To Be or Not To Be Ambitious.

Understanding the Gendered Nature of Adolescent Ambition

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ABSTRACT

Contrary to what we may think, in scientific research, there is no unified definition of the concept of ambition. This not only makes it impossible to compare findings across studies, but it may also explain why studies show highly fragmented results when it comes to gender differences in ambition. Furthermore, ambition has primarily been studied in adults and we lack knowledge of ambition in adolescents.

Traditionally, ambition is measured through specific end-goals that are deemed as ambitious by society such as power, wealth, and prestige. However, people desiring other goals than within these areas may be just as ambitious but are not included due to the historical development of ambitious goals being defined by men, for men, in a man's world. To a large extent, the goals men and women choose are often dictated by gender stereotypes, social norms and gender expectations. Thus, using specific end goals as a way of defining ambition carries inherent gendered bias.

Another way of defining ambition is through certain behavioural traits such as competitiveness, desire for success, or self-esteem. But there is a lack of knowledge about whether ambition is the same as such behavioural traits or whether it is a conceptually distinct factor. However, as with goals, behaviour has a gendered aspect that dictates which behavioural traits are acceptable for men and women. As such, women are often penalized for expressing a desire for power or being highly competitive as these traits are seen as predominately masculine.

Finally, because we lack a unified definition of ambition, measuring ambition in adolescents varies greatly from using future career plans and the desire for having a high income in the future to the desire for certain educational choices and grades as indicators.

No studies have explored qualitatively how adolescents understand and conceptualise ambition. Qualitative studies on adults indicate, however, that the way we traditionally understand ambition, is changing.

In this thesis, the aim is to explore how adolescents define and conceptualise ambition through a qualitative study (Chapter 2 and 3) and to locate possible gender differences in ambition through an experiment (Chapter 4) and quantitative studies (Chapter 2 and 5). Drawing on theories from goal-setting and goal orientation combined with social role theory and gender similarity hypothesis, our findings provide knowledge about how Danish adolescents view ambition and show that gender differences in ambition are more nuanced than we often tend to think. Our findings further debunk the myth that educational choice is equal to ambition level and show that adolescent ambition is not just about specific end-goals or only about power and prestige and upward progression. Ambition is seen as having a long-term goal and the distance from your starting point to your goal is essential – the wider the distance, the more ambitious, but the goal can be anything.

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AUTHOR'S DECLARATION

I, the author, declare that the thesis is my own work. I am aware of the University's Guidance on the use of items included in the thesis having been published at the point of submission being produced subsequent to my registration on the research programme [http://www.exeter.ac.uk/staff/policies/calendar/part1/regulations/#collapseThirtythree]. This work has not been previously presented for an award at this, or any other university.

ABBREVIATIONS

ANOVA	Analysis of variance
AVE	Average variance extracted
b	Unstandardized regression coefficient
β	Beta - Standardized regression coefficient
CFA	Confirmatory factor analysis
CFI	Comparative fit index
CI	Confidence interval
df	Degrees of freedom
F	*F*-test
GFI	Goodness of fit index
GSCA	Grit scale for children and adults
GSE	General perceived self-efficacy scale
GSFQ	Goal-setting formative questionnaire
HF	Higher preparation exam
HHX	Mercantile high school exam
HTX	Technical high school exam
IFI	Incremental fit index
M	Mean
NFI	Norms fit index
p	Probability value
r	Correlation coefficient
RFI	Relative fit index

RMSEA	Root mean square error approximation
SE	Basic self-esteem scale
SEM	Structural equation modelling
SD	Standard deviation
SRMR	Standardized root mean residual
STX	General high school exam
TLI	Tucker Lewis index
TMF	Traditional Masculinity-Femininity Scale
X^2	Chi-squared

CHAPTER 1.
INTRODUCTION

In this introduction, we will explore what prompted this research and the interest in this particular field leading to the aims of this research. This chapter will also have an overall literature review of the field of research. Literature reviews are also included in each manuscript in the following chapters. Finally, as this thesis is manuscript-based, in this chapter we will also describe how each of the studies in the manuscripts form a coherent whole and how they all contribute to the same aims of research.

Author's background and interest in the topic

For more than 6 years, I have worked as an educational analyst and strategic advisor within the educational field. In this process, I have worked closely with high schools and schools of higher education trying to get a better understanding of students' educational choices and motivation. One of the topics that schools are particularly concerned with is students' ambition level and how it affects their choices and goals.

Through my work, I was often presented with attitudes from teachers and headmasters that young students seemed to lack ambition, especially boys. Girls were deemed to have high ambitions when it comes to school work and achievements, whereas boys were considered less ambitious. This was a worry as a certain level of grades is needed when you complete primary school in Denmark in order to enter high school or vocational training (Adgangskrav til ungdomsuddannelserne, n.d.) and teachers feared that many boys would not be able to pursue higher education due to their lack of ambition. However, for high school students there seemed to be a different worry: that girls were seen as overly

ambitious about their achievements leading to stress and anxiety, whereas boys were seen to be more relaxed about their future education. Boys were praised for their desire to pursue high-status educations such as medicine and law after high school, but there did not seem to be any particular expectations for girls to choose so-called high-status educations. Apparently, the view of ambition when it comes to higher education and future work had somewhat changed from primary school to high school and boys were seen as more ambitious than girls.

These observations and different attitudes about what ambition entails and how it is expressed triggered my interest in understanding how ambition is perceived among adolescents.

Gender differences in educational achievements and educational choices

From what I observed at the schools that I worked with, the main perception of ambition in adolescents was centred on grade scores and educational achievements or educational desires, so the higher the grades, the more ambitious or the stronger desire for a high-status higher education, the more ambitious.

In recent years, much attention has focused on the fact that girls generally get higher grades than boys in primary school and that this difference is particularly significant in the 9th and 10th grade exams (Børne- og Undervisningsministeriet, 2022). However, the gender gap in grades is not new at all. Voyer and Voyer (2014) did a meta-analysis of all studies conducted from 1914 to 2011 from more than 30 countries, including Norway and Sweden, and found that differences in grades between boys and girls have always existed; girls have always got higher grades in the final exam in 9th and 10th grade than boys. It is, therefore,

not unique to Denmark or a new phenomenon, but is seen in all countries in the world. The difference in grades between boys and girls has not increased in the last 100 years, but due to the fact that 9 years of compulsory schooling was introduced in Denmark in 1972 (Gjerløff, 2019), the proportion of girls who complete primary school exams has increased (Egelund et al, 2018). At the same time, women make up an increasing proportion of students in secondary education (Egelund et al, 2018), and thus the gender differences in grades become more apparent.

The gender differences in grades are greatest in the 9th and 10th grade exams in primary school. During secondary education, a majority of the boys catch up with the girls and in higher education, the gender differences in grades disappear (Matzon, 2017; Voyer & Voyer, 2014). Torvik and colleagues (2021) found that both girls and boys who have reached puberty perform better in terms of grades. But because girls typically reach their adult height earlier than boys, the final development of their executive cognitive functions typically also starts earlier than boys. Girls are thus ahead on points in relation to physiological maturation and this is reflected in the fact that girls have increased self-discipline, are better able to set long-term goals, and are better at focusing and planning earlier than boys. Girls, therefore, have a biological advantage when it comes to achieving high grades in the 9th and 10th grade exams. Boys are simply not at the same maturation stage as girls. The majority of the boys catch up with the girls during secondary education when their executive cognitive functions are fully developed. And when both groups enter higher education, they are more or less equal when it comes to executive cognitive functions, which is reflected in the fact that the gender gap in grades is evened out (Matzon, 2017).

Although research shows that the start of puberty is important for the difference in grades between boys and girls, the results also show that physiological conditions can only explain a small part of the difference in grades. In fact, Torvik et al (2021) found that only 7-10% of the grade difference can be explained by biological causes. Environmental factors such as gender stereotypes, social norms, and gender expectations have a far greater impact and also influence the effect of biological difference, which together increases the gender gap in grades between boys and girls (Torvik et al, 2021).

Zimmerman (2018) investigated class culture among Swedish 9th grade students and what kind of class or school culture enables boys to work hard and what prevents them from doing so. Zimmerman's results show that in some classes or schools a kind of "boys' culture" develops where being ambitious at school is considered feminine. This culture is highly centred around a masculine ideal and has a negative effect on doing well in school which in turn results in boys performing academically poorly. If boys make an effort to get good grades, it can have social costs for them (Zimmerman, 2018). The school is an arena with two elements, social and academic learning. When what is valued socially matches what is valued academically, things align. But in some schools or even classrooms, the two expectations collide. It is not socially acceptable for the boys to be school-minded or bookish, but socially acceptable for the girls.

