team mindfulness, and the well-being of team members within global virtual teams. To examine this relationship, regression analysis is conducted, providing insights into the associations between present attention and team members' well-being.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.086ᵃ	.007	.005	.819	.007	3.232	1	438	.073

a. Predictors: (Constant), Team_Present_Attention

Figure 16. Regression model summary: Present attention and well-being

The model summary (Figure 16) indicates that the regression model does not reach statistical significance at the conventional 95% confidence level. The F statistic (1, 438) yields a value of 3.232 with a corresponding p-value of 0.073, suggesting insufficient evidence to support a significant relationship between present attention and team members' well-being. The adjusted R-squared value of 0.005 and the R-squared value of 0.007 indicate that only a very small proportion (0.5% to 0.7%) of the variance in team members' well-being can be explained by variations in present attention.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	2.999	.292		10.268	<.001	2.425	3.573
	Team_Present_Attention	.098	.055	.086	1.798	.073	-.009	.206

a. Dependent Variable: Well_being

Figure 17. Regression coefficients: Present attention and well-being

Examining the coefficients (Figure 17), the regression coefficient (β) for present attention is 0.098, with a T-statistic of 1.798 and a p-value of 0.073. The non-significant p-value suggests that present attention does not significantly predict team members' well-being in global virtual teams based on the current model and sample.

The analysis does not provide evidence to support the hypothesis (H1b) that present attention, as a component of team mindfulness, exhibits a positive correlation with the well-being of team members in global virtual teams. The findings suggest a lack of a statistically significant relationship between present attention and team members' well-being within the studied context.

6.3.3 The Relationship Between Nonjudgemental and Well-Being

The hypothesis (H1c) proposes a positive correlation between nonjudgmental processing, a fundamental component of team mindfulness, and the well-being of team members within global virtual teams.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.137ᵃ	.019	.017	.81467	.019	8.400	1	438	.004

a. Predictors: (Constant), Team_Nonjudgmental

Figure 18. Regression model summary: Nonjudgmental and well-being

The model summary (Figure 18) indicates that the regression model is statistically significant at a 95% confidence level. The F statistic (1, 438) yields a value of 8.40 with a corresponding p-value of 0.004, providing strong evidence to support the relationship between nonjudgmental processing and team members' well-being. The adjusted R-squared value of 0.017 and the R-squared value of 0.019 suggest that approximately 1.7% to 1.9% of the variance in team members' well-being can be explained by variations in nonjudgmental processing.

Coefficientsᵃ

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	2.524	.346		7.302	<.001	1.845	3.204
	Team_Nonjudgmental	.180	.062	.137	2.898	.004	.058	.302

a. Dependent Variable: Well_being

Figure 19. Regression coefficients: Nonjudgmental and well-being

Examining the coefficients (Figure 19), the regression coefficient (β) for nonjudgmental processing is 0.180, with a T-statistic of 2.898 and a p-value of 0.004. This statistically significant p-value (0.004) indicates that nonjudgmental processing is positively and significantly related to team members' well-being in global virtual teams.

The analysis provides evidence to support the hypothesis (H1c) that nonjudgmental processing, as a vital aspect of team mindfulness, demonstrates a positive correlation with the well-being of team members in global virtual teams. The findings suggest a statistically significant relationship between nonjudgmental processing and team members' well-being within the studied context.

6.3.4 The Relationship Between Team Psychological Safety and Well-Being

The hypothesis (H2) posits a positive correlation between team psychological safety and team members' well-being within global virtual teams.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	.127ᵃ	.016	.014	.816	.016	7.229	1	438	.007

a. Predictors: (Constant), Team_PsychologicalSafety

Figure 20. Regression model summary: Psychological safety and well-being

The model summary (Figure 20), evaluated at a 95% confidence interval, reveals statistical significance with an F statistic (1, 438) of 7.229 and a p-value less than or equal to 0.01. This indicates that the regression model significantly explains the variance in team members' well-being. The adjusted R-squared value, computed at 0.014, suggests a modest fit of the model to the data, with team psychological safety accounting for approximately 1.4% of the variance in team members' well-being. Similarly, the coefficient of determination (R-squared) is determined to be 0.016, indicating minimal explanatory power of the model.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	2.628	.334		7.872	<.001	1.972	3.284
	Team_PsychologicalSafety	.156	.058	.127	2.689	.007	.042	.271
a. Dependent Variable: Well_being								

Figure 21. Regression coefficients: Psychological safety and well-being

Specifically examining the relationship between team psychological safety and team members' well-being (Figure 21), the regression coefficient (β) for team psychological safety is 0.156 with a corresponding T-statistic of 2.689 and a p-value less than or equal to 0.01. This implies that team psychological safety significantly predicts team members' well-being in global virtual teams within the analyzed dataset.

The analysis provides evidence to support the hypothesis (H2) that team psychological safety is positively correlated with team members' well-being in global virtual teams. The findings suggest a statistically significant relationship between team psychological safety and team members' well-being within the studied context.

