

***Stoic Philosophy And Entrepreneurial Minds: Unveiling
The Resilience Of Norwegian Entrepreneurs In The
Context Of Stoicism***

LARS-MAGNUS DYBWAD
RASMUS NICOLAY PRIPP

SUPERVISOR
Soogand Golsorkhi

University of Agder, 2024

School of Business & Law
Department of Management

Preface

We want to extend our gratitude to Soogand Golsorkhi for her exceptional supervision throughout this study journey, along with Tobias Otterbring, Kalanit Erfat, and Pedro de Castro. Their input has been important in shaping and motivating our study. We have been introduced to students and entrepreneurs through SHIFT who have brought insights that have meant a great deal to our work. The people we have met at SHIFT have inspired our study and the elements it highlights.

We also extend our appreciation to all the respondents who participated in our questionnaire. Your feedback is invaluable, and we hope that your experiences and opinions can contribute to the well-being and resilience of future and current entrepreneurs. Your willingness to engage with us has been very motivating and helpful. The responses and eagerness to assist with our data collection have exceeded our expectations, and we are honored to share this journey with such dedicated entrepreneurs.

Finally, we express our gratitude to our friends and family as they have ensured that our lives remained balanced during this period.

We hope that our work can contribute to further research on this topic as it is important and relevant for the entrepreneurial ecosystem and the incorporation of ancient wisdom in modern life. We also hope that this thesis can improve the resilience of both aspiring and current Norwegian entrepreneurs.

We invite you all to enjoy the reading and we hope you benefit from it.

Abstract

This study investigates the association between modern Stoic tenets and the resilience of entrepreneurs in Norwegian startups. The early failure rate of new firms in Norway and the obstructive mental impact because of business failures, underscore the need for effective resilience strategies among entrepreneurs.

Entrepreneurs face significant stress and uncertainty which can lead to burnout and mental health issues. Resilience, the ability to recover from setbacks and adapt to challenges, is essential for overcoming these adversities. The philosophy of Stoicism and its tenets promote resilience through different mental practices and physical engagements.

Employing a quantitative approach, the study uses a self-administered questionnaire to collect data from Norwegian entrepreneurs. Independent variables measured include Stoic Practices (SP), Stoic Coping Strategies (SCS), Entrepreneurial Self-Efficacy (ES), and Stoic Engagement (SE). The dependent variable for the study is Emotional Resilience (ER).

The results highlight potential benefits of integrating Stoic tenets into entrepreneurial endeavors, training, and education. For practitioners, Stoic practices and entrepreneurial self-efficacy can enhance resilience and stress management. For researchers, the findings provide a foundation for further exploration into the specific mechanisms through which Stoic practices and entrepreneurial self-efficacy influence resilience. Future research should focus on qualitative studies and experiments to deepen the understanding of how Stoic tenets can be effectively applied in various entrepreneurial contexts.

Keywords: Stoicism, modern Stoicism, entrepreneurship, resilience, mindset, Norwegian entrepreneurs.

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1.0 Introduction

The central statistical office in Norway provides statistics showing that 44% of new businesses in Norway are no longer active only a year after registration (Skullerud, 2022). The researchers of this study want to contribute to the mental toolbox of Norwegian entrepreneurs to become more resilient, and push through the challenges they face. The tool this study promotes is an ancient philosophy called Stoicism, which originated in the 3rd century BC. According to (Worth, 2014, pp. 59-60) the old version of Stoicism, also named *Old Stoa* only exists and survives in fragments. *Old stoa* consisted of cosmology, physics and ethical rules and was founded by Zeno of Zithium. This version was later influenced by many famous philosophers, including Plato and Aristotle. Worth (2014, pp. 59-60) further explains a later version of Stoicism named *Late Stoa* which had a deeper focus on the practical and ethical foundations of the philosophy. The tenets of this philosophy were practiced by famous historical figures such as the Latin Philosopher and statesman Cicero (106 - 43 BC), and the Roman emperor Marcus Aurelius (4 BC - 65 AD) (Worth, 2014, pp. 59-60).

Zeno of Citium created Stoicism due to the abolishment of city states. This abolishment left the people with less guidance for their actions and responsibilities, leading to a need for self-discipline and moral guidance (Decker, 2020, p. 9). According to Guerin (2022) the philosophy of Stoicism has since BC been repurposed and examined in many instances through epochs. Guerin (2022) further emphasizes that the most recent branch of Stoicism influenced and rooted in the practical and ethical foundations of ancient Stoicism has increased in popularity in recent times. The new branch is named Modern Stoicism, it does not have any attachments to religion, but utilizes the ethical and moral parts of ancient Stoicism. It focuses primarily on Stoic tenets for self-help and increased resilience in modern life (Guerin, 2022, p. 138; Worth, 2014, p. 60). Modern Stoicism advocates for living in harmony with nature through the practice of four fundamental virtues: wisdom, courage, moderation, and justice (Inwood, 2018, p. 82). These tenets, intended for cultivating a well-lived life, are now adapted to address the complexities of modern life, and building resilience (Sherman, 2021, p. 3). Modern Stoicism and Stoicism will be used interchangeably in this study, as they share the same philosophical tenets regarding mindset and resilience (Guerin, 2022, p. 138; Worth, 2014, p. 60).

According to Hilgard (1987), the discipline of psychology grew out of philosophy. The

philosophy of Stoicism advocates virtue as the highest good and emphasizes resilience in the face of the struggles of life. It has been a cornerstone for leaders and thinkers such as Abraham Lincoln, Franklin D. Roosevelt, and Barack Obama (Decker, 2020). These and more leaders and thinkers who have practiced Stoicism did not only relate themselves with Stoic tenets, but they also integrated them into their leadership, scholarship, and creative endeavors (Decker, 2020, p. 144). The Stoic legacy continues to inspire a modern generation of diverse followers, from economists to entrepreneurs, illustrating the enduring relevance of Stoicism in navigating the turbulent journey of life (Decker, 2020, p. 144 - 146).

Entrepreneurs are the people who create, and often go through struggles to share what they have created with the world. To be an entrepreneur can be highly stressful, and the ability to cope with stress and the pressure surrounding entrepreneurship can have a negative impact on mental health and depression (Cubbon et al., 2021, p. 798). Cubbon et al. (2021) also emphasize that entrepreneurs often face setbacks which can lead to loss of motivation and hope for success. Within entrepreneurship, Stoicism provides a robust mental framework (Guerin, 2022). Furthermore, Guerin (2022) emphasized that Stoicism encourages people to navigate uncertainties with composure and to use rational judgment in decision-making, aligning with the view that rationality is crucial in an unpredictable business environment. Stoicism has also been named the “ideal philosophy” for entrepreneurs by the well-known author Timothy Ferriss as he deems it the “right operating system” for entrepreneurs (Sherman, 2021, p. 1).

According to Sherman (2021, pp. 1-4) the resurgence of Stoicism in modern times can be attributed to its timeless applicability and the universal goal for emotional resilience, particularly in periods of difficulty. Sherman (2021) highlights the importance of virtue and inner strength as tenets of Stoicism, which resonates with the challenges faced by the entrepreneurs of today. The development of resilience and adaptive learning from both successes and failures is crucial for enhancing performance and growth in business and personal life (Duchek, 2017).

The quote “When, therefore, we are hindered, or disturbed, or grieved, let us never blame anyone but ourselves, that means, our own judgements.” (Epictetus, 1928, p. 489) extensively supports the correspondence and similarities between the theory of cognitive therapists and

the philosophy of the Stoics. The point made is that the judgment a person makes of a situation is what disturbs, and since the individual is the one to have made the judgment, the individual is responsible for its effects (Montgomery, 1993, p. 8). The quote made by the famous Stoic Epictetus resonates with the essence of this study.

The researchers utilize a quantitative approach to contribute answers to the problem statement and hypotheses. The quantitative approach involves a questionnaire survey sent directly to Norwegian entrepreneurs working at Norwegian startups. The approach was chosen to get extensive data from Norwegian entrepreneurs and compare their practices and mindset regarding resilience to the practices and mindset promoted by Stoicism. There is extensive literature regarding the fields of Stoicism, resilience, and the entrepreneurial mindset, making the quantitative approach the preferred method to be used by the researchers in this study.

For this study, it is important to establish a clear definition of the term "entrepreneur" to enhance the understanding of the reader. The definition criteria for this study are based on the interpretation by the researchers of the meaning of the terms. The researchers define an entrepreneur as an individual who has a set role and is involved in a startup and its everyday activities. Roach and Sauermann (2015) point out that entrepreneurial joiners often share many of the entrepreneurial preferences typically ascribed to founders, which is why in this study "founder" is not a criterion for defining an entrepreneur. A startup, in turn, is defined by the researchers as a business operating in the private sector which has come into being as a new business in the last ten years.

1.1 Purpose and problem statement

This study aims to close the gap in the research regarding Stoicism and its association with the entrepreneurial mindset and its resilience. The study aims to provide research to get a deeper understanding of to what extent the mindset of Norwegian entrepreneurs is associated with Stoic tenets in the realm of resilience. The study contributes to the literature on the entrepreneurial mindset, Stoicism and resilience, and the goal of the study is to unveil additional tools for aspiring and practicing entrepreneurs to become more resilient.

1.1.1 Problem Statement

Resilience among entrepreneurs is a critical area of study due to its direct impact on business longevity and startup success (Ayala & Manzano, 2014). However, there is a notable gap in the existing literature regarding the specific factors that are associated with the resilience of Norwegian entrepreneurs, particularly through the lens of Stoicism. The potential of quantitative measures to effectively capture the association between Stoic tenets and entrepreneurial resilience is often overlooked in the current pool of research.

1.1.2 Key issues

The study aims to address what specific factors, informed by Stoic tenets, are associated with the resilience of Norwegian entrepreneurs. The study also looks at how these factors can be quantitatively measured to assess their impact on resilience. Lastly, the study examines what actionable insights can be derived from this analysis to support and enhance the resilience of entrepreneurs in Norway.

1.1.3 Research Objectives

- To quantitatively identify and measure the Stoic factors associated with the resilience of Norwegian entrepreneurs.
- To statistically analyze the relationship between these factors and entrepreneurial resilience.
- To provide data-driven recommendations that can help foster resilience among Norwegian entrepreneurs through individual learning and institutions.

1.1.4 Significance of the Study

Addressing the problem is important regarding the effects on economic impact, strengthening entrepreneurial resilience, contribution to the literature on the entrepreneurial mindset and to counteract the trend of businesses in Norway that fail within one year. Applying Stoic tenets to modern entrepreneurship can possibly offer a timeless approach to overcoming contemporary business challenges, benefiting the broader entrepreneurial community.

This quantitative study will provide a structured analysis of the associations whether positive or negative regarding Stoic tenets and entrepreneurial resilience, offering insights for both researchers and practitioners in the field of entrepreneurship.

2.0 Literature review

This literature review explores and evaluates findings from previous research in relation to the problem statement. The literature review examines existing literature in the field of Stoicism, modern Stoicism, fostering and maintaining of resilience, entrepreneurial mindset, and drivers of entrepreneurial success. The researchers present the process of literature selection through relevant databases and keywords. Literature review tables were used for a systematic and clear presentation of the contents chosen for further review. Based on the papers included in the literature review tables, cross-paper-analysis and comparison was conducted for a deeper analysis.

2.1 Selection of literature

Various databases were used to search for information relating to the problem statement. The databases used were Google Scholar, Scopus and JSTOR. The literature search unveiled several interesting articles which the researchers further investigated through the abstracts. The number of articles of initial interest was 483. Out of the 483 articles, 55 articles were chosen for a thorough evaluation to see if they met the criteria for further inclusion in the literature review. The criteria for the inclusion of articles were that the articles were peer reviewed, written in English and that the research were based on, or related to parts of the problem statement of this thesis. Out of the 55 articles, 21 articles were chosen for further inclusion in the literature review.

The keywords used in the search for literature are presented in Table 1. The importance of gathering relevant articles and achieving a thorough understanding of former research in the field is taken into consideration by the researchers.