A reason for this is due to gender stereotypes. Society has gender-stereotyped expectations for girls to do well in school and do their homework (Miller, 2017; Wolter et al, 2015). This means that parents, teachers and others place greater academic demands on the girls. This creates a link between being a girl and doing well at school. On the other hand, the opposite gender stereotype exists more often in relation to boys, i.e. that parents

and teachers do not have the same expectations that boys are equally academically oriented. Boys are, therefore, not being met with the same academic demands and expectations.

According to Zimmerman (2018), it is not an easy choice for boys between being diligent at school and following what is socially acceptable in the classroom. When the boys are constantly referred to as being academically weaker than the girls, it affects the boys' perception and reinforces a fixed mindset: they are academically weak because they are boys, and it becomes a self-fulfilling prophecy.

The fact that girls' and boys' academic performance is strongly influenced by gender stereotypes and expectations questions whether educational achievements are truly indicative of ambition, at least for adolescents.

Whereas girls are seen as ambitious due to their grades, boys are seen as ambitious due to their educational choices. Boys graduating from high school aged 18-20 are more likely to desire higher education based on the possibility of high income or high social status (Danmarks Evalueringsinstitut, 2021). Girls, on the other hand, are more likely to desire higher education based on their interests or the possibility of making a difference for other people (Epinion, 2022) and for that reason girls' educational choices are much more varied compared to boys. But due to the low grades achieved in the 9^{th} or 10^{th} grade exams and/or during high school, many boys are not able to get into high-status higher educations. Instead, they choose to pursue educations that are seen as very masculine as a way of reaffirming their desire for prestige (Epinion, 2022).

However, it seems odd that teachers and society at one point perceive girls to be highly ambitious because they achieve good grades, but at the same time perceive girls to be less ambitious due to their educational choices. We would assume that a person who is ambitious would continue to be that way regardless of their choices. This indicates that

educational choices may not be representative of ambition, but rather a result of gender stereotypes and social norms.

Aims of this research

The broad aims of this research are:

- To get an insight into how adolescents define and perceive ambition and to understand how the concept of ambition plays out in adolescent students.
- To explore whether contexts of work and education might influence ambition levels in adolescents.
- To explore whether there is a link between educational choices and ambition levels in adolescents.
- To explore whether there are gender differences in adolescent ambition.

Literature review

The historical and cultural development of ambition

Ambition as a concept first evolved in ancient Greece (King, 2013). The Greeks did not use the word ambition, rather the concept consisted of three words that combined formed the concept of ambition: philotimia, eritheia, and philodoxia (King, 2013; Price, 1984). Philotimia meant ‘love of honour’ and was viewed as a negative personal attribute in which love of ones’ own profit exceeds all. Eritheia meant ‘rivalry’ or ‘strife’ and was seen as a selfish pursuit of political office by using unfair means such as bribery. And philodoxia meant ‘love of acclaim’ and was considered the corruption of the soul. None of the concepts were considered valuable to pursue. During the Roman period the word ‘ambitio’ was

formed (Price, 1982). Initially, the word was quite neutral meaning canvassing votes and standing for public office. Over time, it evolved to be viewed as describing corrupt practices when seeking honours and creating intrigue.

Influenced by the Greeks and the Romans, early Christianity viewed ambition as a sin distracting a person from their true path with God (King, 2013). In early Christianity ambition was also equalled with 'averice' which stood for monetary greed and lust for power (King, 2013). Averice is included in the Seven Deadly Sins in the form of greed and pride and, in early Christianity, ambition was part of this and to be avoided at all costs (Bloomfield, 1952). Through the Middle Ages, Machiavelli, despite celebrating power, condemns ambition in several of his work calling it wrong and grouping it together with negative qualities such as envy, idleness, violence, and corruption (King, 2013).

During the time of Shakespeare, ambition was still viewed as a sin depriving man of morality (Mack, 1973). This is described very profoundly in Shakespeare's play *Macbeth* in which not only Macbeth, but also his wife suffers from their ambition leading to their downfall. Through Shakespeare's plays and the Christian perception of the time, ambition spread to include not only kings and noblemen but also the common man. The antipode of ambition was not considered humility, as one would assume, but instead mediocrity (King, 2013). This served a purpose for kings and states at the time. By maintaining that ambition is wrong and a sinful vice, and that mediocrity is to be celebrated, it meant that people should stay in their place and with their vocation maintaining the hierarchical class society across societies in Europe. This is also the time when ambition no longer pertains to the field of politics solely but also to the field of work.

With the onset of the colonization of the world, especially the Americas, from the 16th century to the 18th century, the concept of ambition began to undergo a transformation from vice to virtue (King, 2013). As kings and states needed common people to engage in the colonization process, ambition was harnessed and turned into a necessity for colonization. The tool was the promise of land, wealth and titles, but it meant that people would need to exceed their destined vocation and life path and so a redefinition of ambition was needed. Common people began to see opportunities in the New World that they would not be able to achieve in Europe (King, 2013). With the foundation of the United States of America and throughout the 19th century, ambition became closely related to the American Dream and the rise from rags to riches. This could be achieved if your ambition was strong enough, and ambition, therefore, became seen as purely a virtue and something to strive for in the US and among people in Europe wanting to emigrate to the US (King, 2013). During this time, ambition also became an integrated part of work and education which were seen as the natural arenas for ambition apart from politics.

This development of ambition may explain, why society throughout the 20th and 21st century predominately addresses ambition as pertaining to politics, work and education and no other aspects of life. The duality of ambition as both a vice and a virtue depicting different behaviours from violence, bribery and cheating to drive, assertiveness and achievement, as well as goals from obtaining a public office to seeking a better life, may also explain why we today have no clear definition of what ambition entails or what it means to be ambitious. In research, this duality of ambition is often described as positive vs. negative ambition (Bot, 2017; Verstreaten, 2017), as internal vs. external ambition (Johnson et al, 2017) or it is related to gender and how men and women define ambition with women primarily relating ambition with negative aspects (Sools et al, 2017).

Three different approaches to ambition

To further muddle the definition of ambition, the concept can be approached from three perspectives: 1) as an object in which ambitions refers to specific goals, 2) as a personality trait depicting an inborn desire to be successful, seeking power and fame, or 3) as a learned behaviour in line with behavioural traits from drive, competitiveness, and initiative to being greedy, aggressive, and determined.

Ambition as an object. The word ambition is often conflated with the word goals and thus ambition is treated as an object, i.e. the goals that you have, determine whether you are seen as ambitious or not.

Ashby and Schoon (2010) analysed data from a British longitudinal study beginning in 1970. At age 16 the participants were asked about career aspirations and future job plans as well as measuring their educational attainments (exam scores), family income and parents' educational aspirations for their child. This data was compared to the participants' educational qualifications, occupational status and income at age 34. Ashby and Schoon (2010) framed the term 'teenage ambition value' which they measured using two existing variables from the study: job challenge *("How much will it matter to me to get a job with a real challenge?"*) and moving up/getting a promotion *("How much will it matter to me to get a promotion so I can get ahead?")*. They found that teenage ambition value is linked to adult income level and concluded that teenagers who express a desire for "getting ahead" are more likely to have a higher income as adults and are thus more ambitious than their peers.

Johnson et al (2017) also suggest that ambition is the same as specific goals. However, unlike Ashby and Schoon, Johnson et al do not operate with specific goals but instead two different types of goals that can be equally present: intrinsic and extrinsic ambition. The

former group includes personal, interior, value-oriented goals like being a better partner, or finding meaning in one's work, or believing in oneself. Extrinsic goals, meanwhile, have more to do with tangible, material results in which extrinsic goals are about being recognized by other people: being visible, being noticed, being admired similar to fame, wealth, and power (Johnson et al, 2017).

However, as the historical development of ambition shows, which goals are seen as ambitious and which are not are defined by society, and this is further influenced by political interests, societal development, social norms, and gender stereotypes. Traditionally, ambition has been related to the field of politics, work and education, but not the home. Desiring a high position in your career is seen as ambitious, but desiring to have lots of children is not, even though both endeavours require the same dedication, hard work, and long-term commitment. In fact, ambition was primarily related to men and not women. The first time, ambition is related to women is during the period of Elizabeth I of England (Faulkner, 2007). Women were seen as private figures, subordinated within the social hierarchy. Women could not hold titles, enter the public sphere, or attend university, so why was ambition suddenly attributed to women? Historians believe that the only reason ambition was related to women at this point was due to the fact that the ruler herself, Elizabeth I, was a woman, and by relating ambition, a strongly negative vice, with women it was used to deter other women from pursuing a higher place in society.