6.3.5 The Relationship Between Team Mindfulness and Team Psychological Safety

The hypothesis (H3a) proposes a positive correlation between team mindfulness and team psychological safety within global virtual teams.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.850ᵃ	.722	.721	.354	.722	1135.666	1	438	<.001

a. Predictors: (Constant), Team_Mindfulness

Figure 22. Regression model summary: Team mindfulness and psychological safety

The model summary (Figure 22), assessed at a 95% confidence interval, indicates strong statistical significance with an F statistic (1, 438) of 1135.666 and a p-value less than 0.001. This suggests that the regression model significantly explains the variance in team psychological safety. The adjusted R-squared value, calculated at 0.721, signifies a substantial fit of the model to the data, with team mindfulness accounting for approximately 72.1% of the variance in team psychological safety. Similarly, the coefficient of determination (R-squared) is determined to be 0.722, indicating the high explanatory power of the model.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	.702	.149		4.705	<.001	.409	.996
	Team_Mindfulness	.924	.027	.850	33.700	<.001	.870	.978

a. Dependent Variable: Team_PsychologicalSafety

Figure 23. Regression coefficients: Team mindfulness and psychological safety

Specifically examining the relationship between team mindfulness and team psychological safety (Figure 23), the regression coefficient (β) for team mindfulness is 0.924 with a corresponding T-statistic of 33.700 and a p-value less than 0.001. This

implies that team mindfulness significantly predicts team psychological safety in global virtual teams within the analyzed dataset.

The analysis provides strong evidence to support the hypothesis (H3a) that team mindfulness is positively correlated with team psychological safety in global virtual teams. The findings suggest a significant relationship between team mindfulness and team psychological safety within the studied context.

6.3.6 The Relationship Between Present Attention and Team Psychological Safety

The hypothesis (H3b) posits a positive correlation between the practice of present attention, a fundamental element of team mindfulness, and the psychological safety of team members within global virtual teams.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.738ª	.544	.543	.483	.544	522.500	1	438	<.001

a. Predictors: (Constant), Team_PsychologicalSafety

Figure 24. Regression model summary: Present attention and psychological safety

The model summary (Figure 24), evaluated at a 95% confidence interval, reveals significant statistical findings with an F statistic (1, 438) of 522.500 and a p-value less than 0.001. This indicates that the regression model significantly explains the variance in team members' psychological safety. The adjusted R-squared value, computed at 0.543, suggests a substantial fit of the model to the data, with present attention accounting for approximately 54.3% of the variance in team members' psychological safety. Similarly, the coefficient of determination (R-squared) is determined to be 0.544, indicating the high explanatory power of the model.

		Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
Model		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	.801	.198		4.048	<.001	.412	1.189
	Team_PsychologicalSafety	.787	.034	.738	22.858	<.001	.720	.855
a. Dependent Variable: Team_Present_Attention								

Figure 25. Regression coefficients: Present attention and psychological safety

Specifically examining the relationship between the practice of present attention and team members' psychological safety (Figure 25), the regression coefficient (β) for present attention is 0.787 with a corresponding T-statistic of 22.858 and a p-value less than 0.001. This implies that the practice of present attention significantly predicts team members' psychological safety in global virtual teams within the analyzed dataset.

The analysis provides robust evidence to support the hypothesis (H3b) that the practice of present attention, as a fundamental element of team mindfulness, displays a positive correlation with the psychological safety of team members in global virtual teams. The findings suggest a significant relationship between the practice of present attention and team members' psychological safety within the studied context.

6.3.7 The Relationship Between Nonjudgemental and Team Psychological Safety

The hypothesis (H3c) suggests a positive correlation between engaging in nonjudgmental processing, a critical aspect of team mindfulness, and the psychological safety of team members within global virtual teams.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.828ᵃ	.686	.685	.35091	.686	957.419	1	438	<.001

a. Predictors: (Constant), Team_PsychologicalSafety

Figure 26. Regression model summary: Nonjudgmental and psychological safety

The model summary (Figure 26), assessed at a 95% confidence interval, yields highly significant statistical results with an F statistic (1, 438) of 957.419 and a p-value less than 0.001. This indicates that the regression model effectively explains the variance in team members' psychological safety. The adjusted R-squared value, calculated at 0.685, signifies a strong fit of the model to the data, with nonjudgmental processing accounting for approximately 68.5% of the variance in team members' psychological safety. Similarly, the coefficient of determination (R-squared) is determined to be 0.686, indicating the high explanatory power of the model.