Table 1 – Database search results

| Database | Keywords | Search results |
|-----------------|--------------------------------------|-----------------------|
| Google Scholar | “Stoicism” | 139 000 |
| Google Scholar | “Stoicism” “entrepreneurship” | 2 280 |
| Google Scholar | “Modern Stoicism” | 393 |
| Google Scholar | "Modern Stoicism" "entrepreneurship" | 5 |
| Google Scholar | “Norwegian startups” | 91 |
| Google Scholar | “Norwegian entrepreneurs” | 890 |
| Google Scholar | “modern Stoicism” “startup” | 3 |
| Google Scholar | “startup founders” | 4 490 |
| Google Scholar | “startup founders” “mindset” | 1 230 |
| Google Scholar | “entrepreneur” “mindset” | 48 100 |
| Google Scholar | “entrepreneur” “mental health” | 51 500 |
| Google Scholar | “entrepreneurial managers” | 3 420 |
| Google Scholar | “startup founders” | 4 490 |
| Google Scholar | “startup managers” | 386 |
| Scopus | “Stoicism” | 2,028 |
| Scopus | “Stoicism” AND “entrepreneurship” | 14 |
| Scopus | “Modern Stoicism” | 10 |
| Scopus | “Norwegian startups” | 4 |
| Scopus | “startup founders” | 103 |
| Scopus | "entrepreneur" AND "mindset" | 691 |
| Scopus | “entrepreneur” AND “mental health” | 167 |
| Scopus | "entrepreneurial managers" | 60 |
| JSTOR | “Stoicism” | 15 033 |
| JSTOR | “Modern Stoicism” | 26 |
| JSTOR | “entrepreneur” and “mental health” | 2 112 |
| JSTOR | “Entrepreneur” and “mindset” | 1 558 |
| JSTOR | “startup founders” | 53 |

2.2 Literature review tables

Through the literature review tables, the researchers present the results from the further analysis of the literature that were chosen for inclusion. There are two distinct tables, with two different threads of research which are relevant to the thesis. The first table consists of relevant research articles regarding the origin of Stoicism, modern Stoicism, the tenets of Stoicism and its adoption by entrepreneurs, leaders, and several other groups of people. The second table consists of relevant research articles regarding the entrepreneurial mindset, the challenges entrepreneurs face regarding mental health, and the impact of mentality on entrepreneurial success and resilience.

Literature review tables were chosen because of the organized and clear approach they offer for the literature review. Two distinct tables were chosen instead of one to make their insights clearer to the reader (Palmatier et al., 2017, p. 5). A cross-paper analysis is presented based on the literature review tables. The cross-paper analysis takes a deeper dive into the literature, and presents the information found in each of the tables. The cross-paper analysis also includes a cross-paper comparison which compares the information gathered to get an even deeper understanding of the topics and their relations. The cross-paper analysis is what the researchers further used in the research, particularly in the hypotheses development.

Table 2 - Modern Stoicism, its tenets and adoption

| Title & year | Author(s) | Publisher | Objective | Relevance | Data | Findings |
|---|-----------|--|--|---|-----------------------------------|--|
| MODERN STOICISM AND ITS USEFULNESS IN FOSTERING RESILIENCE (2022) | Guerin | Crisis, Stress, and Human Resilience: An International Journal | Examines success stories of using Stoicism to foster resilience and help those at high risk of traumatic events. | The publication contributes by presenting the tenets of Stoicism which touches on resilience. The publication discusses how historic people have used Stoicism to build resilience and endure stressful and traumatic situations. The publication also considers modern Stoicism, and how it has sprung to life through ancient Stoicism. | Secondary data from case studies. | Stoicism is currently undergoing a rebranding. A Stoicism based mental health intervention has the potential to help endure trauma and everyday stress. Entrepreneurs and executives are using Stoic tenets to build mental toughness. |
| Stoic wisdom: Ancient Lessons for Modern Resilience. (2021) | Sherman | Oxford University Press | The publication aims to inform people about Stoicism, its roots and its relevance | The publication contributes to this paper by being a credible source of information about | Secondary and primary data. | Stoicism is perceived by some to be the “ideal philosophy” for entrepreneurs. |

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| | | | for entrepreneurs and people in the modern world. | Stoicism and modern Stoicism. The publication also contributes by displaying the relevancy of Stoicism for cultivating an entrepreneurial mindset with strong resilience and stress management. | | <p>There is currently a surge in the popularity of Stoicism.</p> <p>The history of Stoicism, its ancient roots, and its applicability for the modern world.</p> |
| The philosophy of Stoicism: relevance in today's healthcare system (2021) | Kelly | QJM: An International Journal of Medicine | To explore the relevance of Stoic philosophy in modern healthcare, particularly focusing on its potential to enhance resilience and well-being among healthcare professionals. | The publication illuminates the practicality of Stoic principles in the healthcare environment of today, advocating for the integration of Stoic practices to manage stress and promote mental health among medical practitioners. | Review and analysis of existing literature on Stoicism, combined with observations in healthcare settings. | Stoicism offers valuable strategies for coping with the stresses of the healthcare profession, potentially reducing burnout and improving job satisfaction by emphasizing control over internal states rather than external circumstances. |

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| <p>The Ancient Origins of Cognitive Therapy: The Reemergence of Stoicism (1993)</p> | <p>Montgomery</p> | <p>Journal of Cognitive Psychotherapy</p> | <p>The publication aims to reveal the similarities between modern cognitive therapy and the Stoic philosophies of ancient Rome.</p> | <p>The publication clarifies the similarities between Stoicism and cognitive therapy. It contributes by providing information about Stoicism and its use in improving the mental health of individuals. It also supports the claim that modern cognitive therapy is based on philosophy as a whole and Stoicism in particular.</p> | <p>Historical texts, quotes, modern articles, research, interpretations of cognitive therapy.</p> | <p>The ideas of Stoic philosophers about emotions, which are based on the interaction between reason and the world, were found to be similar to the beliefs of prominent cognitive therapists. The Stoic understanding of how emotions develop was ahead of its time and aligns with the ideas later developed by these therapists.</p> |
| <p>How to be a Stoic: Ancient wisdom for modern living (2017)</p> | <p>Pigliucci</p> | <p>Basic Books</p> | <p>To explore Stoicism as a viable philosophy for modern living, focusing on how its teachings can</p> | <p>The publication demystifies Stoicism, making it accessible and relevant to a modern audience. Pigliucci bridges</p> | <p>Historical texts, personal anecdotes, modern interpretations of Stoic philosophy.</p> | <p>Demonstrates that Stoicism provides practical tools for dealing with challenges in life, promoting</p> |

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| | | | be applied to contemporary challenges and enhance personal well-being. | ancient wisdom with contemporary issues, offering practical advice on how to incorporate Stoic practices into daily life. | | resilience, emotional well-being, and a deeper sense of fulfillment. Stoicism emphasizes on virtue, understanding what we can control, and working towards the common good is shown to be particularly applicable and beneficial in the contemporary world. |
| A Stoic Approach to Business Antifragility (2023) | Ivaşenco | Institutional Repository of Economic Knowledge | To identify and analyze Stoic approaches within the framework of business antifragility, exploring how Stoic principles can enhance resilience and | The publication expands the discourse on antifragility by incorporating Stoic philosophy, offering new insights into building resilient and adaptable business practices. | Historical Stoic texts, contemporary business cases. | The publication highlights five Stoic practices crucial for fostering antifragility in businesses, including the dichotomy of control, and viewing challenges |

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| | | | adaptability in business contexts. | | | as opportunities for growth. |
| Civil society and civil discourse: Eloquence and hope in the communications of presidents Abraham Lincoln, Franklin D. Roosevelt, and Barack Obama (2020) | Decker | TEXAS WOMAN'S UNIVERSITY | To examine how civil discourse is essential to civil society and argue that U.S. presidents have practiced Stoic principles of rhetoric to unify the American people. Additionally, it explores how presidents have altered and extended those principles to include appeals based on hope. | This publication contributes to the understanding of the significance of presidential rhetoric in fostering unity and encouraging public trust and civil discourse. It situates presidential rhetoric within the larger context of classical rhetoric and Stoicism, analyzing speeches from Lincoln, Roosevelt, and Obama to demonstrate how these communications worked to evoke a sense of community and purpose for Americans. | The publication analyzes several speeches from Lincoln, Roosevelt, and Obama. | The publication finds that presidential rhetoric, grounded in Stoic principles and infused with the trope of hope, plays a pivotal role in uniting the nation, particularly during times of crisis. By employing rhetorical strategies that appeal to common values and aspirations, presidents have been able to foster a sense of optimism and collective identity among Americans, highlighting the enduring relevance |

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| | | | | | | of Stoicism and the power of hope in contemporary political discourse. |
| The lineage of positive psychology and cognitive behavioral modalities: How Stoicism inspired modern psychotherapy (2024) | Dickinson | Discover Psychology | To trace the influence of Stoicism on the development of Cognitive Behavioral Therapy (CBT) and Positive Psychology, highlighting the foundational role of Stoicism in modern psychotherapeutic practices. | This publication bridge ancient Stoic philosophy with contemporary therapeutic approaches, demonstrating the enduring impact of Stoicism on the field of psychology. | Analysis of Stoic writings and foundational texts in CBT and Positive Psychology. | The core principles of CBT and aspects of Positive Psychology are deeply rooted in Stoic philosophy, underscoring the importance of cognitive appraisal and emotional regulation for mental well-being. |
| The Effects of Stoic Training and Adaptive Working Memory Training on Emotional | MacLellan & Derakshan | Cognitive Therapy and Research | To investigate whether Stoicism and adaptive working memory training improve emotional | Demonstrates the significant effects of Stoic training on reducing rumination and enhancing self-efficacy. | 45 high worriers in three training groups. | Significant reduction in anxious and negative words in Stoic training group, indicating potential for |

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| Vulnerability in High Worriers (2021) | | | vulnerability in high worriers. | | | cognitive and emotional improvement. |
| Modern Stoicism at the XXI Century University (2022) | Gulevataya et al. | European Journal of Contemporary Education | To explore how Stoic practices can be integrated into university education to help students manage the overwhelming flow of information and maintain a free, reflective mindset. | This publication provides a unique view on incorporating ancient philosophical practices into modern education systems to improve critical thinking and personal development among students. | Uses a mix of theoretical insights and case studies from educational implementations. | The publication found that Stoic practices helped students develop a more reflective and autonomous approach to their education and personal lives, suggesting these ancient techniques could have modern educational value. |

Table 3 - Entrepreneurial resilience and mindset

| Title & year | Author (s) | Publisher | Objective | Relevance | Data | Findings |
|--|-----------------|--|--|--|---|--|
| Fostering Entrepreneurial Mindsets in Deep Tech Disciplines: Exemplary Development of a Toolkit (2024) | Pacher & Glinik | Procedia Computer Science | The objective of the publication is to explore how entrepreneurship education can boost innovation, employment, and economic growth by developing entrepreneurial mindsets among staff and engineers at higher education institutions involved in deep technology disciplines. | This publication contributes by showcasing an educational toolkit designed to enhance entrepreneurship education and develop entrepreneurial mindsets, providing a practical framework for integrating these skills into higher education curriculums. | Theoretical and uses data from various cited studies. | The findings indicate that entrepreneurship education using toolkits and practical applications significantly boosts entrepreneurial skills in deep technology sectors, aiding in opportunity recognition, risk management, and effective communication with stakeholders. |
| Startup Valuation and the Personality of Founders (2023) | Oysharja & Amit | Center for enterprise and society, University of liberal | To explore how the personality of a startup founder impacts their ability to attract | This publication contributes to the understanding of the impact of founder personalities on startup | Qualitative findings from Bangladeshi startup ecosystem, expert interviews. | The personality of startup founders plays a significant role in attracting investments. Traits |

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| | | arts Bangladesh | funding and achieve higher valuations, focusing on charismatic leadership traits versus a cult of personality. | valuations, emphasizing the dual influence of charismatic leadership and the potential pitfalls of developing a cult of personality. | | such as confidence, experience, leadership style, knowledge level, and networking skills are vital. However, extreme traits like overselling innovation, engaging in dubious activities, or developing a cult of personality can have negative consequences. The study emphasizes the importance of balancing personality traits to foster sustainable growth and avoid potential pitfalls. |
| The Impact of Founder Personalities on Startup Success (2023) | McCarthy et al. | Scientific Reports | To explore the effects of founder personalities on the success of | This publication demonstrates that founder personality traits significantly | Large-scale global sample of startups (n = 21187) derived from | Key personality traits such as openness to adventure, lower |

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| | | | startups, particularly focusing on whether specific personality traits or combinations thereof are associated with higher likelihoods of startup success. | differ from the general population and that startups with diverse personality types in their founding teams have an increased likelihood of success. | Crunchbase profiles and Twitter data. | levels of modesty, and higher activity levels are more prevalent among successful startup founders. The study identifies six distinct personality types among founders and finds that personality-diverse teams are more likely to succeed. |
| Growth Aspirations Among Norwegian Entrepreneurs (1992) | Kolvereid | Journal of Business Venturing | To investigate the relationship between the motives of founders to start the business, their education, experience, and the growth aspirations of entrepreneurs. | This publication provides insights into the factors influencing entrepreneurial growth aspirations, emphasizing the role of entrepreneurial motives, education, and past growth experiences. | Data from 250 Norwegian entrepreneurs who started their businesses in 1986. | Entrepreneurial motives for starting their businesses are related to their growth aspirations, with significant relationships also found between education, industry, past growth, and future growth aspirations. |