Despite Johnson et al (2017) defining ambition to be both extrinsic and intrinsic, intrinsic goals are not as widely accepted to be seen as ambitious. Indeed, Sools et al. (2017) found that men and women spoke of two different kinds of ambition with salary, prestige and status being one type, often viewed as negative ambition, and personal growth, learning and self-realization being the other, often viewed as positive ambition. Sools et al (2007)

also found that ambition must be demonstrated rather than claimed by way of the goals you set for yourself. The "doing of ambition" was particularly linked to the number of hours working leading to a belief that part-time workers and women who had children and often had to shape their work to suit their parental responsibilities were not seen as ambitious. This belief, however, did not include fathers suggesting that only certain goals, predominately masculine goals, are accepted as ambitious. Because of this, women are acculturated into defining ambition differently than men and thus choosing different goals (Fels, 2004). However, it demonstrates that using specific goals as a way of defining ambition can be biased if it does not take into account that a person's goals are influenced by social norms and gender expectations.

Ambition as a personality trait. Rather than seeing ambition as an object expressing specific goals, other researchers believe that ambition is something you are determined by individual preferences and personality and is thus seen as something stable and fixed that you either have or do not have (Day & Allen, 2004; Judge & Kammeyer-Mueller, 2012; Larimer et al., 2006). Judge and Kammeyer-Mueller (2012) analysed data from the Terman life-cycle study which is a seven-decade longitudinal study started in 1922 examining high-ability children (i.e. children that scored high on IQ tests) from California. Judge and Kammeyer-Mueller were able to subtract data on 717 individuals. They found that the level of ambition was dependent on personality traits such as conscientiousness, extraversion and neuroticism as well as mental ability, and that ambition is linked to parents' occupational prestige. Because of this, Judge and Kammeyer-Mueller defined ambition to be a middle-trait, that is, a trait that is stable and consistent over time, but at the same time, the manifestation of the trait is contextual. Judge and Kammeyer-Mueller (2012) believe that ambition is a person's habitual striving for success within education, job prestige and income and that an ambitious

person is a person who seeks tangible outcomes for their efforts (pay rise, promotion, titles, awards etc.). However, the study shows no clear distinction between whether or not ambition is learned or inherited.

Equally, in their study, Ashby and Schoon (2010) view challenge as being similar to prestige and wealth. The fact that the researchers hold this view of the word challenge indicates that the study may lack construct validity as the participants may have interpreted the word challenge as meaning mastery or learning which is different from the desire for wealth and prestige. The limitation of Ashby and Schoon's study is the fact that they used already collected data that was not specifically designed to explore ambition. Perhaps what Ashby and Schoon found was not related to ambition but instead to motives for pursuing a goal. McClelland (1961) formulated the Learned Needs Theory in which he identified three motivators that he believed all people have: a need for achievement, a need for affiliation, and a need for power. But even though the needs may be somewhat inherent to all people regardless of age, gender, or culture, one of these motivators will be a dominant motivating driver (McClelland, 1964). And this dominant motivator is largely dependent on our culture and life experiences. Achievers like to solve problems and achieve goals. Those with a strong need for affiliation do not like to stand out or take risks, and they value relationships above anything else. Those with a strong power motivator like to control others and be in charge. However, which of these motivators is linked to ambition depends on how one defines ambition and which approach is used. If ambition is believed to be about specific goals, the need for achievement would be a strong predictor. If ambition is approached from the more traditional Christian view of power, the need for power would be a strong predictor. However, using the approach of Johnson et al (2017), all three motivators could be predictors of ambition.

Ambition as learned behaviour. What McClelland (1961) directly states and Judge and Kammeyer-Mueller's (2012) findings indicate is that ambition is or has a learned behaviour component. In his work, Demerath (2000; 2009) found cultural differences in attitudes toward educational achievements between American high schoolers and Papua New Guinean high schoolers. To Americans, outperforming one's classmates was the goal for both parents and students. However, this often led to highly competitive or even cheating behaviour as well as signs of mental stress in an attempt to be the best (Demerath, 2009). For Papua New Guinean students, it was the opposite. They saw school as a non-competitive environment where it was important to succeed collectively, not individually (Demerath, 2000). Succeeding at the expense of others was seen as a form of vanity and betrayal of morals and New Guinean identity. These differences illustrate the cultural influence on how we interpret ambitious behaviour and what we believe to be a behavioural expression of ambition.

In many Western societies being highly competitive is often equalled to ambition, however, research suggests that there is no link between ambition and competitive behaviour (Dreber et al, 2011; Kohn, 1992). Culture and social norms play a huge role in competitive behaviour. Booth and Nolen (2011) found that girls from single-sex schools develop a culture that is similar to boys when it comes to competition. Girls from these schools behaved more like boys and were very competitive even when assigned to mixed-sex experimental groups. Girls from co-educational schools were, on the other hand, less likely to enter competitions. Similar results were found by Sutter and Glätzle-Rützler (2015) who tested more than 1,000 children from age 3 to 15 and their willingness to compete. They found a strong social learning component creating gender gaps in competitive behaviour from an early age: when boys compete with others regardless of gender, they become more

competitive, however, when girls compete with boys their willingness to compete declines, but not when competing with only girls (Sutter & Glätzle-Rützler, 2015).

Apart from competitiveness, ambition is often conflated with other behavioural traits such as self-efficacy (Harman & Sealy, 2017), self-control (Moffitt et al, 2011; 2013), grit (Duckworth et al 2007), and motivation (Pettigrove, 2007). Harman and Sealy (2017) concluded that self-efficacy enables ambition; that is, if you have no or low self-efficacy, you have no or low ambition. Moffitt and his team (2011; 2013) found solid evidence that those individuals that achieved "a successful life" were those who scored high levels of self-control, already as a child. A successful life was defined to be a life with relatively stable relationships, a relatively stable financial situation, educational achievement, no criminal behaviour, low or no substance abuse, and stable employment. According to Duckworth grit is closely related to self-control and conscientiousness, but with differences. Duckworth et al (2007) define grit as perseverance and passion for long-term goals which overlap with the achievement (industriousness) of conscientiousness and differ in the short-term intensity. Through her research, Duckworth has shown that grit relates to performance and success in many areas, especially academic performance. Most importantly, Duckworth considers grit to be a skill that can be learned, trained and changed. And finally, Pettigrove (2007) studied the link between motivation and ambition from a philosophical perspective and how society views ambition. He concluded that ambition cannot exist without motivation and that motivation can be either intrinsic, extrinsic or both. Motivation may be driven by the goodness of the object itself (wanting more or to be a better person) or by a fear of failure (losing what you have or being a failure as a person).

If ambition is considered a learned behaviour, the literature indicates that it has a close relationship with certain behavioural traits such as self-efficacy and grit, but we do not know how these are related to ambition in adolescents.

Social norms, gender stereotypes and ambition

Social norms, gender expectations, and gender stereotypes influence who we see as ambitious and in what way: men wanting power is accepted, women wanting power is seen as suspicious so not all goals are equally seen as acceptable ambitions for different genders. Thus, the dual perception of ambition as being both a virtue and a vice has a gendered bias. As ambition historically has been related to politics, career and education, women were not seen as ambitious as they were not part of these domains. It may also explain why ambition is often defined in very masculine terms (Fels, 2004; 2005) as the concept was unfolded by men, for men, in a man's world. For most of history, women were not raised to be ambitious or rewarded for ambitious behaviour. Social norms, through most of time, and to some extent still prevails, women's role was to nurture and support men and family (Rhode, 2021). The negative version of ambition was used to prevent women from entering men's world, and today many women still talk about ambition as selfish, self-aggrandizement, and egotistic (Fels, 2004; 2005). However, we are seeing a change in that Millennial women are just as likely to describe themselves as ambitious as men (Rhode, 2021).