Coefficientsᵃ

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.113	.144		7.752	<.001	.831	1.396
	Team_PsychologicalSafety	.774	.025	.828	30.942	<.001	.725	.823

a. Dependent Variable: Team_Nonjudgmental

Figure 27. Regression coefficients: Nonjudgmental and psychological safety

Specifically examining the relationship between engaging in nonjudgmental processing and team members' psychological safety (Figure 27), the regression coefficient (β) for nonjudgmental processing is 0.774 with a corresponding T-statistic of 30.942 and a p-value less than 0.001. This implies that engaging in nonjudgmental

processing significantly predicts team members' psychological safety in global virtual teams within the analyzed dataset.

The analysis provides strong evidence to support the hypothesis (H3c) that engaging in nonjudgmental processing, as a critical aspect of team mindfulness, reveals a positive correlation with the psychological safety of team members in global virtual teams. The findings suggest a significant relationship between engaging in nonjudgmental processing and team members' psychological safety within the studied context.

6.3.8 Mediation: Team Mindfulness

The hypothesis posits that team psychological safety acts as a mediating factor between team mindfulness and team members' well-being. Firstly, the mediation model is assessed with team psychological safety (TPS) as the outcome variable (Figure 28). The results indicate a significant positive relationship between team mindfulness (TM) and team psychological safety (TPS), with TM positively predicting TPS (coeff = 0.924, p < .001).

```
OUTCOME VARIABLE:
 TPS

Model Summary
      R        R-sq      MSE        F          df1        df2        p
    .8495     .7217     .1250    1135.6665   1.0000    438.0000    .0000

Model
             coeff      se         t          p          LLCI      ULCI
constant     .7025     .1493    4.7049      .0000      .4090      .9959
TM           .9243     .0274   33.6997      .0000      .8704      .9782
```

Figure 28. Mediation model: Team mindfulness predicting psychological safety

Next, team members' well-being (WB) is examined as the outcome variable in the mediation model (Figure 29). The results show that while there are positive relationships between both team mindfulness (coeff = 0.534) and team psychological

safety (coeff = 0.114) with team members' well-being, these relationships are not statistically significant as the p-values are high (p > .05).

```
OUTCOME VARIABLE:
WB

Model Summary
     R      R-sq     MSE      F       df1        df2         p
   .1292   .0167    .6667   3.7083   2.0000   437.0000     .0253


Model
              coeff     se       t         p       LLCI      ULCI
constant     2.5767   .3534   7.2921    .0000    1.8822    3.2712
TM            .0537   .1200    .4475    .6547    -.1822     .2897
TPS          .1144   .1103   1.0370    .3003    -.1024     .3313
```

Figure 29. Mediation model: Team mindfulness predicting well-being

The total effect model (Figure 30), which examines the direct relationship between team mindfulness (TM) and team members' well-being (WB) without considering the mediator, shows that there is a statistically significant positive relationship between team mindfulness (TM) and team members' well-being (WB) when not considering any mediator variables.

```
OUTCOME VARIABLE:
WB

Model Summary
     R      R-sq     MSE      F       df1        df2         p
   .1195   .0143    .6668   6.3400   1.0000   438.0000     .0122

Model
              coeff     se       t         p       LLCI      ULCI
constant     2.6571   .3448   7.7066    .0000    1.9795    3.3347
TM            .1595   .0633   2.5179    .0122     .0350     .2840
```

Figure 30. Mediation model: The direct relationship between team mindfulness and well-being

Figure 31 analysis shows an indirect influence of team mindfulness (TM) on well-being (WB) via team psychological safety (TPS), with a bootstrapped indirect effect of 0.106. However, the 95% confidence interval (-0.113 to 0.323) suggests the mediation effect isn't statistically significant.

```
Indirect effect(s) of X on Y:
          Effect   BootSE   BootLLCI   BootULCI
TPS       .1058    .1118    -.1129     .3231
```

Figure 31. Mediation model: The indirect relationship between team mindfulness and well-being

Although the overall impact of team mindfulness on well-being proves significant, the anticipated mediating function of team psychological safety isn't upheld in the analysis. The confidence interval for the indirect effect encompasses zero, indicating that team psychological safety might not entirely mediate the connection between team mindfulness and the well-being of members in global virtual teams.

6.3.9 Mediation: Present Attention

Hypothesis H4b posits that team psychological safety (TPS) acts as a mediator between team present attention (TPA), a component of team mindfulness, and the well-being (WB) of team members in global virtual teams. Firstly, examining the relationship between team present attention (TPA) and team psychological safety (TPS), the model summary (Figure 32) indicates a significant positive relationship, with an R-squared value of 0.544. The regression coefficient for TPA on TPS is 0.691, indicating that for every one-unit increase in team present attention, team psychological safety increases by 0.691 units ($p < 0.001$). This supports the proposed mediation hypothesis, suggesting that higher levels of present attention are associated with greater psychological safety.

```
OUTCOME VARIABLE:
 TPS

Model Summary
    R      R-sq     MSE      F        df1      df2       p
   .738    .544    .205   522.500   1.000   438.000     .000

Model
              coeff     se       t        p      LLCI    ULCI
constant     2.047    .161   12.688    .000   1.730   2.364
TPA           .691    .030   22.858    .000    .631    .750
```