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|---|-----------------------------|--|---|--|---|---|
| <p>Entrepreneurial resilience during challenging times (2013)</p> | <p>Bullough & Renko</p> | <p>Business Horizons</p> | <p>To understand what drives entrepreneurial decisions during challenging times, particularly focusing on the role of personal factors like entrepreneurial self-efficacy and resilience.</p> | <p>The publication highlights the importance of entrepreneurial self-efficacy and resilience in pursuing entrepreneurship during periods of adversity. It suggests ways for entrepreneurs and aspiring entrepreneurs to build these qualities.</p> | <p>Survey data from over 500 entrepreneurs in the United States and abroad.</p> | <p>Entrepreneurial self-efficacy and resilience are critical for starting businesses under challenging circumstances. Entrepreneurs need to engage in business development training, networking, and active entrepreneurial pursuits to build these traits.</p> |
| <p>Entrepreneurial resilience: a biographical analysis of successful entrepreneurs (2017)</p> | <p>Duchek</p> | <p>International Entrepreneurship and Management Journal</p> | <p>To explore the concept of entrepreneurial resilience and its components, as well as how it can be enhanced, through the analysis of the</p> | <p>Provides a theoretical framework of entrepreneurial resilience based on a literature review and biographical analysis, identifying factors that impact the development of</p> | <p>Biographies of eight highly resilient entrepreneurs.</p> | <p>Identifies two situational (parental behavior and experience) and two process-related factors (entrepreneurial learning and work attitudes) as</p> |

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|--|-----------------|--------------------------------|---|--|--|---|
| | | | biographies of successful entrepreneurs. | entrepreneurial resilience and success. | | significant in developing entrepreneurial resilience. |
| The resilience of the entrepreneur. Influence on the success of the business. A longitudinal analysis (2014) | Ayala & Manzano | Journal of Economic Psychology | To examine the connection between resilience dimensions and the success of entrepreneurs, particularly in the Spanish tourism sector. | This publication contributes to the understanding of how resilience affects entrepreneurial success. | Primary data from established entrepreneurs in the Spanish tourism sector. | Resilience, particularly resourcefulness, is a key predictor of entrepreneurial success. The study also finds gender differences in how optimism and hardiness predict success. |
| A situated metacognitive model of the entrepreneurial mindset (2010) | Haynie et al. | Journal of Business Venturing | To investigate the foundations of an “entrepreneurial mindset” by focusing on metacognitive processes that promote adaptable | Develops a model that specifies entrepreneurial metacognition as situated in the entrepreneurial environment, providing insight into how entrepreneurs | Literature from social and cognitive psychology. | The entrepreneurial mindset is metacognitive in nature, enabling entrepreneurs to re-organize existing knowledge structures and think beyond traditional |

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| | | | cognitions in uncertain decision contexts. | formulate cognitive strategies. | | heuristics in novel and uncertain situations. |
| Unraveling the entrepreneurial mindset (2020) | Kuratko et al. | Small Business Economics | To explore the concept of an entrepreneurial mindset and its implications for entrepreneurship. | The publication synthesizes various perspectives on the entrepreneurial mindset, offering insights into its cognitive, behavioral, and emotional aspects and challenges for implementing it. | Review of existing literature on the entrepreneurial mindset. | The entrepreneurial mindset plays a critical role in recognizing and exploiting entrepreneurial opportunities and overcoming challenges. |
| Responding to unexpected crises: The roles of slack resources and entrepreneurial attitude to build resilience (2023) | Conz et al. | Small Business Economics | This publication investigates how entrepreneurial firms responded to the uncertainty caused by an unexpected crisis, examining the leverage of slack resources to build organizational resilience and how | This publication identifies four key entrepreneurial responses based on the type of slack resources (business or family) and the extent of entrepreneurial attitude (favorable or unfavorable) used: “waiting while seeding,” “keeping business as usual,” | Multiple case studies involving entrepreneurial firms in Northwest Italy. | The findings reveal that slack resources, both business and family, enable firms to absorb shocks and adapt, contributing to resilience. However, to transform adversities into opportunities, firms |

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| | | | entrepreneurial attitudes can turn adversities into opportunities. | “striving to resist,” and “surfing the pandemic.” It demonstrates that both business and family slack resources can help absorb shocks and build resilience but must be activated by a favorable entrepreneurial attitude to turn adversities into opportunities. | | also require a favorable entrepreneurial attitude. The study also challenges the assumption that family firms are inherently better at surviving and thriving post-crisis, showing that both family and non-family firms can build resilience with similar strategies. |
| Interested to start a venture but worried about the future: Investigating the role of resilience in fear of career uncertainty and entrepreneurial intention (2024) | Ukil & Almashayekhi | Acta Psychologica | To explore how fear of career uncertainty and perceived inability affect entrepreneurial intention (EI) and how resilience influences these fears and their | The publication extends understanding by showing how specific fears can negatively influence EI and how resilience can mitigate these effects, transforming fear of career uncertainty into a positive driver toward EI. | Sample of young university students in Bangladesh, two-phase survey. | Fear of career uncertainty has a significant negative influence on EI, while resilience positively influences EI and can reduce both fear of career uncertainty and perceived inability, |

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| | | | interaction with EI. | | | transforming fear of career uncertainty into a positive driver toward EI. |
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2.3 Cross paper analysis

The literature review section above is organized and looks closely at information from 21 different research articles. This part of the study will provide a cross-paper analysis which looks across all the included literature to further emphasize why it is chosen and what their findings indicate when they are put together and compared. The goal of the cross-paper analysis is to make sense of all the information clearly and help build the overall understanding of the topic.

2.3.1 Cross paper analysis of table 2 Modern Stoicism, its tenets and adoption

This cross-paper analysis of Table 2 revealed that Stoicism, which focuses on wisdom, courage, justice, and moderation, is not only a historical philosophy but can also be a practical approach to dealing with daily challenges.

Guerin (2022, p. 141) highlights the unique role of Stoic tenets in high-stress environments, suggesting that its principles give aid to individuals in effectively managing stress and building resilience. Guerin (2022) also emphasizes the tenets of Stoicism and their utility regarding happiness, calmness, and enduring trauma. These observations are consistent with the findings of Kelly (2021, p. 839) that Stoic practices can reduce workplace stress and improve overall well-being in healthcare settings. In relation to the findings, Kelly (2021) uses the quote of Epictetus provided in the introduction of this study and emphasizes that power to overcome lies within our impressions regarding external events. Kelly (2021, p.840) states that the philosophy of Stoicism remains relevant as human nature has not changed, although the knowledge of the external world has changed immensely since the creation of Stoicism.

Gulevataya et. al (2022) extend the benefits of Stoicism to the educational environment, advocating for Stoic practices such as journaling and meditation. These practices proved to enhance critical thinking and self-reflection among the students, thus helping them navigate their lives. The students included in the study also read books from famous Stoics. The study concluded with students reporting increased self-reflection leading to decreased anxiety, stress, and nervousness. While Guerin (2022) focuses on individual coping mechanisms,

Kelly (2021) and Gulevataya et al. (2022) additionally emphasize the importance of the social environment in fostering resilience through strong relationships and community support. This aligns with the Stoic emphasis on interconnectedness and social responsibility (Sherman, 2021, p. 45).

Pigliucci (2017, p. 100), Ivaşenco (2023, p. 303) broadens the perspective by discussing the application of Stoic principles to everyday life challenges and business resilience, demonstrating the flexibility of Stoic principles. They provide insights for personal growth through practices like negative visualization, which is premeditation of adversity. Negative visualization is to regularly focus on bad scenarios while knowing you have the internal resources to deal with them, thereby repeating to yourself that they are not as bad as they seem (Ivaşenco, 2023, p. 303; Pigliucci, 2017, p. 100). Ivaşenco (2023) highlights the importance of Stoic tenets such as maintaining calm and in control in chaotic business environments, and to look at mistakes as reparative feedback. Both authors underscore the Stoic principle of focusing on what is within our own control.

MacLellan and Derakshan (2021) investigated the effects of Stoic training, both in isolation and combined with adaptive working memory training, on emotional vulnerability in individuals identified as high worriers. The focus of the study on self-reported rumination, self-efficacy and Stoic ideation is consistent with the Stoic emphasis on internal mental states and judgments as the key to well-being, aligning with works like Pigliucci (2017) and Sherman (2021). The practical nature of Stoicism emphasized in sources like Ivaşenco (2023), and Guerin (2022) enhance the argument for the use of Stoic training as an intervention. MacLellan and Derakshan (2021) found that Stoic training led to significant reductions in self-reported rumination compared to the control group. Additionally, the Stoic training-only group showed improvements in self-efficacy and Stoic ideation. However, there were no significant group differences in the cognitive tasks, suggesting that the observed effects were primarily on self-reported measures rather than objective cognitive performance.

Further analysis is offered by Dickinson (2024), who traces the influence of Stoicism on modern psychotherapy, specifically cognitive behavioral therapy, and positive psychology. This analysis sheds light on how Stoic tenets of rational control and virtue have shaped therapeutic practices and contributed to developing strategies aimed at enhancing human

strengths, resilience, and virtues. A key component highlighted by Montgomery (1993) is the Stoic understanding of perception and judgment of external events that disturb the human mind. This understanding explains that what disturbs us is the judgment we make of a situation, and since we make our own judgments, we are responsible for its effects (Montgomery, 1993, p. 8). This resonates with the themes discussed in the other papers, particularly regarding the application of Stoic tenets to enhance resilience.

Decker (2020) links Stoicism to effective communication strategies within political leadership. The paper cites historical figures such as Abraham Lincoln and Barack Obama as examples of leaders who use Stoic tenets and rhetoric to foster unity and hope during times of crisis. This not only highlights the flexibility and relevance of Stoicism in addressing challenges but also enriches the understanding of its application in the political arena. However, the focus on political leadership may limit the applicability of these findings to other leadership contexts. Sherman (2021) broadens the discussion of the resurgence of Stoicism in modern culture, emphasizing its potential to foster ethical leadership and resilience in the face of contemporary challenges.

Overall, this comprehensive review effectively synthesizes the key themes and findings from a range of studies on the application of Stoic philosophy in various professional and personal contexts. By examining how Stoic tenets can help in managing stress, enhancing resilience, and fostering ethical leadership, this analysis provides a compelling case for the continued relevance and applicability of Stoicism in the 21st century.

2.3.2 Cross paper analysis of table 3 Entrepreneurial resilience and mindset

This cross-paper analysis of Table 3 offers a comprehensive exploration of the interplay between internal motivations and external influences on entrepreneurial success, resilience, and growth aspirations.

A central theme across the chosen studies is the role of entrepreneurial self-efficacy and resilience under challenging conditions. Bullough and Renko (2013) emphasize these traits as essential for navigating through difficulties and seizing opportunities within the entrepreneurial sphere. For example, Bullough and Renko (2013, p. 345) highlights the case

of Henrik Fisker, who, despite the economic recession, launched Fisker Automotive, the first luxury hybrid-electric car company in the world, showcasing the power of self-efficacy in driving entrepreneurial action. This can further be seen by recent research by Conz and Magnani (2023), which stresses the importance of favorable entrepreneurial attitudes to activate slack resources in companies responding to external crises.

Kolvereid (1992) and McCarthy et al. (2023) further elaborate on how personal motives interact with external business environments to influence growth aspirations and the success rates of startups. Traits like openness and proactive behavior are common among successful entrepreneurs, and personality diversity within teams correlates with higher success rates (McCarthy et al., 2023, p. 6). Ayala and Manzano (2014) further add traits like optimism and hardiness, which they note are key components of resilience, significantly predict entrepreneurial success. They also found that resourcefulness is a critical factor in predicting entrepreneurial success. These findings suggest that resilience not only enables entrepreneurs to cope with adversity but also actively contributes to their success by fostering a proactive and adaptable approach to challenges.

Insights from Oysharja and Amit (2023) enrich the understanding of the interplay between the personality traits of founders and startup success. Their paper offers a detailed view of how personal characteristics directly influence the ability of entrepreneurs in startups to attract funding and achieve high valuations. Traits like charisma, persuasiveness, and visionary leadership are seen as pivotal in enhancing the appeal to potential investors. This complements the metacognitive strategies outlined by Haynie et al. (2010), where adaptability and resilience were correlated with entrepreneurial success. The emphasis on metacognitive strategies, being conscious of learning and problem-solving, suggests that successful entrepreneurs not only possess specific personality traits but also actively employ cognitive processes to navigate uncertainty and adapt to changing circumstances.

The findings from a recent study by McCarthy et al. (2023) on personality diversity in startup founding teams provide additional insights into the interplay between personality traits and cognitive processes. Notably, the study highlights the significant role of the Big Five personality traits and identifies six distinct personality types among founders, emphasizing that no single “Founder-type” personality guarantees success. This underscores the

importance of diversity in personality traits within founding teams. Greater personality diversity may help to enhance the resilience of startups and innovative capacity, as diverse teams are better equipped to navigate complex challenges and seize opportunities (McCarthy et al., 2023).

The work of Oysharja and Amit (2023) explores the potential downsides of certain personality traits within the startup ecosystem. It highlights that an excessive focus on personal branding and the creation of a personality cult can sometimes lead to detrimental effects. This is particularly emphasized when the actions of founders do not align with the interests of the company. This underscores the importance of balancing personal charisma with ethical leadership and a focus on the overall well-being of the company. These findings align with the emphasis of Kuratko et al. (2020) on the emotional aspect of the entrepreneurial mindset, highlighting the potential "dark side" of entrepreneurial passion and the need for self-regulation and ethical decision-making.