Gender socialization begins early. Parental expectations for good behaviour are often higher for daughters than sons. This leads to more girls having higher educational and occupational aspirations than boys (Mello, 2008). Girls are more likely to get higher grades than boys and more women than men achieve university degrees (Nielsen & Sørensen, 2004). Boys are seen as less ambitious when it comes to a school setting and this is used as

an explanation as to why boys achieve lower grades. However, only 120 years ago, teachers and parents believed the opposite to be true; that girls did not belong in an educational setting and that boys were "designed" for education due to their gender as the quote from the headmaster of a Danish high school said in 1906 when the first two female students graduated (Lund, 2017, p. 4):

> *"By letting in girls, the seriousness of school and learning has declined. Some of our best students might be girls, but generally girls lack discipline, they are too lively and are not capable of following rules."*
>
> Headmaster at Aarhus Katedralskole, 1906.

Today, we find the same views, only, this time it is about boys, not girls (Wind, 2022). This change in societal perception of boys' and girls' ambition in an educational context shows that how we define and perceive ambition not only changes over time but is also heavily influenced by gender stereotypes in different contexts. In contrast to the educational context, boys still grow up believing that they have more career options than girls, and both girls and boys believe that there are jobs at which men are better (Shapiro et al, 2012). A recent Danish survey (Epinion, 2022) found that high school students view educational programs and jobs as being either highly masculine (such as carpenter, engineer), highly feminine (such as nurse, psychologist) or gender-neutral (such as cook, teacher) and that this influences their educational choices. Women increasingly choose not to enter highly masculine educations as they fear they will be negatively received leading women to believe they have fewer career choices than men (Epinion, 2022).

If our understanding of ambition is susceptible to societal changes, and the roles of men and women change over time, we would expect that the gender stereotypes related to

ambition would also change. However, a meta-analysis from Eagly and colleagues (2019) shows that compared to 1974 women today are viewed as competent as men, but men are still viewed to be more ambitious than women. Myklebust (2019) found similar results in young Norwegian students in which women were deemed just as skilled as men in nautical education (a highly masculine profession), but less ambitious as the female students were expected to also care for their future children and family in line with the traditional gender stereotype of women being responsible for the home.

Regardless of whether ambition is viewed as an object, as a personality trait or as purely learned behaviour, the influence of culture, social norms and gender stereotypes cannot be denied and greatly shapes what we understand to be ambition.

Theoretical framework

Goal-setting and Goal orientation theory

As ambition entails some kind of pursuit towards an object or desired future, having one or more goals is often an integrated part of ambition. A goal is an imagined future outcome that can be either an object, a behaviour, a feeling, or a state of mind (Deckers, 2018). A goal that is perceived to be obtainable and desirable activates a person's motivation and directs his or her behaviour. The future outcome becomes a goal once the person has decided to actively pursue it (Deckers, 2018). Thus, the presence of internal drive combined with the subjective perception of a goal as having value, are key elements of ambition.

The theoretical approach in studies on ambition centres around motivation. When ambition is defined as a specific goal, theories within goal-setting are predominately used, whereas when ambition is defined as a behaviour, theories within goal orientation are used.

In the 1960s, Edwin Locke put forward the goal-setting theory of motivation. This theory states that goal setting is essentially linked to task performance (Locke & Latham, 2006). It states that specific and challenging goals along with appropriate feedback contribute to higher and better task performance, and is primarily used in a work setting. The theory asserts a linear relationship between goal difficulty and performance provided that the person has the necessary skills and knowledge which is why the theory in recent decades has come to include aspects of self-efficacy (Ford, 1992). The core of the goal-setting theory is that people are motivated when they have clearly set goals that are *specific, challenging, and acceptable* combined with a belief that you have or are able to acquire the skills and knowledge needed to achieve the goal (Deckers, 2018).

Goal setting theory was developed in an organisational context to examine performance and motivation among employees and has found substantial theoretical end empirical support (Deckers, 2018; Ford, 1992). However, because it was developed in an organisational work context, the theoretical framework may not be directly applicable to other contexts such as education or personal life, especially when using predefined goals. Another weakness of the goal-setting theory is that it is based on the assumptions of individualistic cultures. As such, the basic recommendation of the theory for *goal characteristics* is that goals should be specific and challenging, and for *goal-setting methodology* is that goals should be set participatively so that employees accept the goals and feel committed to them (Locke & Latham, 2006). However, due to the cultural assumptions of the goal-setting theory, the theory has limitations cross-culturally. In a variety of countries such as those in the Caribbean, Australia, Israel, and Sri Lanka, specific and challenging goals are found to be more effective in increasing performance compared with statements such as 'do your best' (Punnett, 2004). However, it has been suggested that

specific and challenging goals may not be welcome in collectivistic and feminine cultures, because such goals have the potential to increase competition in the workplace (Punnett, 2004). Even though the Danish culture is highly individualistic (Hofstede Insights, 2023), the culture is also highly feminine in which workplace competition is often frowned upon or viewed as highly negative (Adler & Gundersen, 2007; Hofstede Insights, 2023).

The aspects of goal-setting theory with its focus on challenging goals and self-efficacy as driver for behaviour and performance is certainly useful when exploring ambition. But due to the limitations of the goal-setting theory, I find it useful to incorporate the approach found in goal orientation theory. Indeed, Seijts et al (2004) also advocate for the integration of goal setting and goal orientation theory based on their experiment showing that a specific challenging performance goal (as used in goal setting theory) could not outperform more vague goals or learning goals. For more complex goals, high performance goals are not prudent, that is, the goal itself is not always a motivating factor rather there can be a variety of motives to pursue a goal.

Goal orientation theory is classified as a social-cognitive theory of motivation (Ford, 1992). Such theories are based on how an individual's thoughts are influenced by the social context, and how this helps to shape the individual's motivation. Goal orientation theory is based on how motivation is formed on the basis of feelings and thoughts, which is then important for the learning process and what achievements one has (Roberts, 2012). This is also seen in the two pillars of goal orientation theory: The first is that visible action and cognitive activity are rational and intentional. The second is that the individual can aim to develop or demonstrate competence (Nicholls, 1984). In goal orientation theory a distinction is made between two types of goals: 1) mastery goals and 2) performance goals. People have a certain degree of both of these goal types, but one will typically be the dominant one.

Mastery goals are goals where development and learning are in focus. An individual with dominant mastery goals wants more competence in order to be able to master or understand something new. Performance goals are goals that are not about learning. For an individual with dominant performance goals, how they are perceived by others is more important than what they actually learn. They either seek positive feedback on their performance, or they want to avoid receiving negative feedback on their lack of competence (Dweck, 1986; Nicholls, 1984).

Pless et al (2015) believe that the motive behind goal orientation is essential and that motivation has several avenues that exist simultaneously. But unlike Dweck and Nicholls who only operate with two types of goal orientations, Pless et al (2015) propose that several types of orientations co-exist and that these orientations can be both individualistic, social and contextual in young students. Pless et al collected data from 1,150 9th grade students in Denmark through questionnaires, observations of classes in 6 schools, 25 SnapLogs interviews, 6 group interviews with 30 students, 4 group interviews and 2 individual interviews with teachers, 6 informal interviews with teachers and school leaders, and 58 essays about motivation from the students of the 6 case schools. They found that young students have five different motivation orientations: performance motivation, knowledge motivation, mastery motivation, relations motivation, and involvement motivation (Pless et al 2015). They also found that motivation can be affected by the social context: if a student is primarily knowledge motivated and the social context does not support that e.g. by focusing on grades only or not providing opportunities to access and discover knowledge, the student experiences a decrease in motivation and may abandon the goal altogether (Pless et al, 2015).

The goal orientation theory supplements the goal setting theory with its focus on the motives for pursuing a goal and how the context can affect peoples' motives. Where goal setting theory is focused on setting a challenging goal, goal orientation theory complements by broadening the type of goal that a person selects and that the goal is more likely to be long-term.

Sandwiched between goal-setting theory and goal orientation theory, we find expectancy-value theory which has elements of both theories. Expectancy-value theory was developed by Atkinson in 1964 and was further developed and used within educational psychology by Eccles and most recently, Wigfield (Atkinson, 1964; Eccles, 1984; Wigfield & Eccles, 2000). Expectancy-value theory measures motivation based on the expectancy beliefs and value beliefs a person has about a specific task or goal. Expectancy beliefs are the extent to which a person feels that they can be successful in reaching their goal, including their own beliefs and abilities similar to self-efficacy beliefs (Ford, 1992). The expectancy-value theory thus has strong resemblance to goal-setting theory of defining specific tasks that will lead to the attainment of specific goals.