Figure 32. Mediation model: Present attention predicting psychological safety

Secondly, the relationship between team present attention (TPA), team psychological safety (TPS), and well-being (WB) is analyzed. The model summary (Figure 33) for well-being indicates an R-squared value of 0.016. The direct effect of TPA on WB is not statistically significant (p = 0.793), with a regression coefficient of -0.021. However, the direct effect of TPS on WB is statistically significant (p = 0.045), with a regression coefficient of 0.173. This suggests that team psychological safety positively influences the well-being of team members, regardless of team present attention.

```
OUTCOME VARIABLE:
 WB

Model Summary
    R      R-sq     MSE      F        df1      df2       p
   .128    .016    .667    3.641    2.000   437.000    .027

Model
              coeff     se       t        p      LLCI    ULCI
constant     2.645    .340    7.770    .000   1.976   3.314
TPA          -.021    .081    -.262    .793   -.180    .138
TPS           .173    .086    2.007    .045    .004    .342
```

Figure 33. Mediation model: Present attention predicting well-being

Furthermore, the total effect (Figure 34) of team present attention (TPA) on well-being (WB) is not statistically significant (p = 0.073), with a regression coefficient

of 0.098. This indicates that the direct effect of team present attention on well-being is not supported in the model.

```
OUTCOME VARIABLE:
WB

Model Summary
     R      R-sq    MSE      F       df1       df2        p
   .086     .007    .671    3.232   1.000    438.000    .073

Model
             coeff     se       t        p       LLCI     ULCI
constant     2.999    .292    10.268    .000     2.425    3.573
TPA           .098    .055     1.798    .073     -.009     .206
```

Figure 34. Mediation model: The direct relationship between present attention and well-being

However, the analysis depicted in Figure 35 reveals an indirect pathway through which team present attention (TPA) influences well-being (WB), mediated by team psychological safety (TPS). The computed bootstrapped indirect effect is determined to be 0.120. However, the accompanying 95% confidence interval, spanning from -0.017 to 0.254, indicates that the observed mediation effect does not reach statistical significance.

```
Indirect effect(s) of X on Y:
          Effect    BootSE    BootLLCI    BootULCI
TPS        .120      .069      -.017        .254
```

Figure 35. Mediation model: The indirect relationship between present attention and well-being

The analysis does not provide support for hypothesis H4b, indicating that team psychological safety does not act as a mediator between present attention and the well-being of team members in global virtual teams.

6.3.10 Mediation: Nonjudgemental

Firstly, examining the relationship between nonjudgmental processing (NJ) and team psychological safety (TPS), the model summary (Figure 36) demonstrates a significant positive association, with an R-squared value of 0.686. The regression coefficient for NJ on TPS is 0.886, indicating that for every one-unit increase in nonjudgmental processing, team psychological safety increases by 0.886 units (p < 0.001). This finding supports the hypothesized mediation, suggesting that higher levels of nonjudgmental processing are linked with greater team psychological safety.

```
OUTCOME VARIABLE:
TPS

Model Summary
      R      R-sq    MSE      F        df1      df2       p
    .828    .686    .141   957.419   1.000   438.000   .000

Model
            coeff    se      t        p      LLCI     ULCI
constant    .803    .159   5.039    .000    .490    1.116
NJ          .886    .029  30.942    .000    .830     .943
```

Figure 36. Mediation model: Nonjudgmental predicting psychological safety

Secondly, exploring the relationship between nonjudgmental processing (NJ), team psychological safety (TPS), and well-being (WB), the model summary (Figure 37) for well-being indicates an R-squared value of 0.019. The direct effect of NJ on WB is not statistically significant (p = 0.234), with a regression coefficient of 0.132. Similarly, the direct effect of TPS on WB is also not statistically significant (p = 0.603), with a regression coefficient of 0.054. This implies that neither nonjudgmental processing nor team psychological safety directly influences well-being in this model.

```
OUTCOME VARIABLE:
 WB

Model Summary
      R      R-sq     MSE      F       df1      df2        p
    .139     .019     .665    4.328   2.000   437.000     .014

Model
             coeff     se       t       p       LLCI     ULCI
constant    2.481     .356    6.971    .000    1.781    3.180
NJ           .132     .111    1.192    .234    -.086     .351
TPS          .054     .104     .520    .603    -.150     .258
```

Figure 37. Mediation model: Nonjudgmental predicting well-being

However, the total effect (Figure 38) of nonjudgmental processing (NJ) on well-being (WB) is statistically significant (p = 0.004), with a regression coefficient of 0.180. This suggests that there is an overall effect of nonjudgmental processing on well-being, albeit the direct effect is not significant.

```
OUTCOME VARIABLE:
 WB

Model Summary
      R      R-sq     MSE      F       df1      df2       p
    .137     .019     .664    8.400   1.000   438.000    .004

Model
             coeff     se       t       p       LLCI     ULCI
constant    2.524     .346    7.302    .000    1.845    3.204
NJ           .180     .062    2.898    .004     .058     .302
```