The elaboration of metacognition from Haynie et al. (2010) is similar to the work of Kuratko et al. (2020), which describes the complex interplay of cognitive, behavioral, and emotional elements in the entrepreneurial mindset. The recognition that these three aspects do not operate independently but interact and reinforce each other is crucial for entrepreneurs. The cognitive aspect, which involves mental functions and thoughts, enables, and facilitates individual actions and emotions (Kuratko et al., 2020, p. 1687). Thus, a mindset that emphasizes metacognition and the triad emphasized by Kuratko et al. (2020) can enable entrepreneurs to generate creative solutions and thereby enhance their chances of success in their endeavors. This highlights the importance of a holistic approach to understanding the entrepreneurial mindset, recognizing the interconnectedness of cognitive, behavioral, and emotional factors.

The analysis of Duchek (2017) regarding eight successful entrepreneurs reveals that early exposure to entrepreneurial environments, parental support and early exposure to success and failure significantly contribute to developing resilience. However, entrepreneurial resilience is not solely dependent on familial support. Stable reference persons or networks can also play a significant role in fostering resilience, especially during the early phases of entrepreneurship. Integrating this with the metacognitive strategies discussed by Haynie et al. (2010), a

complex interaction emerges. Early experiences of success and failure equip entrepreneurs with resilience, which in turn enhances their metacognitive capacities to adapt and thrive in a challenging business environment. This foundation of resilience prepares entrepreneurs to face future uncertainties, fostering a continuous learning and adaptation mechanism within the entrepreneur. These findings suggest that resilience is not solely an innate trait but can be developed through early exposure and experiences.

The research by Kolvereid (1992) on growth aspirations among Norwegian entrepreneurs adds another layer to the understanding of how education and personal development interplay with entrepreneurial success. The study found that educational background significantly impacts the aspiration of entrepreneurs for business growth, with those possessing college or university degrees exhibiting the strongest growth aspirations (Kolvereid, 1992, p. 218). This corresponds with the findings of Pacher and Glinik (2024), who emphasize the crucial link between the technical knowledge acquired in higher education and the ability to effectively navigate the entrepreneurial landscape. However, it is important to note that while education plays a role, it is not the sole decisive factor of entrepreneurial success. Other factors, such as resilience, as highlighted by Ukil and Almashayekhi (2024), are equally important in overcoming challenges and achieving entrepreneurial goals.

Ukil and Almashayekhi (2024) further emphasize the role of resilience in entrepreneurial success, particularly in the face of career uncertainties. Their research shows that resilience developed through educational and personal experiences is a crucial driver for transforming fears related to career uncertainties into positive entrepreneurial outcomes. This suggests that resilience not only helps entrepreneurs cope with adversity but also empowers them to leverage their fears and uncertainties as catalysts for entrepreneurial action. These findings highlight the potential for resilience to transform negative emotions into a driving force for entrepreneurial pursuits and success.

Overall, this cross-paper analysis reveals that a combination of personal resilience, education, and metacognitive strategies is crucial for entrepreneurial success. It highlights the importance of a combined approach to developing entrepreneurial skills and mindsets. This helps in dealing with business challenges and supports steady growth and lasting resilience.

The analysis also underscores the need for further research on the interplay between internal motivations and external influences on entrepreneurial resilience and success.

2.3.3 Cross paper comparison

Section 2.3.1 examines how Stoic tenets like wisdom, courage, justice, and moderation apply today, mainly in healthcare, entrepreneurship, education, and politics. It shows how these tenets can improve resilience and ethical behavior. Section 2.3.2 looks at the mental traits and strategies that lead to entrepreneurial success, especially self-confidence and resilience.

Section 2.3.1 uses different sources to show how Stoicism can be used in various fields. For example, Guerin (2022) talks about how Stoicism helps manage stress in high-pressure jobs, while Kelly (2021) shows its benefits in reducing burnout in healthcare workers. Sherman (2021) links Stoicism to ethical leadership, highlighting its importance today. Section 2.3.2 uses studies to show how personal traits, education, and strategies help entrepreneurial success and resilience. Notably, Kolvereid (1992) and McCarthy et al. (2023) show how education and different personality traits impact entrepreneurial outcomes.

Section 2.3.1 presents Stoicism as a useful tool for handling modern challenges, offering strategies for managing challenges through controlling emotions and thoughts. This is backed by Dickinson (2024), who discusses the influence of Stoicism on modern therapy. Section 2.3.2 shows that personal resilience, education, and strategic approaches are key to understanding what drives entrepreneurial success and resilience. Ayala and Manzano (2014) emphasize the role of resilience in entrepreneurial success, aligning with Stoic ideas of mental strength presented by Guerin (2022).

Highlighted in section 2.3.1, Decker (2020) explains how Stoic tenets can boost emotional resilience and ethical leadership, which can benefit entrepreneurs, and shows how leaders use Stoic ideas to promote unity and resilience. Section 2.3.2 focuses on developing entrepreneurial skills and mindsets that match the Stoic tenets highlighted in section 2.3.1. Research by Oysharja and Amit (2023) and Haynie et al. (2010) shows that this type of entrepreneurial mindset is crucial for success.

Overall, the authors in Section 2.3.1 see Stoicism as a valuable tool for increasing resilience, managing stress, and promoting ethical leadership, which is crucial for entrepreneurs. The authors in section 2.3.2, focus on personal resilience and education as key for entrepreneurial success, highlighting several strategies linked to Stoic tenets described in Section 2.3.1. To conclude, combining Stoic tenets with entrepreneurial practices offers a promising way to improve both personal and professional outcomes. The analysis suggests that entrepreneurs can benefit from Stoic practices such as emotional control, view of external challenges, rational decision-making, and ethical leadership to stay resilient when facing challenges. The literature review highlights the value of Stoicism in creating a resilient and successful entrepreneurial mindset.

3.0 Hypotheses development

The hypotheses were made for further testing through statistical analysis with quantitative data, to give answers and insights to the problem statement. The hypotheses were developed based on the most frequent theories and knowledge unveiled in the literature review.

According to Soldatova and Rhetsky (2011, p. 1) research hypotheses form the foundation of scientific endeavors and ensuring they are accurately and clearly represented is essential for the proper analyses of studies.

Hypothesis 1 considers the association between Stoic practices and emotional resilience. The implementation of Stoicism and its practices in daily life is expected to influence the resilience of entrepreneurs, a trait often necessary during challenging situations. Stoic practices could potentially improve emotional resilience in both professional and personal realms, as highlighted in the work of Guerin (2022) and Kelly (2021). Ayala and Manzano (2014) emphasize the key role of emotional resilience in entrepreneurship, pointing to the possibility of practices related to Stoicism to be used among Norwegian entrepreneurs. It is therefore hypothesized that entrepreneurs with a higher level of use regarding Stoic practices will reveal greater personal and professional resilience than those who do not.

H1: There is a significant positive association between usage and adoption of Stoic practices and the emotional resilience of Norwegian entrepreneurs.

Hypothesis 2 explores the association between Stoic coping strategies and emotional resilience. The relevance of mental coping strategies promoted by Stoicism in fostering resilience is supported by the findings of Pigliucci (2017) and Ivaşenco (2023). Their findings discuss the application of Stoic strategies to enhance personal growth and maintain control in chaotic environments. The work of Duchek (2017) and Haynie et al. (2010) highlights that resilience is not solely an innate trait but can be developed through exposure, personal growth, and experiences. Based on the included works, the utilization of Stoic coping strategies is hypothesized to associate with the resilience of Norwegian entrepreneurs.

H2: There is a significant positive association between Stoic coping strategies and the emotional resilience of Norwegian entrepreneurs.

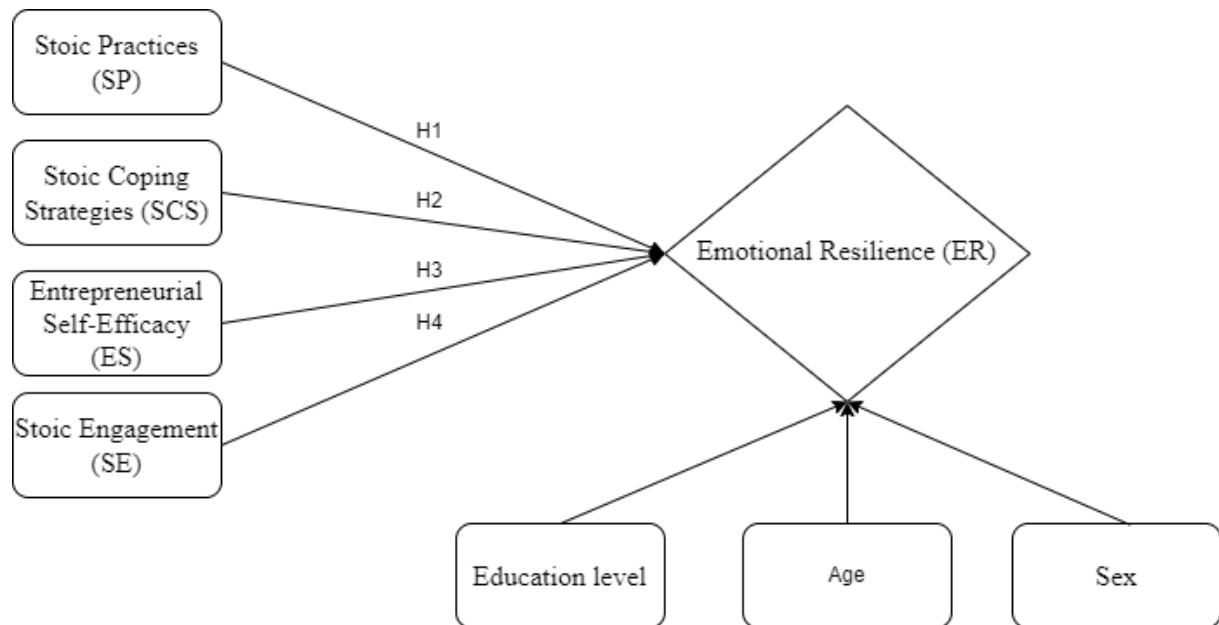
Hypothesis 3 considers the association between entrepreneurial self-efficacy and emotional resilience. This hypothesis suggests that a strong sense of self-efficacy facilitates stronger resilience in facing business related adversities. Bullough and Renko (2013) emphasize the role of self-efficacy in improving resilience, while Ayala and Manzano (2014) point to traits like openness, resourcefulness, and courage as drivers for entrepreneurial success. MacLellan and Derakshan (2021) found that Stoic training led to significant reductions in self-reported rumination and improvements in self-efficacy and ideation.

H3: There is a significant positive association between entrepreneurial self-efficacy and the emotional resilience of Norwegian entrepreneurs.

Hypothesis 4 investigates the association between Stoic engagement and the emotional resilience of Norwegian entrepreneurs. Research from Guerin (2022) and Dickinson (2024) explains how Stoic engagement can be integrated into modern therapeutic practices to reduce emotional vulnerability and foster resilience. The work from Ukil and Almashayekhi (2024) describes the role of resilience in improving chances of entrepreneurial success. The sources point to resilience as a driver of entrepreneurial success, and Stoicism as a driver of resilience which provides a theoretical basis for this hypothesis.

H4: There is a significant positive association between Stoic engagement and the emotional resilience of Norwegian entrepreneurs.

Figure 1 - Conceptual model for hypotheses



4.0 Methodological approach

The chosen approach for this study was quantitative. The approach was chosen as it was appropriate for answering our problem statement, which required quantitative data to generalize the findings regarding Norwegian entrepreneurs.

Data collection was conducted through an online self-administered questionnaire survey. This method of data collection is ideal for covering the target population, addressing sensitive topics, speeding up the data collection and it generally requires fewer resources than interviews (Belisario et al., 2015, p. 4).

4.1 Variables

The variables used in this study were made based on established research from the literature review, they are presented in Table 4 along with their items and definitions. The research includes dependent and independent variables made for the testing of the hypotheses. The

dependent variable, also known as the outcome variable, is linked to the outcome of the study. The independent variables, also called the explanatory variable, are not affected by the experiment itself, but manipulated to influence the dependent variable (Kaliyadan & Kulkardi, 2019, p. 83). The most significant variable for this study is the dependent variable, as it directly influences the outcome of the study. The aim of the study is to reveal to what degree the independent variables influence the dependent variable.

Five key variables, one dependent and four independent, have been uncovered through the literature review and analysis. These variables are based on the most frequent and most relevant information found in the literature. The dependent variable is Emotional resilience (ER). The independent variables are Stoic practices (SP), Stoic coping Strategies (SCS), Entrepreneurial Self-Efficacy (ES), and Stoic Engagement (SE).