However, according to expectancy-value theorists, believing that you can succeed with a goal is not enough. I must also expect some immediate or future personal gain or value from achieving the goal. Value beliefs are based on the level of importance the person places on completing the task or reaching the goal (Wigfield et al, 2009). Goal value is based on its importance, intrinsic enjoyment, and usefulness minus the cost of attaining it which is closely related to goal orientation theory with its focus on intrinsic versus extrinsic motives for desiring a goal.

Although, the expectancy-value theory seems to be an obvious choice when examining ambition as it has elements of both goal-setting and goal orientation theory, the challenge of

using this theory in ambition research lays with the constraints of comparison. Klein (1991) found that value beliefs cannot be measured reliably without comparison of goals as value of a goal should be seen in a greater context of other related goals. Otherwise, the link between value and a specific goal will more likely always be positive or high. However, this would lead to the use of predefined goals in order for us to make this comparison. However, as we aim for an open approach to understanding adolescent ambition without using a predefined definition but rather explore the definition provided by the adolescents themselves, we find it more useful to be open to any type of goals (both specific and vague) as well as different types of motivation orientations in this thesis.

Social role theory and gender similarity hypothesis

Despite the focus on context and motives for pursuing a goal being central in goal orientation theory, the theory rarely takes into account the influence of social roles and gender stereotypes. To address this gap, inclusion of social role theory is sensible.

Social role theory pertains to gender differences and similarities in social behaviour (Eagly & Wood, 2016). The theory frames the differences observed between men and women as the result of a combined impact of socialization, gender stereotypes, gender roles, and physical differences that direct the behaviour of men and women (Eagly & Wood, 2016). Gender stereotypes and gender roles are key concepts in social role theory. Gender stereotypes, or beliefs about women and men, play a role in perpetuating the division of social roles. Expectations about gender roles or the behaviours expected from women and men influence people to adhere to gender stereotypes. Gender roles and gender stereotypes are learned and internalized through socialization, or the process wherein children learn which behaviours are considered to be appropriate or inappropriate in society. Adolescence

is a critical period in which gender attitudes and behaviours intensify and new gender roles emerge (John et al, 2017). It is also a period during which the negative outcomes of some gender norms begin to manifest such as believing that certain educations or jobs are mainly for one gender (Nielsen & Sørensen, 2004). As roles are cognitive schemas that are associated with specific goals and expectations that organize and guide individuals' perception and preferences, the social roles individuals assume affect their choice of goals and their motivation (Arieli et al, 2020).

Hyde (2005) agrees that social roles direct men's and women's behaviour, but she believes that social roles should always be considered within the context in which behaviour is observed as people only tend to follow social roles in social situations. For example, a number of studies show that men are much more helpful than women (Eagly & Crowley, 1986). However, meta-analyses showed that this was only the case where onlookers were present and participants were aware of it perpetuating the male social role of chivalry. When no onlookers were present, there were no differences in helpfulness between men and women (Eagly & Crowley, 1986). Based on her research, Hyde (2005; 2007) developed the gender similarities hypothesis that men and women are more alike than different in most aspects and that gender differences in research are more likely to be the result of context. The fact that the context can have such a strong influence on behaviour is important to observe in research, as the research context alone can drive gender differences. As we aim to explore possible gender differences in ambition, taking social roles and the influence of context into account is relevant for the interpretation and discussion of findings.

Research questions

In this thesis we aim to address four questions that the existing literature give rise to: 1) how do adolescents define and conceptualise ambition?, 2) how does context of job and education influence ambition levels in adolescents?, 3) is ambition and educational choices correlated?, and 4) are there gender differences in adolescent ambition?

These four questions are answered through five studies. Study 1 lays the foundation of our research through a qualitative approach investigating how adolescent boys and girls understand ambition and being ambitious, thus answering our first question. The definition provided by the students in Study 1 is then used as a way of measuring ambition levels in the following four studies. Study 2 examines gender differences in ambition when using this new definition of adolescent ambition. Study 2 also tests how ambition and behaviours found in Study 1 are related in a proposed model and whether we will find gender differences in this model. Study 2 takes a structural equation modelling approach outlining how behavioural traits such as grit and self-efficacy are related to ambition.

From the results of the two first studies, we can see that both boys and girls define ambition to be about goals (ambition as an object) and that behavioural traits (self-esteem, grit, goal-setting, and self-efficacy) are supporting factors but not the same as ambition. The findings in Study 1 indicate that ambition in adolescents needs to be viewed from both a goal-setting as well as a goal-orientation approach.

In Study 1 a majority of the girls expressed that they see themselves as highly ambitious, but less than half the boys see themselves as highly ambitious. In Study 2 we found no gender differences in ambition. This stark difference between Study 1 and 2 made us curious. Hyde (2005) suggests that the context in which a study takes place can create gender differences in outcomes. In Study 1 the students were interviewed at school in their classrooms. Considering that boys may be affected by negative stereotypes in an educational

setting, this may have prompted answers of low ambition. Study 2 was an online survey, so answers were given in many different contexts (school, home, while commuting etc.) which may explain why we did not find any gender differences. Study 3 was therefore used to test if ambition levels could be manipulated in different contexts (education and work) compared to a control group in an experiment. The results showed no gender difference between groups, however, within the group of boys, we found a negative influence of the educational context, and that this effect was moderated by gender role conformity so that the more conform to masculine ideals, the lower the score on ambition. The gender difference we found in ambition in Study 1 may therefore have been driven by sub-groups of boys affected by the presence of the researcher perpetuating masculine role expectations. Study 3 also supports the findings in Study 2; that when using a definition of ambition that is not tied to specific end-goals or specific behaviours, we are less likely to experience gender differences.

Finally, in Studies 4 and 5, we examine the correlation between educational choices and ambition levels among high school students and older students enrolled in higher education. The definition found in Study 1 described ambition to be about one or more goals, but the goal can be anything. As educational choices are predominately used as indicators of adolescent ambition, we wanted to see if ambition is correlated with length or type of education. We found no correlation between ambition and educational choices or length of education in either group of students. We also found no gender differences. Again, this underlines the importance of approaching ambition from both a goal-setting and a goal-orientation perspective. Rather than using specific end-goals as indicator of ambition, the distance from your starting point to your goal and the desire for the goal is a better indicator of ambition in adolescents.

Methodology

Across the five studies, the methodology consists of a mixture of qualitative, quantitative and experimental methods to gain a better understating of adolescent ambition. For Study 1 we used semi-structured written interviews to gain in-depth information about perceptions and attitudes about the concept of ambition. We used this method to avoid directing or influencing the students' answers and to achieve as rich information as possible. A more detailed explanation of the method is presented in chapter 2 and chapter 3.

In Study 2 we used structural equation modelling (SEM) which is a multivariate method used to test hypotheses regarding the influences among interacting variables. SEM is advantageous when you need to examine models that consist of several latent factors that may have an interdependent effect. A SEM model is a hypothesized model composed of causal and correlational assumptions based on theory. As we examined the relationship between behavioural factors (grit, goal-setting, self-efficacy, self-esteem) and ambition, several theories support the assumption that there may be a causal link between these behaviours and ambition as well as them being interdependently correlated.

For Study 3 we wanted to see if different contexts cause differences in ambition levels and, thus, we applied an experimental approach to specifically examine causality. Studies 4 and 5, on the other hand, were both conducted as moderation analyses and partial correlation analyses to test possible associations between educational choice and ambition. It was not possible to conduct the analyses as experiments to explore causality as it would require a longitudinal study design due to the nature of the educational choice process, which was not possible for this thesis.

Significance of study

This research will provide new insights into adolescent ambition and supplement the ambition literature in general. Specifically, this research will benefit the following:

Society – this research will broaden our understanding of what it means to be ambitious and help understand the life choices of younger generations and the impact of gender stereotypes on ambition, not just for girls, but also for boys.

Workplaces and organisations - traditional benefits such as high salary, upward career mobility and prestigious titles may not attract future generations. This research urges workplaces to consider a different approach to defining ambitious career paths that implement more than only traditional work goals.

Schools and educational institutions – this research can guide schools and educational institutions to become more aware of the effect of gender stereotypes in an educational setting and what effect it can have on ambition in young students. The result of this research will also provide valuable insight into whether educational choices are a good indicator of ambition.

Teachers – this research may convince teachers to adopt a less gender-biased approach to ambition and explore how they can focus on skills such as goal-setting ability, self-efficacy, and grit in order to further students' ambition.