Figure 38. Mediation model: The direct relationship between nonjudgmental and well-being

Furthermore, the analysis (Figure 39) reveals an indirect effect of nonjudgmental processing (NJ) on well-being (WB) through team psychological safety (TPS), with a bootstrapped indirect effect of 0.048. However, the 95% confidence interval for this indirect effect ranges from -0.145 to 0.234, indicating that the mediation effect is not statistically significant.

```
Indirect effect(s) of X on Y:

        Effect   BootSE  BootLLCI   BootULCI
TPS     .048     .097    -.145      .234
```

Figure 39. Mediation model: The indirect relationship between nonjudgmental and well-being

In summary, while the total effect of nonjudgmental processing on well-being is significant, the hypothesized mediation role of team psychological safety is not supported by the analysis. The confidence interval for the indirect effect includes zero, suggesting that team psychological safety may not fully mediate the relationship between nonjudgmental processing and the well-being of team members in global virtual teams. Further research may be needed to elucidate the complex interplay between these variables in virtual team environments.

6.3.11 Summary of The Hypotheses Testing

Table 9 presents the summary of hypotheses that have been identified through the regression and mediation analysis.

Table 9. Summary of Hypothesis Testing Results

Hypothesis	Conclusion	Summary of Finding
H1a	Support	Team mindfulness is correlated with team members' well-being in global virtual teams.
H1b	No support	Present attention, as a constituent of team mindfulness, is not correlated with team members' well-being in global virtual teams.
H1c	Support	Nonjudgmental processing, as a vital aspect of team mindfulness, has a positive correlation with the well-being of team members in global virtual teams.

H2	Support	Psychological safety is positively correlated with team members' well-being in a global virtual team.
H3a	Support	Team mindfulness is positively correlated with psychological safety in global virtual teams.
H3b:	Support	The practice of present attention, as a fundamental element of team mindfulness, has a positive correlation with the psychological safety of team members in global virtual teams.
H3c	Support	Engaging in nonjudgmental processing, as a critical aspect of team mindfulness, reveals a positive correlation with the psychological safety of team members in global virtual teams.
H4a	No support	Team psychological safety does not act as a mediating factor between team mindfulness and team members' Well-being in global virtual teams.
H4b	No support	Team psychological safety does not serve as a mediating factor between present attention, a constituent of team mindfulness, and the well-being of team members in global virtual teams.
H4c	No support	Team psychological safety does not mediate between nonjudgmental processing, a constituent of team mindfulness, and the well-being of team members in global virtual teams.

7 CONCLUSION

In light of the primary research question, which investigates the influence of team mindfulness and team psychological safety on the well-being of members in global virtual teams, the study's findings provide critical insights into the intricate dynamics within virtual team environments.

Firstly, it was found that team mindfulness is significantly correlated with the well-being of team members, indicating that cultivating a mindful team environment can positively impact individuals' overall well-being in such teams. However, when considering specific components of team mindfulness, only nonjudgmental processing showed a significant positive correlation with team members' well-being, suggesting its particular importance in fostering positive outcomes.

Furthermore, the study confirmed the importance of team psychological safety in shaping individual well-being within global virtual teams. Robust support was found for the positive correlation between team psychological safety and individual well-being, emphasizing the significance of creating an environment where team members feel safe to express themselves without fear of negative consequences. Intriguingly, the findings also unveiled a symbiotic relationship between team mindfulness and psychological safety. It was observed that team mindfulness positively influenced team psychological safety, with both present attention and nonjudgmental processing contributing to the creation of a psychologically safe team environment. This suggests that cultivating mindfulness within teams may catalyze establishing a supportive and inclusive atmosphere, ultimately enhancing individual well-being.

However, contrary to expectations, the study did not find support for team psychological safety acting as a mediating factor between team mindfulness and members' well-being. Neither did it support the hypothesis that psychological safety mediates the relationship between specific components of team mindfulness (present attention and nonjudgmental processing) and members' well-being.

7.1 Theoretical Contributions

The exploration of well-being within the realm of virtual teams has traditionally received limited attention (Hill et al. 2024, 4; Cañibano et al. 2022, 1; Gilson et al. 2015, 11) yet recent trends indicate a burgeoning interest in this area. As research in the field of virtual teams advances, there is a noticeable shift towards identifying factors that can nurture well-being within global virtual teams. While prior studies have underscored the effects of virtual work on well-being (Hill et al. 2024, 29; Standaert et al. 2023, 12; Cañibano et al. 2022, 10) ongoing inquiries are delving into strategies and practices conducive to fostering a positive work environment and supporting the well-being of team members in global virtual settings. While individual-level variables such as job resources (Grobelny 2023, 9), leaders' e-competencies (Chaudhary et al. 2022, 1056), emotional intelligence (Gamero et al. 2021, 13-14), and affect management training (González-Anta et al. 2021, 13) have garnered attention, relatively less focus has been directed toward team-level constructs that hold significant potential in influencing the well-being of virtual team members. This research contributes to the theoretical framework surrounding well-being in virtual teams by shifting the focus from individual-level variables to team-level constructs. By shedding light on the importance of team mindfulness and psychological safety, this study lays the groundwork for future research to explore additional team-level constructs and their impact on well-being in virtual team environments.