Table 4 - Theoretical framework

| Variable | Definition | Items |
|---------------------------|--|--|
| Emotional Resilience (ER) | The ability of an individual to conquer and bounce back from stressful or challenging situations while maintaining psychological well-being. | <ol style="list-style-type: none"> 1. Level of emotional resilience and capability of handling challenges. 2. Ability to maintain a positive outlook even during difficult times. 3. Ability to bounce back from setbacks and failures. 4. Level of confidence in ability to handle stress and pressure. |

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| Stoic Practices (SP) | The degree to which Norwegian entrepreneurs adhere to Stoic practices, either knowingly or unknowingly. | <ol style="list-style-type: none"> 1. Stoic practice of viewing failure as a tool for growth and success. 2. Stoic practice of managing emotional control in pressuring situations. 3. Stoic practice of cultivating courage in facing entrepreneurial risks and setbacks. 4. Stoic practice of maintaining composure and rational judgment during high-pressure situations. |
| Stoic Coping Strategies (SCS) | The extent to which Norwegian entrepreneurs accept what cannot be changed and focus only on what is within their own control. | <ol style="list-style-type: none"> 1. Time and focus spent on what is out of personal control within business operations. 2. Finding solutions rather than dwelling on problems. 3. Mindset focused on accepting situations that cannot change. 4. Accepting setbacks |

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| | | or challenges and moving forward. |
| Entrepreneurial Self-Efficacy (ES) | The beliefs of Norwegian entrepreneurs in their ability to effectively manage the challenges and uncertainties of entrepreneurship, influenced by Stoic principles emphasizing self-reliance and inner strength. | <ol style="list-style-type: none"> 1. Level of confidence in skills and abilities to overcome challenges in entrepreneurial endeavors. 2. Level of confidence in the ability to effectively manage entrepreneurial challenges. 3. Level of confidence in that effort and actions will lead to success in entrepreneurial pursuits. 4. Degree of stress-coping abilities. |
| Stoic Engagement (SE) | The degree to which Norwegian entrepreneurs engage in Stoic habits such as journaling, mindfulness, and reflection to cultivate emotional resilience, reduced stress, and psychological well-being. | <ol style="list-style-type: none"> 1. Degree of journaling engagement as a means of reflecting on thoughts, emotions, and experiences. 2. Degree of engagement in meditation practices to promote emotional |

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| | | <p>well-being and stress reduction.</p> <p>3. Degree of engagement in self-reflection practices to gain insights into values, goals, and personal growth.</p> <p>4. To what degree material possessions are valued as a means of success and happiness</p> |
|--|--|--|

4.2 Self-administered questionnaire

The survey was designed as a self-administered questionnaire to ensure that those who participated could complete it at their convenience. This method was chosen to maximize the accuracy of the data collected by allowing respondents to answer questions without external influence. The questionnaire survey was sent to Norwegian entrepreneurs who have a set role in a startup through careful selection using Proff Forvalt which is a database containing all registered Norwegian businesses. The entrepreneurs were found through filtering businesses based on several criteria to fit the definition of a startup provided in chapter 4.3. Surveyxact facilitated a secure and anonymous submission of responses. This method not only ensured broad reach throughout Norway, but also enhanced the efficiency of the data collection process.

The survey consisted of 31 items, 11 of these were items regarding income status, age, gender, and role in the startup. The remaining 20 items were related to the variables. There were 4 items included for each variable as shown in Table 4. The respondents ranked their responses on a nominal and ordinal scale for demographic items. For questions regarding other key variables, a seven-point Likert scale in which 1 represented “extremely low degree” and 7 represented “extremely high degree” was used. The 7-point Likert scale was chosen as

it has been proven to maximize reliability (McKelvie, 1978; Nunnally, 1994). It also gives the researchers insight into the attitudes or opinions of the respondents, contributing to more precise data analysis (Corder & Foreman, 2009, p. 5). The invitation to the survey distributed to all potential participants provided clear instructions and confidentiality was assured to encourage honest responses.

The data collection phase concluded with a high-level response rate of 38,7%, underscoring the relevance of the research topic to the target demographic. The minimum number of respondents was 116 and was determined by using G*Power. G*Power is a software program which is used to calculate statistical power. The program provides the ability to calculate power for a wide range of statistical tests, and in this case, it was a multiple linear regression. The effect size was set to 0,15 which is deemed as medium (Cohen, 1988, p. 413) and is “conceived as one large enough to be visible to the naked eye” (Cohen, 1988, p. 26). The error probability was set to 0,05, this aligns with the most used confidence interval in the literature which is 95% (Šimundić, 2008, p. 154). The power was set to 90 which is according to Mascha and Vetter (2018, p. 693) the recommended power as it minimizes the risk of type 2 errors which are errors that present research findings as falsely negative.

4.3 Selection criteria

To ensure that the sample accurately represented Norwegian entrepreneurs involved in startup businesses, the participants for this study were rigorously defined. The use of Proff Forvalt as the chosen database gave this survey a comprehensive dataset on all registered businesses in Norway. It also outlined the potential participants who met the specific criteria set for defining startups.

The definition criteria for this survey are based on interpretations made by the researchers regarding the meaning of the terms. This approach was adopted so that the researchers could establish the criteria for determining who was eligible to participate in the survey. A “Startup” is defined as a company that has been established within the last ten years, operates in the private sector, and is an independent firm not part of a group company. The interpretation of the term “Role within the Startup” is where the participants were required to have a set role

within the startup. This included founders, co-founders, CEOs, presidents, and other key positions that involve significant decision-making responsibilities.

The geographic location for this study was nationwide, this was to ensure a diverse geographical representation across Norway. This diversity also aimed to enrich the findings of the study by including a broad range of entrepreneurs and their challenges. Filtering process through Proff Forvalt allowed for precise targeting based on these criteria, ensuring that only those who genuinely fit the definition of a startup entrepreneur were requested to participate.

4.4 Reliability, credibility & transferability

The study employed validated scales and consistent methodologies to ensure the reliability of its findings. According to Kvale and Brinkmann (2017, p. 276), reliability concerns the stability and credibility of research results and is crucial for determining whether outcomes can be reproduced by other researchers under similar conditions. To enhance reliability, data collection and analysis procedures were implemented to minimize potential errors and biases.

Credibility in research is crucial for ensuring that the methods and findings accurately reflect the objectives of the study and are authentically linked to the phenomena under investigation (Jacobsen, 2018, p. 17). It involves confirming that the measurements accurately capture what they are intended to measure. In this study, credibility was enhanced by selecting participants closely and conducting a thorough data analysis to ensure that the outcomes truly represent the underlying realities of the subject. Such measures ensure that the results are not only credible but also directly aligned with the specified research objectives.

Transferability considers the extent to which the findings of a study can be generalized to populations beyond those directly investigated (Jacobsen, 2018, p. 237). This study provides a description of the research context, enabling other researchers to evaluate the applicability of the results to different settings. By involving participants from diverse industries and roles, the study extends the relevance of its findings. These considerations enhance the robustness of the research and broaden its application.

4.5 Ethical considerations

In the survey, keeping the answers anonymous was important to protect the identities of the people who responded and to help them feel comfortable being honest. This approach follows findings that people are more likely to give honest answers when they know their identity is protected (Lelkes et al., 2012).

However, being anonymous can also mean people might not take the survey as seriously, which could make the answers less accurate. Research shows that while hiding identities reduces the pressure to give correct answers, it might also lead to less careful responses, which could affect the quality of the data (Lelkes et al., 2012).

The researchers used Surveyxact for data gathering, which keeps answers anonymous by not saving any personal details like IP addresses or emails. The only information that was collected was the county of residence, gender, age, industry, and job role. Sikt (2024) informs that the information gathered in the questionnaire is not sufficient to identify anyone, therefore extra permission was not needed.

5.0 Analysis & findings

5.1 Preparation and collection of data

SurveyXact is known for being user-friendly and very good at handling complex surveys, which was essential for the detailed questions on the independent variables and the dependent variable. Once a sufficient amount of respondents exceeded the minimum limit extracted from G*Power, the data was downloaded and organized using Microsoft Excel. Excel was used as it is excellent for arranging large sets of data clearly and efficiently. The use of Excel allowed the researchers to clean up the data by removing incomplete responses and renaming the variables to make them easier to later analyze in Statistical Product and Service Solutions (SPSS). SPSS was the software used for advanced statistical analysis. By the end of this process, the data from 249 complete responses was ready for the next stage of analysis in SPSS.

This methodical approach of using specific tools for data collection and preparation helped ensure that the data was accurate and organized effectively. The use of SurveyXact, followed by data management in Excel, and then detailed analysis in SPSS, makes a systematic process tailored to address the problem statement and hypotheses accurately. This process ensured that the data had a solid foundation, and it allowed the researchers to analyze the data and then the relationships between the variables confidently.

5.2 Variable means

The descriptive statistics in Table 5 showed high average scores on Emotional Resilience (ER), with mean ranging from 5.34 to 5.43. This suggests that participants generally perceived themselves as resilient. Scores on Stoic Practices (SP) had mean from 4.68 to 5.55, indicating a good level of engagement with Stoic practices. Stoic Coping Strategies (SCS) had means from 4.68 to 5.61, showing moderate average scores, implying that participants may not regularly use Stoic methods for coping. Entrepreneurial Self-efficacy (ES) had means ranging from 5.17 to 5.54, suggesting that participants had a high degree of self-efficacy. Lastly, Stoic Engagement (SE) had means from 4.97 to 5.51, indicating that participants generally engage with Stoic ideas, but not uniformly across all measured items.

5.3 Normality tests

For the analysis of the normality of the dataset, the researchers used skewness and kurtosis, along with the Shapiro-Wilk and Kolmogorov-Smirnov tests. Skewness is a measure of the symmetry, or the lack of symmetry of the normal distribution, while kurtosis is a measure of the peakedness of the distribution (Mishra et al. 2019). The kurtosis should be between -7 and 7 and skewness of the items should be between -2 and 2 (Namahoot & Laohavichien, 2018, p. 265). The kurtosis and skewness of the different items are displayed in Table 5 below. All the items in the dataset have a skewness between -2 and 2, and a kurtosis between -7 and 7, meaning that the data is normally distributed. This would typically validate the use of many parametric statistical tests that rely on this assumption of normality.

In the Shapiro-Wilk and Kolmogorov-Smirnov tests as shown in Table 5 below, the significance value is $< .001$ for all items, which adds to the proof that the data is normally distributed (Kwak & Park, 2019, p. 8). The Shapiro-Wilk and Kolmogorov-Smirnov tests are

among the main tests that assess the assumption of normality, however there are potential problems with normality tests that arise mainly due to sample size (Öztuna et al., 2006, p. 172).

It could be beneficial for further studies to consider alternative statistical approaches that do not rely on normality, according to Öztuna et al. (2006, p. 172) there are potential problems with normality tests that arise mainly due to sample size. With small samples, these tests often lack power, leading to frequent but misleading passes. Conversely, in large samples, even minor, inconsequential deviations from normality are flagged as significant. Thus, normality tests may not reliably indicate the true distribution characteristics of the data based on sample size.

Table 5 - Skewness & kurtosis

| | Descriptive Statistics | | | | | | | | | |
|--------------------|------------------------|----------------------|----------------------|-------------------|-----------------------------|-----------|------------|-----------|------------|--|
| | N Statistic | Minimum Statistic | Maximum Statistic | Mean Statistic | Std. Deviation Statistic | Skewness | | Kurtosis | | |
| | | | | | | Statistic | Std. Error | Statistic | Std. Error | |
| ER1 | 249 | 1 | 7 | 5,41 | ,880 | -1,438 | ,154 | 3,956 | ,307 | |
| ER2 | 249 | 2 | 7 | 5,43 | ,748 | -,820 | ,154 | 1,559 | ,307 | |
| ER3 | 249 | 3 | 7 | 5,43 | ,759 | -,512 | ,154 | ,352 | ,307 | |
| ER4 | 249 | 2 | 7 | 5,34 | ,856 | -,826 | ,154 | ,864 | ,307 | |
| SP1 | 249 | 1 | 7 | 4,68 | 1,332 | -,611 | ,154 | -,586 | ,307 | |
| SP2 | 249 | 2 | 7 | 5,35 | ,887 | -1,036 | ,154 | 1,881 | ,307 | |
| SP3 | 249 | 2 | 7 | 5,55 | ,740 | -,612 | ,154 | 1,516 | ,307 | |
| SP4 | 249 | 2 | 7 | 5,42 | ,858 | -,892 | ,154 | 1,760 | ,307 | |
| SCS1 | 249 | 1 | 7 | 4,68 | 1,538 | -,770 | ,154 | -,715 | ,307 | |
| SCS2 | 249 | 1 | 7 | 5,19 | 1,158 | -1,701 | ,154 | 2,913 | ,307 | |
| SCS3 | 249 | 4 | 7 | 5,56 | ,716 | -,187 | ,154 | -,185 | ,307 | |
| SCS4 | 249 | 3 | 7 | 5,61 | ,676 | -,590 | ,154 | ,635 | ,307 | |
| ES1 | 249 | 1 | 7 | 5,34 | ,802 | -1,441 | ,154 | 4,487 | ,307 | |
| ES2 | 249 | 3 | 7 | 5,54 | ,712 | -,540 | ,154 | ,647 | ,307 | |
| ES3 | 249 | 2 | 7 | 5,51 | ,730 | -,895 | ,154 | 2,244 | ,307 | |
| ES4 | 249 | 1 | 7 | 5,17 | 1,237 | -1,853 | ,154 | 3,613 | ,307 | |
| SE1 | 249 | 2 | 7 | 5,51 | ,783 | -1,327 | ,154 | 4,143 | ,307 | |
| SE2 | 249 | 1 | 7 | 5,42 | 1,005 | -1,850 | ,154 | 4,508 | ,307 | |
| SE3 | 249 | 1 | 7 | 5,44 | ,986 | -1,782 | ,154 | 4,274 | ,307 | |
| SE4 | 248 | 3 | 7 | 4,97 | ,711 | -,300 | ,155 | -,089 | ,308 | |
| Valid N (listwise) | 248 | | | | | | | | | |