Academia and future researchers – this research encourage future researchers to approach ambition from a triangle of goal setting, goal orientation, and gender stereotypes rather than solely employing specific end-goals. Furthermore, this research advises academia to reconsider traditional definitions and conceptualisations of ambition and to observe that conceptualisations of ambition may change over time.

Summary of chapters

The following chapters 2 to 5 have been written as independent, stand-alone papers suitable for publication which is why we have included abstracts at the beginning of each chapter as well as literature reviews focusing on specific topics relevant to each study.

Chapter 2 describes Studies 1 and 2. Chapter 3 consists of a published paper with a fellow PhD student. We have both utilised Google Docs in our qualitative studies, only from two different positions. Our approach and the experiences we have gained from using Google Docs as method are described and evaluated in Chapter 3. Although Chapter 3 is not specifically related to the aims of the research in this thesis, we have decided to include the paper as it provides a deeper understanding of the methodology used in Study 1. Finally, Chapter 4 describes Study 3, and Chapter 5 describes Studies 4 and 5. In the final Chapter 6, we have integrated the findings across Studies 1 through 5 to answer the research aims of this thesis and highlight in which ways they are important in theoretical and practical terms.

Contribution of authors to the papers

Chapter 2 (Study 1 and 2) has been written up as one paper. The paper is under review. Sabrina Spangsdorf conceived and designed the study with the help of Michelle Ryan and Teri Kirby. Sabrina Spangsdorf collected data, performed the analysis and wrote the first draft of the paper. Michelle Ryan, Teri Kirby, and Renata Bongiorno provided feedback on analysis and write-up of results. All authors read and provided feedback on structure, grammar, and language of the paper.

Chapter 3 has been written as a stand-alone methods paper describing the use of Google Docs as used in chapter 2 (Study 1) in this thesis. The paper has been published. It was written with fellow PhD student Victoria Opara. Sabrina Spangsdorf and Victoria Opara

share joint co-authorship of the paper. Michelle Ryan provided feedback on structure and content of the paper.

Chapter 4 has been written up as a paper of Study 3. The paper has been published. Sabrina Spangsdorf conceived and designed the study with the help of Michelle Ryan and Teri Kirby. Sabrina Spangsdorf collected data, performed the analysis and wrote the first draft of the paper. Teri Kirby provided feedback on analysis and write-up of results. Michelle Ryan provided feedback on structure and introduction.

Chapter 5 has been written up as a paper combining Study 4 and 5. The paper is under review. Sabrina Spangsdorf conceived and designed the study, collected data, performed the analysis and wrote the first draft of the paper. Michelle Ryan provided feedback on structure, content, language, and analysis.

Publications in this thesis

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CHAPTER 2.
EXPLORING THE DEFINITION OF ADOLESCENT AMBITION

Abstract

Studies on gender differences in ambition show conflicting results. Recent qualitative studies suggest this is due to the use of stereotypical masculine notions of ambition and success based on specific end-goals. In addition, studies on adolescent ambition are greatly lacking. We address these gaps by exploring how Danish adolescents view ambition. We combine a qualitative interview study (n = 30 (47% girls)) with a cross-sectional survey study (n = 643 (49.6% girls)) to better understand how adolescents define and conceptualise ambition, and to explore possible gender differences in ambition. Our template analysis suggest that boys and girls share similar definitions of ambition that are not tied to specific contexts, goals or perceptions of success, and that behavioural traits such as self-esteem, grit, goal-setting, and self-efficacy are needed for the expression of ambition. Structural equation modelling confirmed that goal-setting, grit, self-esteem, and self-efficacy have a significant positive relationship with ambition. Our analysis showed no gender differences in ambition when using the definition provided by the adolescents. Our results support the need for a broader approach to ambition, especially when addressing adolescents, and understanding of the impact of gender stereotypes on ambition.

Keywords: ambition, success, adolescents, grit, self-efficacy, goal-setting

Introduction

Traditionally, ambition has been defined as the desire for specific end-goals such as entering elite universities (Jerrim et al, 2020), aiming for high grades (Duckworth & Seligman, 2006), level of managerial intentions (van Vianen & Keizer, 1996), or desire for promotion (Strovik & Schøne, 2008), or as being the expression of certain behavioural traits such as competitiveness or desire for monetary success (e.g. Hogan & Hogan, 1995; Judge & Kammeyer-Mueller, 2012). However, the studies on ambition have one thing in common: they are all based on what can be classified as stereotypical masculine notions of ambition and success in which ambition is seen as a desire for upward educational or career mobility combined with a desire for tangible outcomes such as wealth, status or prestige. This is believed to explain why the majority of the studies find gender differences in ambition as choices of goals and behaviour is often influenced by gender expectations and gender roles (Fels, 2004; 2005; Perez, 2021).

The latest qualitative research on ambition, however, suggests that a new way of perceiving ambition is emerging. Harman and Sealy (2017) and Sools et al (2007) found evidence that the traditional approach to ambition is not appropriate as it is based on biased notions of ambition and success and therefore carry inherent stereotypes that do not necessarily represent the way participants define and conceptualise ambition. Both Harman and Sealy (2017) and Sools et al (2007) studied young adult employees and we are therefore interested in exploring whether this new way of perceiving ambition is also prevalent in high school adolescents who are on the verge of making choices about their future educational and occupational paths. Our first question is therefore: How do adolescents define and conceptualise ambition?

Second, the studies from Harman and Sealy (2017) and Sools et al (2007) are both qualitative and their findings have not been examined quantitatively to see if their results can be generalised to a larger group of participants. Harman and Sealy (2017) only interviewed women, so we have no knowledge of whether their definition of ambition can be extended to men. Finally, the two interview studies were both carried out at professional workplaces. As such, we cannot directly extent the findings to adolescents who are still in school and have not yet entered the labour market. We have thus included a second study in which we will examine possible gender differences in ambition based on the definition we find in our first study. Our second question is therefore: Will we find gender differences in ambition when using a definition provided by adolescents?

Ambition defined as specific end-goals

Ambition is most often defined and measured using predefined end-goals involving linear, hierarchical progression typically related to work and career. But these results utilise a variety of definitions such as the willingness to work full-time and the type of work preferred (Hakim, 2000; Dick & Hyde, 2006), the desire for promotion and professional future (Ashby & Schoon, 2010), the desire for top universities (Jerrim et al, 2020), the level of grades (Duckworth & Seligman, 2006) or managerial intentions (van Vianen & Keizer, 1996). However, if studies on ambition primarily look at specific end-goals as determinates of ambition (e.g., education, money, leadership roles), men are more likely to be seen as ambitious (Eagly & Steffen, 1984; Eagly & Wood, 2012).

Social norms and gender stereotypes often lead men and women to choose so-called gender-appropriate goals (Nielsen & Sørensen, 2004). Eagly and colleagues' social role theory suggests that gender stereotypes are informed by our surrounding social contexts

(Eagly & Steffen, 1984; Eagly & Wood, 2012). We, therefore, tend to believe that women have communal qualities, such as being nice, warm, and nurturing, whereas men tend to have agentic qualities, such as being competitive, ambitious, powerful, and independent. People often internalize these societal expectations and develop stereotype-consistent goals. Women tend to adopt more communal goals, such as working with people or caring for others, whereas men tend to adopt more agentic goals, such as power, earning a high income, and leadership roles (Eagly et al, 2019; Eagly & Wood, 2012).

According to Eagly and her colleagues culturally shared gender roles facilitate gender differences and similarities in social behaviour, cognition, and choices (Eagly et al, 2019; Eagly & Wood, 2012). This may in turn not only influence the goals that men and women choose to pursue but also influence their behaviour to meet gender stereotypes and social role expectations which may lead to women behaving less ambitiously as this is often viewed as a very masculine trait.

As goals can be influenced by social roles and gender stereotypes, we argue that using specific end-goals such as high levels of income, desire for status, or job titles as indicators of ambition may not provide a complete picture of ambition.

Ambition defined as certain behaviours

Apart from measuring ambition through specific goals, ambition is also often measured based on certain behaviours. As such, competitive behaviour is often interpreted as being the same as ambition. Consequently, gender differences in competitiveness are often used to explain why women are less ambitious than men (Booth & Nolen, 2012; Gneezy et al, 2009; Sutter & Rützler, 2010). According to Kohn (1992), research does not, however, demonstrate a clear link between competition and ambition, even across such

varied fields such as education, sports, performing arts, and psychology. On the contrary, Kohn (1992) found that ambition and competition are not that strongly related. Indeed, some people engage in competition because they are motivated to win over others, however, equally many people, both men and women, engage in competition to improve themselves or to test their level of effort (Franken & Brown, 1995). The fact that ambition is often framed as competitiveness may be perpetuating existing gender stereotypes rather than being viewed without bias.