The present study contributes to the existing literature by reaffirming the positive correlation between team mindfulness and the well-being of members in global virtual teams. Drawing upon the Conservation of Resources (COR) theory, which posits that individuals strive to protect, maintain, and build resources to cope with stressors effectively, enhancing well-being (Hobfoll 1989, 516), assumptions were made that mindfulness, as a personal resource (Kroon et al. 2015, 639; Good et al. 2016, 18) that can contribute to well-being, which may consistently deliver expected outcomes at the global virtual team level. Findings suggest that team mindfulness indeed plays a significant role in promoting the well-being of members in global virtual teams, aligning with previous studies at the individual level (Lomas et al. 2017, 2; Malinowski & Lim 2015, 2; Shapiro et al. 2006, 380; Walsh & Shapiro 2006, 230; Brown & Ryan 2003, 843). This underscores the importance of understanding the interplay between

team mindfulness and well-being within global virtual team contexts. Furthermore, findings suggest that specific components of team mindfulness, such as nonjudgmental processing, play a significant role in promoting team members' well-being in global virtual teams, supporting previous studies (Ortet et al. 2020, 1; Bodenlos et al. 2015, 407). However, the lack of a significant correlation between present attention and team members' well-being, which contradicts previous studies at the individual level (Hepburn et al. 2021, 1; Livingstone & Isaacowitz 2017, 23), highlights the need for further investigation.

The study's findings confirm the hypothesized positive correlation between team psychological safety and team members' well-being in global virtual teams. These findings align with existing literature indicating that high psychological safety in teams correlates with reduced stress, burnout, and worry, while simultaneously enhancing work satisfaction, engagement, and overall well-being (Obrenovic et al. 2020, 12; Idris & Dollard 2014, 6). This provides insights into the significance of psychological safety in global virtual teams. It highlights the importance of psychological safety as a resource that contributes to team members' well-being, even in the absence of physical proximity and face-to-face interactions.

Traditionally, COR theory has been applied to explain stress, well-being, and behavior in various organizational contexts (Hobfoll et al. 2018, 103). By examining the relationship between team mindfulness, psychological safety, and well-being within global virtual teams through the lens of COR theory, this research offers a new perspective on how collective resources, including team mindfulness and psychological safety, can impact individuals' well-being in a global virtual environment.

This study validates the hypothesized positive correlations between team mindfulness and team psychological safety, as well as between specific components of team mindfulness (present attention and nonjudgmental processing) and psychological safety in global virtual teams. The hypothesis builds upon COR theory's proposition that resources are interconnected and co-develop, emphasizing the interplay between personal resources and supportive social conditions within teams (Hobfoll et al. 2018, 107). This study extends this understanding to encompass team-level resources, such as team mindfulness, and their impact on fostering a supportive team environment conducive to psychological safety. These findings also support the existing literature

indicating a positive relationship between mindfulness and psychological safety (Yu & Zellmer-Bruhn 2018, 332; Good et al. 2016, 15). Moreover, the study contributes to the conceptualization of team mindfulness as a cognitive resource that enables teams to effectively manage and conserve their mental and emotional resources (Yu & Zellmer-Bruhn 2018, 332). By delineating the dimensions of present attention and nonjudgmental processing within team mindfulness, the thesis elucidates how these aspects contribute to creating a climate of openness, resilience, and emotional carrying capacity within teams.

While the thesis initially proposed team psychological safety as a mediator, the results suggest that this pathway does not explain the relationship between team mindfulness and well-being. Instead, the study highlights the direct influence of team mindfulness on enhancing team members' well-being. By reframing the discussion, the study illustrates how the development of mindfulness within a team directly contributes to creating an environment where team members feel comfortable expressing themselves and engaging in risk-taking behaviors, ultimately enhancing their well-being. This perspective extends the COR theory's proposition regarding the importance of possessing resources for mitigating stress and enhancing well-being at the team level. The finding that team psychological safety doesn't act as a mediator between team mindfulness or its components and well-being suggests that the relationship between team mindfulness and well-being may not depend on team psychological safety as originally thought.

7.2   Managerial Implications

The findings of this study hold significant implications for managerial practices within organizations that operate with global virtual teams. Fostering nonjudgmental processing, a component of team mindfulness, within global virtual teams is essential. Such an approach positively correlates with the psychological safety of team members, thereby contributing to their overall well-being. Managers should prioritize creating an environment where team members feel accepted, respected, and free from fear of criticism.