Table 6 - Normality tests

| | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|------|---------------------------------|-----|-------|--------------|-----|-------|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| ER1 | ,284 | 248 | <,001 | ,792 | 248 | <,001 |
| ER2 | ,286 | 248 | <,001 | ,809 | 248 | <,001 |
| ER3 | ,277 | 248 | <,001 | ,836 | 248 | <,001 |
| ER4 | ,268 | 248 | <,001 | ,839 | 248 | <,001 |
| SP1 | ,222 | 248 | <,001 | ,889 | 248 | <,001 |
| SP2 | ,256 | 248 | <,001 | ,831 | 248 | <,001 |
| SP3 | ,291 | 248 | <,001 | ,823 | 248 | <,001 |
| SP4 | ,261 | 248 | <,001 | ,839 | 248 | <,001 |
| SCS1 | ,250 | 248 | <,001 | ,834 | 248 | <,001 |
| SCS2 | ,267 | 248 | <,001 | ,748 | 248 | <,001 |
| SCS3 | ,286 | 248 | <,001 | ,832 | 248 | <,001 |
| SCS4 | ,337 | 248 | <,001 | ,790 | 248 | <,001 |
| ES1 | ,250 | 248 | <,001 | ,771 | 248 | <,001 |
| ES2 | ,303 | 248 | <,001 | ,816 | 248 | <,001 |
| ES3 | ,302 | 248 | <,001 | ,795 | 248 | <,001 |
| ES4 | ,284 | 248 | <,001 | ,737 | 248 | <,001 |
| SE1 | ,294 | 248 | <,001 | ,769 | 248 | <,001 |
| SE2 | ,294 | 248 | <,001 | ,733 | 248 | <,001 |
| SE3 | ,299 | 248 | <,001 | ,743 | 248 | <,001 |
| SE4 | ,290 | 248 | <,001 | ,823 | 248 | <,001 |

a. Lilliefors Significance Correction

5.4 Multicollinearity

Multicollinearity in regression analysis is identified when two or more predictors are highly correlated, potentially undermining the statistical reliability of the estimates of the regression coefficients. This condition can complicate the interpretation of the model by inflating the standard errors of the coefficients, leading to less statistically significant predictors even though they may be meaningful (Shrestha, 2020, p. 39). Alin (2010, p. 370) emphasizes that multicollinearity may cause serious difficulty with the reliability of the estimates of the model parameters, highlighting the importance of addressing this issue in data analysis. Hair et al. (2021, p. 117) states that the Variance Inflation Factor (VIF) value should be less than 5, but also points to collinearity issues occurring with VIF values as low as 3. Bhatt and Shastri (2018, p. 127) states that the tolerance value should be equal to or less than 1.

Table 7 - Multicollinearity

| Model | | Coefficients ^a | |
|-------|-----|---------------------------|-------|
| | | Collinearity Statistics | |
| | | Tolerance | VIF |
| 1 | SP | ,949 | 1,054 |
| | SCS | ,923 | 1,083 |
| | ES | ,939 | 1,065 |
| | SE | ,930 | 1,076 |

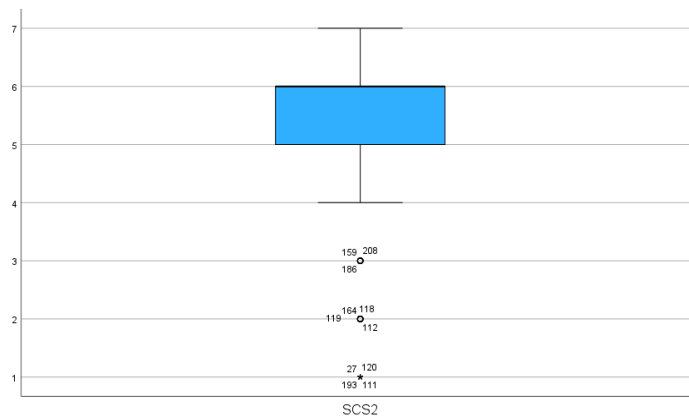
a. Dependent Variable: ER

The Tolerance values for the independent variables SP, SCS, ES and SE were reported as 0,949, 0,923, 0,939 and 0,930. Furthermore, VIF values for the variables were reported as 1.054, 1.083, 1.065, and 1.076. The tolerance and VIF values are well within the limits of excluding collinearity issues, meaning that these issues are of little to no concern. This strengthens the validity of the multiple linear regression analysis, as it demonstrates that each variable contributes unique information to the model without being redundant with the others.

5.5 Outliers

In this study, outliers were found in several of the items in the study through boxplot analysis in SPSS. “An outlier is an observation that deviates so much from other observations as to arouse suspicion that it is generated by a different mechanism” (Duan et al., 2009, p. 153). This approach was chosen for its visual and organized results, which make it effective for the researchers to locate outliers and evaluate the extent of outliers in the data. The box plot also portrays the mean, median and range (Soldatova & Rhetsky, 2011, p. 84).

Figure 2 - Boxplot SCS2



The boxplot for the variable SCS2 showed several outliers, eleven in total, primarily located at the lower scores of 1, 2, and 3, whereas most responses clustered around 5 or 6. This pattern of outliers was also noted across other variables such as ER1, ER2, ER4, and ES4, indicating a non-uniform distribution that could potentially skew the overall analysis. The presence of outliers suggests the need for further investigation into the reasons behind these responses, as they may offer additional insights into the relationship between Stoic tenets and ER. Outliers can be indicative of data entry errors, unique individual experiences, or subgroups within the sample that require further exploration (Corder & Foreman, 2009, p. 2).

Table 8 - Outliers

| Boxplot | Number of outliers | Name of outliers |
|----------------|---------------------------|--|
| ER1 | 6 | 78, 11, 6, 52, 118, 132 |
| ER2 | 3 | 4, 121, 6 |
| ER3 | 3 | 175, 20, 134 |
| ER4 | 5 | 154, 217, 134, 130, 6 |
| SP2 | 7 | 217, 225, 185, 134, 12, 6, 241 |
| SP3 | 1 | 12 |
| SP4 | 5 | 173, 164, 135, 6, 120 |
| SCS2 | 11 | 159, 208, 186, 164, 118, 119, 112, 27, 120, 193, 111 |
| SCS4 | 1 | 6 |
| ES1 | 6 | 83, 68, 214, 194, 27, 20 |
| ES2 | 2 | 18, 6 |
| ES3 | 3 | 8, 18, 6 |
| ES4 | 11 | 67, 203, 229, 174, 225, 90, 118, 208, 193, 215, 195 |

| | | |
|-----|---|--|
| SE1 | 5 | 112, 27, 18, 126, 111 |
| SE2 | 9 | 174, 208, 195, 118, 59, 120, 52, 126, 27 |
| SE3 | 7 | 126, 118, 120, 214, 112, 101, 239 |
| SE4 | 7 | 233, 240, 234, 203, 118, 75, 165 |

5.6 Measurement reliability test

According to Tavakol & Dennick (2011, p. 53) the most widely used objective measure of reliability is Cronbach's alpha. The researchers employed Cronbach's alpha to test the internal consistency within each of the variables. The Cronbach's Alpha internal consistency coefficient ranges from 0 to 1. Bogatu et. al (2015, p. 343) declare that a value of 1 signifies that the research tool measures the actual score, with random errors eliminated. Bogatu et. al (2015, p. 343) further explains that a value of 0 indicates that the research tool measures only random errors, with no relation to the actual score. A higher Cronbach's alpha value, typically 0.70 or above, signifies greater consistency and reliability among the items, indicating their cohesive measurement of the variable (Cronbach, 1951). A lower alpha value may result from poor inter-relatedness between items, having too few items or heterogeneous constructs (Tavakol & Dennick, 2011). According to Zhang et al. (2020, p. 778) low Cronbach alpha values do not imply that the items of the psychological and especially social domains are invalid, but rather they function more as an index rather than as a scale.

Table 9 – Cronbach's alpha Emotional Resilience

| Reliability Statistics | | |
|-------------------------------|--|------------|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
| ,718 | ,722 | 4 |

The calculated Cronbach’s alpha value for the variable ER stands at 0.718, signaling strong internal reliability within the data. This may suggest good inter-relatedness between the items, that survey participants understand the questions well and that the answers are consistent.

Table 10 – Cronbach’s alpha Stoic Practices

| Reliability Statistics | | |
|-------------------------------|--|------------|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
| .419 | .458 | 4 |

The Cronbach’s alpha value for the variable SP stands at 0.419, signaling lower internal reliability within the data. This may suggest that the questions in the survey are not entirely clear enough for the participants, and consequently the items are not performing well enough. The items and their corresponding answers intended to test the variable of Stoic practices are not sufficiently consistent.

Table 11 - Cronbach's alpha Stoic Coping Strategies

| Reliability Statistics | | |
|-------------------------------|--|------------|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
| .112 | .062 | 4 |

The Cronbach’s alpha value for the variable SCS stands at 0.112, signaling very weak internal reliability within the data. This may suggest a very poor interrelatedness between items and that the questions in the survey are not clear enough for the participants.

Table 12 - Cronbach's alpha Entrepreneurial Self-efficacy

| Reliability Statistics | | |
|-------------------------------|--|------------|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
| ,378 | ,375 | 4 |

The Cronbach's alpha value for the variable SCS stands at 0.378, signaling lower internal reliability within the data. Some questions may have been unclear and vaguely formulated, making it difficult for participants to understand them and the items may not be sufficiently related.

Table 13 - Cronbach's alpha Stoic Engagement

| Reliability Statistics | | |
|-------------------------------|--|------------|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
| ,584 | ,552 | 4 |

The Cronbach's alpha value for the variable SCS stands at 0.584, signaling a moderate internal reliability within the data. This indicates that the questions have potential to be better formulated and that items may not be sufficiently related.

The insufficient internal consistency of the SP, SCS, and ES variables indicates that the items within these scales may not consistently measure the intended constructs. This could be due to several factors, such as poorly worded items, a lack of coherence among items, or the multidimensional nature of the constructs being measured (Tavakol & Dennick, 2011, p. 54). The moderate consistency of the SE scale and the acceptable consistency of the ER scale suggest that these measures are more reliable but still have room for improvement. A method to improve the reliability of these scales would be to revise the items to ensure they accurately and consistently measure the intended constructs (Tavakol & Dennick, 2011, p. 54). This could involve conducting qualitative studies to better understand the dimensions of SP, SCS,

and ES, and using the information to develop more coherent and focused items. Additionally, pilot testing revised scales and using factor analysis to identify and retain items that contribute to a higher internal consistency would be beneficial (Kaliyadan & Kulkarni, 2019).

5.7 Multiple linear regression analysis

Through the multiple linear regression analysis, the associations between the dependent variable and independent variables are tested (Uyanık & Güler, 2013, p. 234). According to Park & Park (2020, p. 50) the standardized beta helps see if there is a positive or negative association between the independent variables and the dependent variable. They further emphasize that a positive standardized beta means a positive association, while a negative one indicates a negative association. A positive association means that an increase in the independent variable will lead to an increase in the dependent variable (Tranmer & Elliot, 2008, p. 31). The regression analysis presents an R square value for the variables depicted in Table 14. The R square value shows how well the independent variables explain the dependent one (Tranmer & Elliot, 2008, p. 30). The significance value (sig. value) tells us if these connections are statistically meaningful. In social sciences, a significance level of $p=0.05$ is commonly agreed upon as the standard (Bougie & Sekaran, 2020, p. 268).

In Table 14, the regression results and R square value are presented. With all independent variables included, the R square value is 0.270. This result implies that the independent variables explain 27% of the variance in the ER of Norwegian entrepreneurs. The higher the R square, the higher the model fits to the data, making it able to explain the data better (Echrigui & Hamiche, 2023, p. 7). According to Hashim et al. (2016, p. 814) this R square value would be considered low in some fields, however, studies attempting to predict human behavior have R-squared values that are typically lower than 50%. They also highlighted that humans are harder to predict than physical processes.

Table 14 - Model summary

| Model Summary | | | | |
|----------------------|-------------------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | ,519 ^a | ,270 | ,258 | ,51564 |

a. Predictors: (Constant), SE, SP, SCS, ES

Coefficients as well as standard error, standardized beta, t-value, and sig.value are presented in Table 15. The beta value of SCS and SE is negative, pointing to a negative association between these independent variables and the dependent variable. The remaining beta values are positive, pointing to a positive association between these independent variables and the dependent variable. The sig.value of SCS and SE is higher than the maximum threshold of 0,05 which means that the connections are not statistically meaningful. The sig.values of SP and ES are below the maximum threshold, making the connections statistically meaningful. SP and ES are the two independent variables which prove to be both statistically meaningful and positively associated with the dependent variable of ER.