Additionally, ambition is often defined as being the equivalent to desire for success (e.g. Hogan & Hogan, 1995: Judge & Kammeyer-Mueller, 2012). Individuals that express a desire for success are thus viewed as ambitious. However, using desire for success as a way of defining ambition hold a number of inherent problems. First, the widespread societal definition of success is about objective indicators such as money, status, or promotion (e.g. Elchardus & Smits, 2008; Larimer et al, 2006; O'Leary, 1997; van Vianen, 1999). Thus, success is defined as the attainment of wealth, prosperity, fame, or social status or an individual that accomplishes goals that lead to this kind of success. If ambition is about setting goals that will lead to success and success is defined to be about money, power, and prestige, then those choosing goals in line with this definition of success are more likely to be seen as ambitious than those who chose other types of goals. However, this approach may exclude those who desire other end-goals.

Second, in the context of gender, young women may perceive certain objective measures of success such as certain types of education or future job positions as less accessible and therefore perceive these goals as less valuable or important (Brockman et al, 2018; Gino et al, 2015). Indeed, evidence suggests that men and women express different types of ambition: stereotypically masculine ambition is premised on power, money, and

rank, while stereotypically feminine ambition is premised on mastery, challenge, and personal development (Verstraeten, 2017). Similarly, Dyke and Murphy (2006) demonstrated that women tend to define success in terms of the balance between career and personal growth and maintaining meaningful relationships (self-referent success), whereas men define success more often in materialistic terms (objective success). Thus, while women may, in some circumstances, be seen as less ambitious than men; this may be because they adhere to a type of ambition premised on a different perception of success or because social norms and gender expectations may dictate how women are allowed to express ambition. We argue that defining ambition as certain behaviours that are stereotypically masculine only captures some aspects of ambition or reflect ambition in selected groups.

New approach to the definition of ambition

In their study, Sools et al. (2007) interviewed 17 current and former male and female managers of a Dutch company. They found that men and women spoke of two different kinds of ambition with salary, prestige, promotion, and status being one type, viewed as negative ambition, and personal growth, learning, and self-realization being the other, viewed as positive ambition. Both men and women distanced themselves from the negative version of ambition but embraced the positive version. These findings indicate that ambition is about more than wealth, prestige and status.

In a similar line, Harman and Sealy (2017) interviewed 20 young British women in a large service organisation and found that ambition in these women was not about specific end-goals but rather a drive to succeed at something they valued or defined as successful. Ambition was also not just related to the work domain but extended into all domains which

suggest that the desire for promotion and power only represent a small part of ambition. According to Harman and Sealy, ambition should instead be redefined as *"an internal drive towards a subjective form of success"* (p. 382, Harman & Sealy, 2017). Their findings indicate that ambition is not necessarily about specific end-goals, upward career mobility, or societally defined success.

These two studies provide a fundamental change in how we approach ambition as concept in research. Apart from Sools et al (2007) and Harman and Sealy (2017), previous studies on ambition have not explored how different groups of participants define and conceptualise ambition. Rather they have utilised existing definitions or definitions constructed by the researchers. Sools et al (2007) and Harman and Sealy (2017) are among the first studies to qualitatively understand how ambition is perceived by the study participants. Though, to our knowledge, no studies have explored how adolescents define and conceptualise ambition, and our research goal is to address this lacuna.

The current research

Taken together, we argue for a need to explore adolescent ambition from a qualitative perspective and with a broader approach to goals. We examine the complex ways in which adolescent ambition might be gendered in two studies; (1) an exploratory study using semi-structured online written interviews aiming to provide a definition of adolescent ambition to be used in our second study as well as understanding the nature of ambition from the point of view of adolescents, and (2) a survey study examining gender differences in ambition. To address the gap in the ambition literature, we have decided not to operate with a pre-defined notion of ambition or a specific context beforehand. The purpose of our first study is rather to achieve a definition that will guide our second study. We are curious to learn how

adolescents will define ambition when no other framework is given such as negative or positive connotations, specific end-goals, pre-defined notions of success, or specific contexts.

Study 1

The purpose of Study 1 is to gain insights into adolescents' thoughts on ambition. Due to the nature of our research question and the need for studying ambition from a broader perspective, we have chosen an exploratory approach using semi-structured interviews. According to Yin (1994), an exploratory phenomenological approach is a valuable means by which to seek new insights about a phenomenon or construct that is not clearly defined and where it is relevant to explore personal experiences to determine if there are shared meanings among respondents. This is appropriate as we do not seek to test hypotheses, but instead to clarify concepts and gather insights.

Method

Participants

Participants were 30 Danish high school students from two different high schools. Of these 47% were girls, 53% were boys. Age range was between 14 to 18 years (M = 15.8, SD = 1.28). The schools were selected as they have a mixture of students from both urban and rural areas and from a broad range of socio-economic backgrounds. All schools were public and co-ed.

Procedure

The data collection procedure was approved by the Psychology Ethics Committee at Exeter University before data collection. The study consisted of individual semi-structured online written interviews. Each school selected one class that had approximately 50/50 boys and girls and that had students from different socio-economic backgrounds. Parents were informed and gave consent for students under the age of 18.

We gave the students an introduction to the study and an information sheet and a consent form. Students who did not wish to participate were free to opt out: 10 students decided not to participate. Students then provided informed and signed consent. No incentives were given. We purposely avoided the word ambition in the information sheet so as not to create expectations or have the students exchange views before the interviews. We informed students and parents that the study was about their views on goals, what motivates them, and their experiences.

Before the interviews, the students provided an email address to which they received a link to a real-time document-sharing website on the day of their interview (Opara et al, 2021). Each student only had access to their own document. We divided each class into four smaller groups of 7 participants each for the interviews. In each of the sessions, students sat in a classroom with their own laptops answering the questions in the online document. While the session involved a group of students completing the interview at the same time, each student completed it individually. The first author was in the room with the students to answer any questions. The first author had access to each online document throughout the interviews to probe responses for more information and explanation about their understanding of ambition (e.g. *Can you explain what you mean by having a big heart?*) similar to a traditional interview. This method was chosen for three reasons: 1) to avoid the students from being influenced by hearing or reading the answers from the other students as

ambition can be highly subjected to social influences (Sools et al, 2007), 2) to reduce the influence of researcher-interviewee power imbalance which can be a factor in face-to-face interviews (Opara et al, 2021), and 3) to reduce time and cost for transcribing the interviews. Each interview session lasted about 1½ -2 hours. After the interview, we debriefed the students in full and informed them about the real purpose of the study, that is, exploring the concept of ambition and success. Once the interviews were completed, we copied the text from each interview to a Word document and deleted the online document and the students' email addresses.