The promotion of psychological safety within global virtual teams emerges as a critical factor. Creating an atmosphere where individuals feel safe to voice their opinions, take risks, and make mistakes without repercussions is paramount. Furthermore, while the direct correlation between present attention and team members' well-being may not be apparent, it is clear that present attention positively correlates with team psychological safety. Therefore, integrating mindfulness practices that emphasize present attention could enhance psychological safety which ultimately enhances well-being.

Understanding the absence of a mediating role for psychological safety is crucial. Despite initial expectations, the study found no evidence that psychological safety acts as a mediator between team mindfulness and team members' well-being. This suggests that the relationship between team mindfulness and well-being might not depend on psychological safety as previously assumed. Managers should take note of this finding when designing interventions to promote team well-being, focusing on direct strategies to enhance mindfulness practices rather than relying on psychological safety as an intermediary.

In summary, managers should focus on fostering nonjudgmental processing, promoting psychological safety, and integrating mindfulness practices within global virtual teams to enhance team members' well-being. These efforts can contribute to creating supportive and thriving virtual team environments conducive to success.

7.3   Limitations and Further Research

The study's sample size of 440 students, while inclusive, may limit the generalizability of findings, particularly to broader populations beyond university students. The study primarily involves university students engaged in academic coursework, potentially overlooking insights from professionals or individuals in workplace settings. This limitation may restrict the applicability of findings to real-world organizational contexts or industries.

Moreover, the predominant representation of European students may restrict the applicability of results to global contexts with diverse cultural norms and workplace

dynamics. While all teams participated in the surveys, variations in response rates across survey instances and the presence of non-responding team members in certain surveys may introduce biases and influence the reliability of collected data. Such variations could impact the robustness of statistical analyses and interpretations.

Additionally, the study does not control for variables, particularly the dynamic nature of global virtual teams. This absence of control may influence the interpretation of results and the ability to draw definitive conclusions about the relationships between team dynamics and well-being within such teams.

Data collection through self-report measures via online surveys may be susceptible to response biases, including social desirability and recall errors. Additionally, using Likert scales for assessing constructs like team mindfulness and psychological safety may present limitations in capturing nuanced variations in participant perceptions. The process of rephrasing reverse-scored items in measurement scales introduces complexities in data analysis and interpretation. Variations in participant understanding or interpretation of Likert scales may affect the accuracy of measurements, potentially impacting the validity of findings. The study's focus on self-reported reflections of well-being following each assignment limits the scope of well-being measurement. This narrow focus overlooks other dimensions of well-being and external factors influencing participant well-being within global virtual teams.

The exploration of well-being within global virtual teams offers numerous opportunities for further research. Building upon the insights gleaned from this study, there are several avenues for future research to deepen our understanding of the intricate dynamics within virtual team environments. Longitudinal studies tracking teams over time could provide valuable insights into how team mindfulness, psychological safety, and individual well-being evolve over extended periods. This approach would offer a more nuanced understanding of the temporal dynamics within global virtual teams.

In the context of global virtual teams, cultural considerations play a pivotal role from the perspectives of team mindfulness, psychological safety, and well-being. Perceptions of well-being can also be deeply influenced by cultural factors. What constitutes well-being may vary across cultures, encompassing physical, mental, social, and spiritual dimensions. Future research endeavors should delve into how cultural

factors intersect with these dimensions, influencing team dynamics and overall outcomes.

The role of technology in global virtual teams merits further exploration. Investigating how different technological platforms and tools influence team mindfulness, psychological safety, and member well-being could inform the design and implementation of virtual collaboration technologies. Moreover, considering the dynamic nature of virtual teams, future research could examine how team transitions, project phases, and team member turnover influence the relationship between team mindfulness, psychological safety, and well-being. Understanding how virtual teams adapt to changing circumstances and challenges is essential for optimizing team performance and member well-being.

As a further research scope for understanding the relationship between team mindfulness, psychological safety, and well-being, researchers could consider applying the Self-Determination Theory (SDT) lens. SDT proposes that individuals have three basic psychological needs: autonomy, competence, and relatedness (Deci & Ryan 2012, 417). Future research could investigate how team mindfulness and psychological safety contribute to fulfilling these needs within global virtual teams, thereby influencing member well-being.

Another theoretical lens that could be explored is Social Identity Theory (SIT). SIT posits that individuals derive a sense of identity and self-esteem from their group memberships (Ellemers & Haslam 2012, 379). Research from this perspective could examine how team mindfulness and psychological safety contribute to the formation and maintenance of positive social identities within virtual teams. Teams characterized by high levels of mindfulness and psychological safety may facilitate a strong sense of team identity and cohesion, leading to increased member well-being.