The t-statistic of SP is 8,070 and the t-statistic of ES is 4,035. The t-statistic measures the distance the coefficient is from zero in terms of standard errors. Therefore, a higher t-value indicates greater confidence in the coefficients as predictors (Tayyaba, 2013, p. 54). The value of the t-statistic should be greater than 1.96 or less than -1.96 for sufficient confidence in the coefficients as predictors (Javanbakht & Mirbaha, 2023, p. 3). SP and ES greatly exceed the value of 1,96, while SCS and SE are neither greater than 1.96 nor less than -1.96 making them not suitable predictors of the dependent variable.

Table 15 - Coefficients

| Coefficients ^a | | | | | | | | | | |
|---------------------------|------------|-----------------------------|------------|---------------------------|--------|-------|---------------------------------|-------------|-------------------------|-------|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | 95,0% Confidence Interval for B | | Collinearity Statistics | |
| | | B | Std. Error | Beta | | | Lower Bound | Upper Bound | Tolerance | VIF |
| 1 | (Constant) | 2,293 | ,438 | | 5,234 | <,001 | 1,430 | 3,155 | | |
| | SP | ,461 | ,057 | ,455 | 8,070 | <,001 | ,348 | ,573 | ,940 | 1,064 |
| | SCS | -,074 | ,068 | -,070 | -1,088 | ,278 | -,208 | ,060 | ,724 | 1,382 |
| | ES | ,308 | ,076 | ,272 | 4,035 | <,001 | ,157 | ,458 | ,657 | 1,522 |
| | SE | -,108 | ,069 | -,108 | -1,577 | ,116 | -,244 | ,027 | ,642 | 1,557 |

a. Dependent Variable: ER

5.8 Supported hypotheses

As the researchers have conducted a broad analysis of the data, the support of the hypotheses is now possible to be uncovered. To give answers to the problem statement, the hypotheses are the most important contributors as they include the variables which are relevant to it. The

hypotheses are also important in uncovering the proven and tested advice to Norwegian entrepreneurs regarding fostering resilience through modern Stoicism.

H1: There is a significant positive association between usage and adoption of Stoic practices and the emotional resilience of Norwegian entrepreneurs.

($\beta = 0.455$, $p < 0.05$). The hypothesis is supported.

The significant positive association confirms that Stoic practices are associated with the emotional resilience in Norwegian entrepreneurs.

H2: There is a significant positive association between Stoic coping strategies and the emotional resilience of Norwegian entrepreneurs.

($\beta = -0.70$, $p = 0.278$). The hypothesis is *not* supported.

The negative non-significant association suggests that the Stoic coping strategies measured are negatively associated with emotional resilience in Norwegian entrepreneurs.

H3: There is a significant positive association between entrepreneurial self-efficacy and the emotional resilience of Norwegian entrepreneurs.

($\beta = 0.272$, $p < 0.05$). The hypothesis is supported.

The significant positive association indicates that entrepreneurial self-efficacy is positively associated with emotional resilience in Norwegian entrepreneurs.

H4: There is a significant positive association between Stoic engagement and the emotional resilience of Norwegian entrepreneurs.

($\beta = -0.108$, $p = 0.116$). The hypothesis is *not* supported.

The negative non-significant association suggests that Stoic engagement is negatively associated with emotional resilience in Norwegian entrepreneurs.

The analysis proves two out of four hypotheses to be supported. The hypotheses which are supported are the ones that will be more yielding to investigate regarding future research. The hypothesis regarding Stoic coping strategies and emotional resilience is not supported as significant and is not positively correlated, the same is proven concerning the hypothesis which includes Stoic engagement and emotional resilience.

6.0 Discussion

The problem statement for this study stressed the resilience of Norwegian entrepreneurs as a critical area of study due to its impact on business longevity and startup success. The high rate of Norwegian firms failing within one year of operation also points to the need for resilience fostering in the Norwegian entrepreneurial domain (Skullerud, 2022). The objectives of the research were to identify, measure and analyze the Stoic factors associated with the resilience of Norwegian entrepreneurs, and provide resilience fostering recommendations based on Stoic tenets. This discussion aims to fulfill these objectives through the findings of the study and the included literature. The discussion also aims to provide recommendations regarding resilience fostering among Norwegian entrepreneurs.

One of the primary strengths of this study is the comprehensive statistical analysis conducted to assess the distribution characteristics and associations between variables. Descriptive statistics in Table 5 highlight high average scores on Emotional Resilience (ER) and moderately high scores on Stoic practices (SP) and Entrepreneurial self-efficacy (ES), indicating a trend among participants towards ER and engagement with Stoic tenets. This aligns with previous research suggesting that Stoic tenets can enhance ER by promoting rationality, self-awareness and practices leading to emotional well-being (Sherman, 2021; MacLellan & Derakshan, 2021; Gulevataya et. al, 2022; Guerin, 2022).

To further understand the associations regarding the variables, the study employs multiple linear regression analysis, providing a more nuanced understanding of how variables associate with ER. The significant positive association between SP and ER ($\beta = 0.455$, $p < 0.05$) supports the hypothesis that Norwegian entrepreneurs who adopt SP can enhance the ability to cope with stress and adversity. This finding is consistent with Guerin (2022, p. 141), who emphasized the practical benefits of SP for mental toughness in entrepreneurial contexts. The significance of SP in association to ER underscores the potential value of incorporating SP into practices aimed at fostering resilience in Norwegian entrepreneurs. According to Sherman (2021, pp. 170-174), specific SP such as reflection on mortality can build a more robust emotional response to adversity by mitigating fear and surprise, thus enhancing resilience.

These findings align with the findings of Ivaşenco (2023, p. 303) who highlights that individuals who incorporate SP, like negative visualization, gain inner calmness and mental strength by mentally preparing for negative outcomes, leading to increased ER. Preparing for negative outcomes is also stressed by Sherman (2021, p. 3), who also highlights Stoicism as a way of decreasing anxiety and despair. For Norwegian entrepreneurs, this can contribute to a more stable and sustainable work culture, where challenges are met with greater calm and clarity. It can also promote a more vigorous approach to both personal and professional adversities, which can be crucial for long-term success.

Sherman (2021, pp. 80-81) discusses potential criticisms of Stoicism, specifically the view of Stoicism leading to emotional suppression rather than the rational enthusiasm and desire, along with careful caution promoted by ancient Stoics. This offers a nuanced view that emphasizes the need for balance. While SP can enhance resilience, inner calmness and stress management, overemphasis on rationality might lead to emotional suppression. While the positive correlation between SP and ER is promising, it is crucial to delve deeper into the mechanisms that influence this relationship. Understanding the nuanced effects of specific SP and their psychological impacts can contribute to the literature greatly.

Contrasting the findings of SP and ER, the finding of a non-significant negative association between SCS and ER indicates that the data does not provide sufficient evidence to support the hypothesis. The application of SCS in the lives of participants appears to be moderate based on the means of the items in the variable, indicating that participants do not frequently use Stoic methods for coping. There can be many reasons as to why SCS is neither positively nor significantly associated with ER. Norwegian entrepreneurs may not use SCS to enhance their resilience as they may not be aware of the benefits promoted by Ivaşenco (2023) regarding Stoic strategies for increased control and personal growth.

Additional reasons might be that items in the variable are not measuring the same underlying construct, or that the questions in the survey were not formulated well, these reasons are backed by the very weak Cronbach's alpha measured for this variable. Duchek (2017) and Haynie et al. (2010) state that resilience emerges through exposure, personal growth, and experiences and Pigliucci (2017) notes that the practical application of Stoic strategies requires consistent practice and deeper integration into personal routines. This points to a lack

of experience with SCS as another potential reason as to why SCS is negatively associated with ER.

Despite this, there is evidence that supports a different perspective on resilience, particularly through self-efficacy. The finding of a significant positive association between ES and ER aligns with the work of Bullough and Renko (2013) on the critical role of self-efficacy in fostering resilience and overall well-being. The Stoics, like Seneca, would likely agree with this assessment, as they advocate for a proactive approach to challenges in life, emphasizing the importance of taking responsibility for personal actions and focusing on what is within personal control (Ivaşenco, 2023; Pigliucci, 2017, p. 26-36). These factors resonate with the concept of self-efficacy, which is the belief in the ability of an individual to influence events and outcomes. A person with high self-efficacy is more likely to persevere in the face of adversity, viewing challenges as opportunities for growth rather than overwhelming obstacles (Bullough and Renko, 2013). This implies that a strong belief in their own ability to influence events and outcomes can help Norwegian entrepreneurs build resilience and overcome challenges.

However, entrepreneurs with high ES may become overconfident or disregard other views, which can lead to narcissistic behavior (Oysharja and Amit, 2023, p. 14). Stoicism advocates for humility and self-awareness, this encourages entrepreneurs to remain grounded and avoid the pitfalls of overconfidence (Kuratko et al., 2020, p. 1686; Sherman, 2021, pp. 117-118). This self-awareness is crucial in avoiding the negative consequences of narcissism (Oysharja and Amit, 2023, p. 14). These findings suggest that Norwegian entrepreneurs with high ES need to balance confidence with humility to avoid the pitfalls of narcissistic behavior, which can harm their relationships and decision-making processes. Furthermore, by integrating Stoic tenets such as humility and self-awareness, entrepreneurs can enhance their resilience and maintain a healthy balance between self-assurance and self-critique.

Building on this understanding of the importance of ES, the findings of MacLellan and Derakshan (2021) and Gulevataya et al. (2022) identify Stoic training as a factor which led to significant reductions in self-reported rumination and improvements in self-efficacy. These findings are to a degree confirmed by the positive association found in this study. Stoicism can help increase self-efficacy, and when ES increases, so does ER. These findings suggest

that Stoic training can be a valuable tool for Norwegian entrepreneurs, helping them reduce rumination and improve self-efficacy, which are crucial for maintaining mental clarity and focus on their business endeavors.

On another note, the non-significant association between SE and ER in this study means the items included may not fully capture the complexity of engagement with Stoic philosophy. For example, Gulevataya et al. (2022) implies that when Stoicism is applied in an educational context, there may be a tendency to measure how often students participate in SE, like journaling, rather than how deeply or meaningfully they engage in them. This can affect the measurement of association between SE and ER which therefore may need refinement. This refinement could involve developing more nuanced survey instruments that capture the depth and quality of the engagement of an individual with SE rather than just the frequency. Additionally, the association between SE and ER might be influenced by other factors, such as personality traits or specific challenges faced in the entrepreneurial journey (Duchek, 2017).

Within the startup ecosystem, there is a tendency to create compelling personal stories to attract investors (Oysharja and Amit, 2023, p. 14). Regular journaling helps entrepreneurs maintain authenticity and transparency by documenting their daily struggles and progress (Gulevataya et al, 2022). This practice can not only improve storytelling, but it can also help create genuine narratives that resonate with stakeholders (Oysharja and Amit, 2023, pp. 14-15). For Maclellan and Derakhshan (2021, pp. 19-23), the participants in their study showed a reduction in anxious and negative language when they wrote daily planners and self-assessments, suggesting improvement in their emotional state due to the SE.

As discussed, engagement in Stoic activities can be beneficial according to the literature. Pigliucci (2017, p. 10) points out that there are several neurobiological studies showing that meditation which is an item in the variable of SE is mentally beneficial. There could be multiple reasons why this study did not find SE associated with ER. For example, it could be as simple as the survey questions not being adequately formulated, which may have led to misinterpretations, which is a claim backed by the insufficient Cronbach's alpha for this variable. The contradictory findings regarding SE and ER indicate the need for more comprehensive research regarding this association.

The significance of the discussed findings contributes to the literature on Stoicism and resilience in Norwegian entrepreneurship, aiming to identify, measure, and analyze how Stoic tenets associate with the resilience of Norwegian entrepreneurs, thereby providing valuable insights and tools for aspiring and practicing entrepreneurs. Incorporating Stoic-related factors into the daily lives of Norwegian entrepreneurs could provide practical insights to manage stress and adversity more effectively. Stoic factors have the potential to improve mental toughness and overall well-being (Guerin, 2022, pp. 140-141; Pigliucci, 2017, pp. 33-36) and integrating these into entrepreneurship education could aid in fostering a resilient and innovative mindset which is essential for success in any career path (Pacher & Glinik, 2024, p. 1311).

Furthermore, principles of control over the internal state can enhance the robustness and adaptability of entrepreneurs (Ivaşcenco, 2023). With regards to the work of Dickinson (2024), the findings of this study also have significance for the broader field of positive psychology. The association between SP, ES and ER supports the effectiveness of philosophical interventions for promoting psychological well-being. The findings suggest that Stoicism, with its emphasis on practical wisdom and virtue ethics, can be valuable for individuals seeking to cultivate resilience and navigate challenges.

7.0 Conclusion

This study contributes to the expanding body of literature on the intersection of Stoicism and entrepreneurship by clarifying the associations between emotional resilience and Stoicism among Norwegian entrepreneurs. The empirical evidence reveals a nuanced relationship, where Stoic Practices (SP) and Entrepreneurial Self-efficacy (ES) are positively associated with Emotional Resilience (ER). This finding aligns with prior research that supports the efficacy of Stoic tenets in fostering resilience. However, the study also found non-significant negative associations between Stoic Coping Strategies (SCS), Stoic Engagement (SE) and ER, suggesting that the application and impact of Stoic tenets may vary based on individual contexts and specific practices. It is also important to emphasize the insufficient Cronbach's alpha values for the variables, which stresses the need for further research and improvement of these variables.