Furthermore, researchers could draw upon the Job Demands-Resources (JD-R) model to examine the role of job demands and resources in shaping member well-being within virtual teams. According to the JD-R model, job demands are aspects of the job that require sustained effort and are associated with physiological and psychological costs, while job resources are factors that facilitate goal achievement and reduce job demands (Bakker & Demerouti 2007, 312). Future research could explore how team

mindfulness and psychological safety act as job resources that buffer the negative impact of job demands on member well-being within global virtual teams.

8 SUMMARY

This thesis embarked on an exploration of the intricate interrelationships between team mindfulness, psychological safety, and well-being within the context of global virtual teams. Findings offer valuable insights into the complex dynamics at play within such teams. While the hypothesized direct relationship between team mindfulness and individual well-being was fully supported, the analysis revealed the importance of specific components of team mindfulness, particularly nonjudgmental processing, in fostering individual well-being.

Moreover, the crucial role of team psychological safety in shaping individual well-being within global virtual teams was confirmed, highlighting the significance of creating an environment where team members feel safe to express themselves without fear of negative consequences. Furthermore, a symbiotic relationship between team mindfulness and team psychological safety was uncovered, with both dimensions positively influencing each other. However, team psychological safety was not shown to mediate the relationship between team mindfulness and individual well-being.

From a theoretical standpoint, this research contributes to the existing literature by shifting the focus from individual-level variables to team-level constructs in understanding well-being within virtual teams. By elucidating the roles of team mindfulness and psychological safety, this study lays the groundwork for future research to explore additional team-level constructs and their impact on well-being in virtual team environments. Moving forward, scholars and practitioners alike must consider cultural factors in understanding team dynamics and well-being outcomes within global virtual teams. Additionally, further research could explore alternative theoretical lenses, such as Self-Determination Theory and Social Identity Theory, to deepen our understanding of the complex interplay between team processes and member well-being. In essence, this thesis underscores the importance of cultivating team mindfulness and psychological safety as key resources for enhancing well-being in global virtual teams. By fostering a supportive and inclusive team environment, organizations can empower their global virtual team members to thrive and flourish in today's increasingly interconnected and digital world.

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APPENDICES

Appendix 1: Declaration of the Use of Artificial Intelligence (AI)

I hereby confirm that I have utilized artificial intelligence (AI) in the process of researching and writing my thesis. The use of AI tools has been instrumental in enhancing my understanding of various concepts, clarifying confusing topics, aiding in data analysis, and refining the language and presentation of the content. Specifically, I employed ChatGPT to assist me in the following areas:

Understanding Complex Articles[1]: When faced with difficult-to-understand passages in academic articles relevant to my research, I utilized ChatGPT to provide concise summaries. By pasting portions of the article and requesting a summary, I gained clarity on intricate topics.

Clarifying Conceptual Confusions[2]: ChatGPT played a crucial role in clarifying conceptual confusions. For instance, when deliberating between philosophical frameworks for my thesis, such as positivism and pragmatism, I took help from ChatGPT to deepen my comprehension of these concepts.

Analysing Data[3]: My thesis involved analyzing team-level data, which required additional steps beyond individual-level data analysis techniques. Referring to the methodology section of Yu and Zellmer-Bruhn's article (2018), I recognized the necessity for supplementary procedures. To fully grasp these methods, I took assistance from ChatGPT.

Navigating SPSS for Data Analysis[4]: ChatGPT proved invaluable in aiding my navigation of SPSS for data analysis. Whenever I encountered challenges or queries regarding SPSS analyses, I turned to ChatGPT for guidance, which significantly facilitated my data analysis process.

Additionally, AI-based spelling corrections and language improvements were integral to the writing process. Tools such as Grammarly and Quillbot were employed to refine the language and ensure proper spelling. However, to guarantee that the original meaning of the content remained intact and accurate, I meticulously proofread everything and made corrections where necessary.

The use of AI, particularly ChatGPT, Grammarly, and Quillbot, has been integral to my thesis research and writing endeavors. I acknowledge the assistance provided by AI tools in enhancing understanding, resolving conceptual ambiguities, facilitating data analysis, and refining the language of the thesis. I affirm that I have utilized AI resources with care and responsibility, contributing to the integrity and rigor of my thesis.

Prompts

[1]ChatGPT, OpenAI, Oct. 5, 2023. Prompt: "What it trying to say- Mindfulness theory emphasizes that its two dimensions offer cognitive and affective functions (Good et al., 2016) that ought to reduce oppositional intensity and negative emotionality, connecting team conflict and mindfulness through these concepts. Therefore, team conflict offers a valuable test of the function and meaningfulness of team mindfulness."

[2]ChatGPT, OpenAI, Dec. 12, 2023. Prompt: "What are the basic differences between positivism and pragmatism?"

[3]ChatGPT, OpenAI, Jan. 7, 2024. Prompt: "How to do rwg, icc1, and icc2 analysis in SPSS"

[4]ChatGPT, OpenAI, Jan. 23, 2024. Prompt: "What's the difference between unstandardized Beta and standardized Beta in regression analysis"