The positive association between SP and ER underscores the relevance of integrating these ancient philosophies into modern entrepreneurial training and education. Similarly, the positive association between ES and ER emphasizes the crucial role of self-confidence for entrepreneurs in the face of adversity. This belief can be a powerful buffer against the stresses and setbacks that entrepreneurs inevitably face. Incorporating these principles not only fosters a resilient mindset but also equips entrepreneurs with the tools to thrive in the dynamic landscape of modern business.

The findings of this study highlight the potential of SP and ES to contribute to the mental resilience of entrepreneurs, offering valuable insights for both practitioners and researchers. By incorporating Stoic-related factors into entrepreneurial education and training programs, it is possible to enhance the mental toughness and overall well-being of entrepreneurs, aiding them in managing stress and overcoming challenges more effectively.

Overall, this study offers a promising perspective on the practical application of Stoicism in the entrepreneurial context, providing a foundation for future research to further explore and refine the integration of Stoic practices in entrepreneurship.

7.1 Limitations of the study

Despite the strengths of the study, it also has several limitations. One significant limitation is the poor internal consistency of some scales of every independent variable, indicated by their low Cronbach's alpha values. This suggests that the items within these scales may not be measuring the same underlying construct consistently, which could stem from various factors. Such factors could include poorly worded items, a lack of consistency among items, or the multidimensional nature of the constructs being measured (Tavakol & Dennick, 2011, p. 54). Improving the measurement scales to enhance their reliability is essential for future research (Cronbach, 1951, p. 297). Conducting qualitative studies to better understand the dimensions of dependent and independent variables could yield information that leads to more coherent and focused items.

Another limitation is the amount of variance explained by the regression model ($R^2 = 0.270$), indicating that other factors not included in this study may also play significant roles in

influencing emotional resilience. This suggests the need for a more comprehensive approach that considers additional variables, such as personal background, environmental factors, and broader psychological constructs (Duchek, 2017).

The self-reported nature of the data and the specific cultural context of the sample may limit the generalizability of the results. Nevertheless, this research contributes valuable insights into the field of Stoicism and its potential applications in entrepreneurship and education.

7.2 Implications for theory

The mixed results regarding the significance of different predictors highlight the complexity of emotional resilience. While Stoic Practices (SP) and Entrepreneurial Self-efficacy (ES) showed significant positive associations with Emotional Resilience (ER), Stoic Coping Strategies (SCS) and Stoic Engagement (SE) did not. This variability suggests that the application and impact of Stoic tenets may differ based on individual contexts and the specific aspects of Stoicism being practiced.

The results regarding the significant positive association between SP and ER imply that the adoption of practices and mental principles promoted by Stoicism can aid in enhancing ER. This finding builds on the existing evidence of Guerin (2022) and Kelly (2021) supporting the notion that Stoic practices offer practical tools for dealing with challenges and promoting resilience.

The results regarding the significant positive association between ES and ER reinforce the idea that confidence in entrepreneurial abilities is crucial for resilience. This finding builds on the existing evidence of Bullough and Renko (2013) and Ayala and Manzano (2014), who highlighted the role of self-efficacy in navigating entrepreneurial challenges, promoting mental well-being, and awakening of entrepreneurial spirit.

The significant negative associations regarding SCS and SE suggest that not all Stoic-relative factors are equally associated with resilience. This indicates the need for a nuanced understanding of how different Stoic tenets are applied.

The results should be considered when developing resilience training and education programs for entrepreneurs. Emphasizing SP and building ES can provide practical benefits.

By incorporating these findings entrepreneurs and educators can develop and enhance resilience needed to navigate the challenges of entrepreneurship.

7.3 Recommendations

To address the limitations and build on the findings of this study, future research should focus on refining the measurement scales for Stoic coping strategies and Stoic engagement to improve their reliability. Additionally, incorporating a more diverse range of variables, such as personality traits, social support, and coping mechanisms, could provide a more comprehensive understanding of the factors contributing to emotional resilience. Exploring the connections between Stoicism and cognitive behavioral approaches, as discussed by Dickinson (2024), could provide deeper insights into effective resilience-building strategies.

Exploring qualitative approaches, such as in-depth interviews and case studies could also offer richer insights into how individual entrepreneurs experience and apply Stoic-related factors in their daily and professional lives. This could help identify specific practices that are most effective in enhancing resilience and provide more tailored recommendations for entrepreneurs. Additionally, Gulevataya et al. (2022) present the educational perspectives on how Stoic-related factors can enhance critical thinking and self-reflection among students which might be beneficial for developing resilience training programs in educational institutions.

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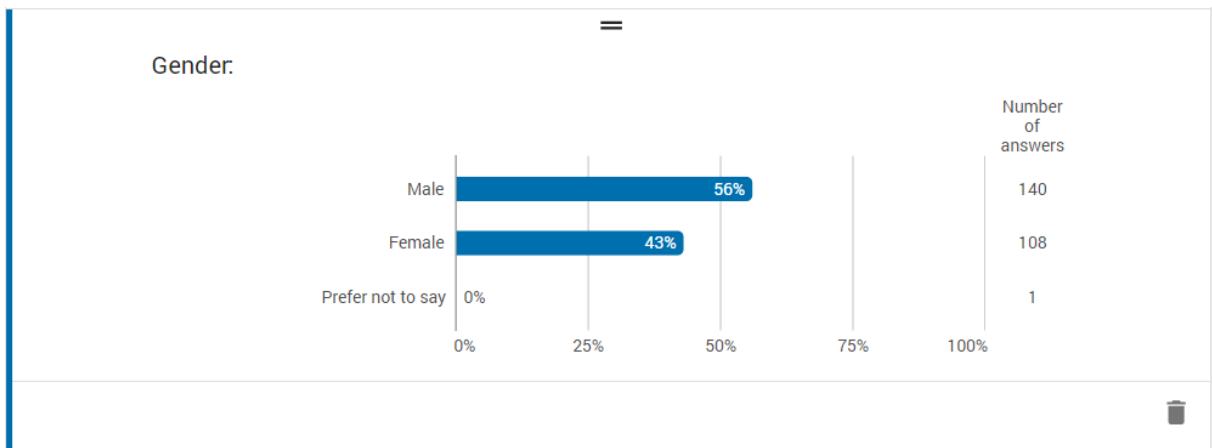
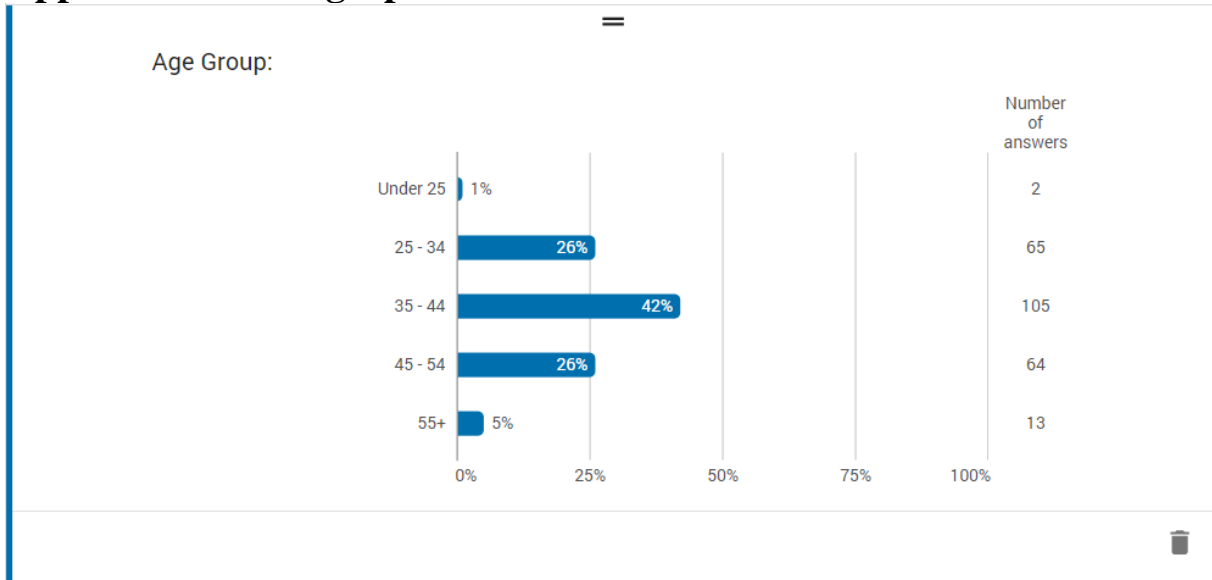
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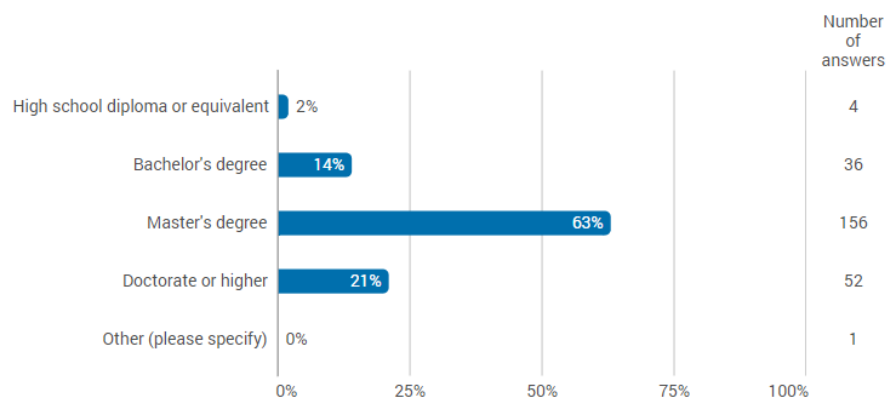
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9.0 Appendix

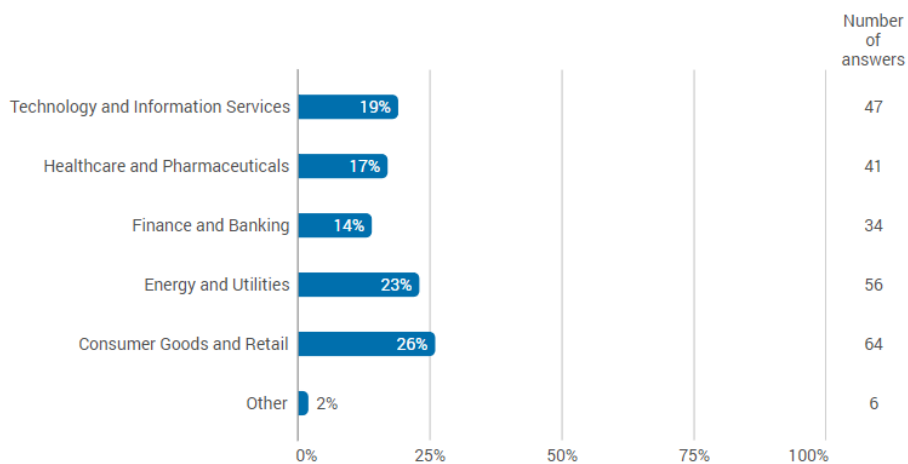
Appendix 1: Demographic results from data collection



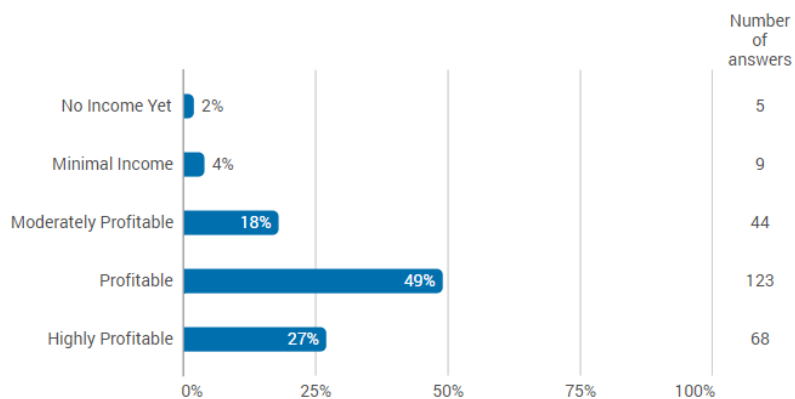
Education Level:



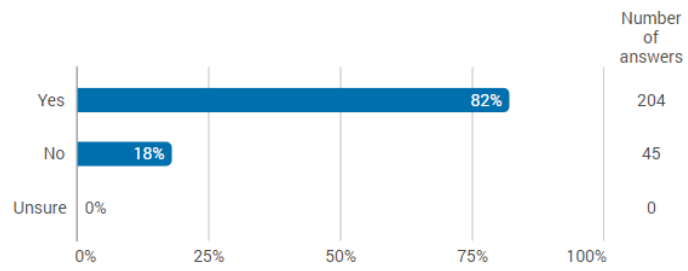
What industry does your startup operate in?



Has the startup generated income?



Have you ever founded or co-founded a startup that failed?



How many years have you been an entrepreneur?