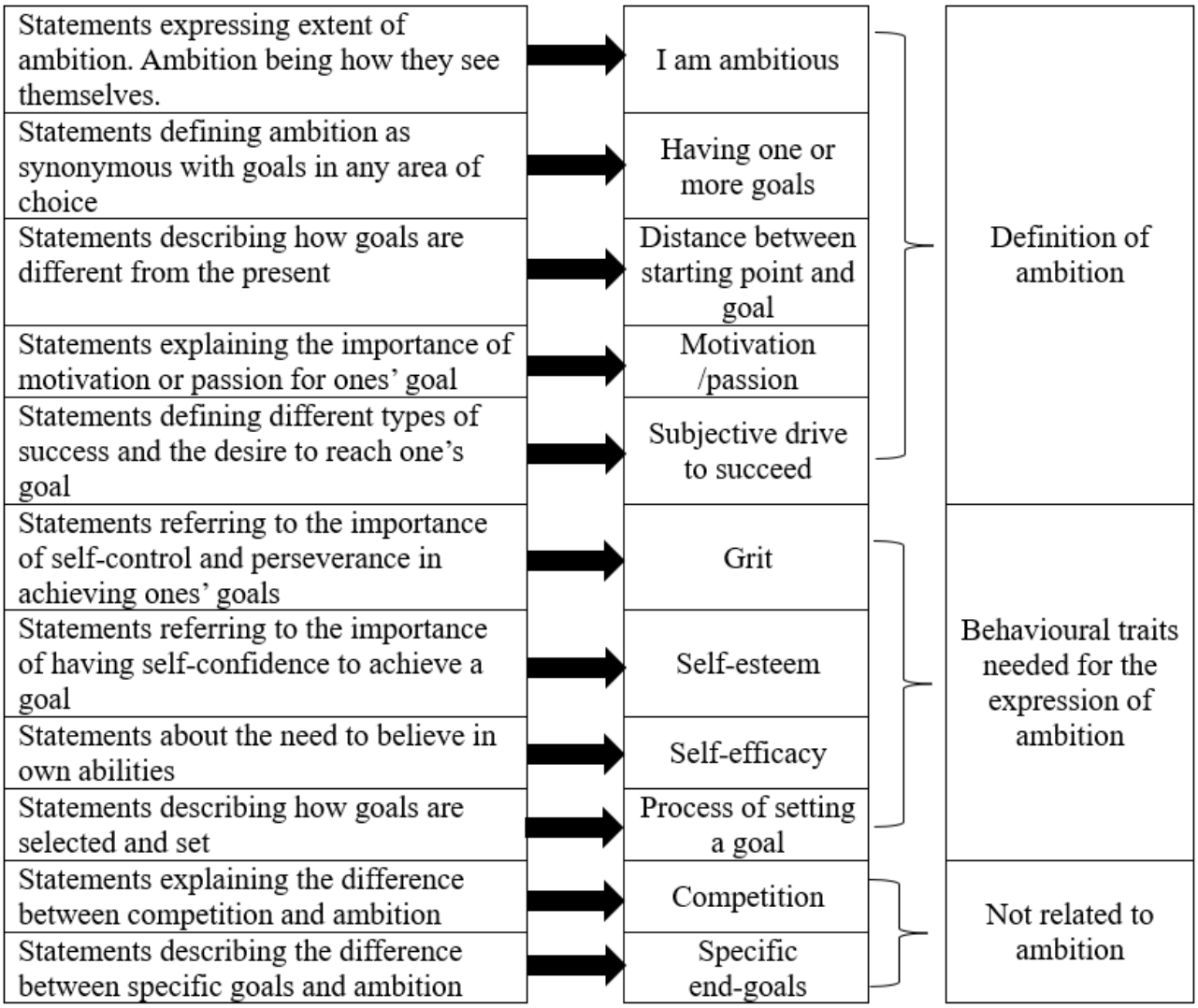
The interviews included 13 open-ended questions about what ambition means to them, what characterises an ambitious person, how they perceive success in relation to ambition, what they think about competition, perseverance, and having done well. The questions were centred around how adolescents conceptualise ambition, but, as the literature review shows, ambition is often conflated with desire for success, competition, and specific goals. We, therefore, included questions about these topics into the discussion about ambition. The students were also asked about age, gender, and school level. All questions were written in a non-gendered form (in Danish), so as not to make gender salient. As participants typed their responses in real-time, the interviews were available verbatim immediately.

Data analysis

We conducted the analysis using a template analysis which is a particular way of thematically analysing qualitative data, especially interviews (King, 2012). Template analysis involves the development of a coding 'template', which summarises themes identified by the researcher as important in a data set, and organises them in a meaningful

and useful manner. As recommend by King (2012), we first read all the interviews to become familiarised with the content. Second, we conducted a preliminary coding of the data. Template analysis often starts with some a priori themes, which identify themes strongly expected to be relevant to the analysis (King, 2012). The five a priori themes were: “Ambition”, “Success”, “Competition”, “Done well”, and “Perseverance”. These five themes were tentative and used as initially sorting of data. Based on the initial coding, we developed an initial coding template with identified sub-themes in each of the five main themes. All themes were then revised. We changed the five main themes according to the sub-themes and moved sub-themes to the main theme that had a better match. We then applied this initial template to the whole data set and modified themes after careful consideration of each transcript. Finally, a final template was defined and all transcripts were coded to it. This template served as the basis for our interpretation of the data (see Figure 1).

Figure 1: Final themes identified in analysis



Findings

Primary findings: Definition of ambition

Overall, the students defined ambition to be about having one or more goals that you are highly motivated to pursue (but the goal can be anything), that you must work hard to achieve, and that there has to be a certain distance from your starting point to your goal. Additionally, you must believe that you can achieve some kind of self-defined success with your goal, and that you see yourself as ambitious. We did not find any expressed gender

differences in how adolescent boys and girls define ambition, but we found gender differences when it comes to how they see themselves as ambitious or not.

Having a goal is essential, but the goal can be anything – it is the distance from your starting point that matters. Having a goal was viewed as an essential part of ambition. However, the students were in agreement that the type of goal is not important:

"Ambition is ambition, no matter what your goal is, but there can be differences in the level of what you want to achieve or what kind of success you want." (Girl, 16 years)

"I think ambition is very often the same thing. You can be ambitious about different types of goals. It is different from one person to another how you define what it means to be ambitious. Some peoples' ambition is to be rich or have a good education, other people just want to be happy with whatever they do." (Boy, 18 years)

*"You can be ambitious within different areas, but I don't think there is much difference in the word itself. Ambition is the same, whether you have goals for your family or for a job. Basically, it's the same". (*Girl, 17 years)

*"Ambition is the same, but the goal can be different. But you need to have a goal and be goal-oriented to be ambitious". (*Boy, 15 years)

The students also emphasized that although goals can be different, it is the distance from your starting point to your goal that determines ambition: the greater the distance, the more ambitious. In this aspect, the students emphasised the need for working hard to achieve your goals:

"You set yourself high goals. The goal should be higher than where you're at, to begin with; it should be difficult to reach your goal. If it is too easy to reach the goal, it's not ambitious enough." (Girl, 18 years)

"Ambition will always be about reaching something that is difficult to reach". (Boy, 18 years)

Having high goals and generally aiming high was equally described as being ambitious:

*"An ambitious person is one who sets a goal that is really difficult to reach but who doesn't give up despite people saying that the goal is impossible". (*Boy, 16 years)

"An ambitious person is one who have high goals". (Girl, 18 years)

"It's when you have a goal that is high and slightly out of reach, but you work hard and don't give up." (Boy, 15 years)

You must be motivated to achieve your goal. Ambition is not only about having a goal, but also about how motivated you are to pursue that goal. It is about having a goal and being passionate about it, reaching for something that you enjoy or love:

"It's a general feeling of happiness. You think about how you want to be or what you want to be later in life. You have set yourself some kind of goal. It makes you happy". (Boy, 15 years)

"*An ambitious person is very engaged in what he or she does and he or she is passionate about it. You love to do it".* (Girl, 18 years)

In relation to doing something you love, boys and girls primarily referred to different types of motives for ambition. Some motives can be classified as intrinsically driven by internal rewards such as enjoyment, interest, or desire. Other motives are more extrinsic in nature focusing on external rewards and accomplishments. Girls more often referred to role models, and being influenced or inspired by other people as part of their motivation:

"When you are ambitious you work the extra hours for that little extra pay. You work hard and you don't give up, even when faced with a problem – then you find a solution, a way around it". (Boy, 15 years)

"To me, it's about making my dad proud. I have to exceed him, then I know I have made the right choices". (Boy, 15 years)

"Often you are affected by the people around you. If they are not as ambitious as you, you lose your motivation to be ambitious". (Girl, 14 years)

"*An ambitious person could be my father. He has the ambition of wanting the best for his family. He always reaches new goals and does more than expected. He works hard to make money so that we all can go on vacation and live a happy life. I want to be like him*". (Girl, 15 years)

"I am very much inspired by a youtuber. She's one of the most famous youtubers in Denmark. She always makes people smile and she so kind. I like that. That's a good way of being ambitious". (Girl, 17 years).

Interestingly, the students did not equate competition with ambition, but found competition to be a motivational tool that can be used to ignite your motivation in the pursuit of a goal when trying to overcome obstacles but not essential for ambition. Generally, competition was considered by girls and boys to be a situational element that can spur your motivation on your path towards success, but not as a prerequisite:

"You can be ambitious without competing, and competitive without being ambitious. They don't necessarily have anything to do with each other". (Girl, 16 years)

"To have success some people might think you need to compete. To compete for a promotion. But really is just a motivating factor, nothing more". (Boy, 15 years)

"Competition can be a way to achieve success, but it's not the same as ambition". (Boy, 17 years)

Strive for some kind of success. Both boys and girls spoke of the desire for success as an important element in ambition. Believing that you can achieve some kind of success is linked to reaching your goal. However, the students also made it clear that how you define success is up to the individual:

"An ambitious person selects his goals; a successful person is one who has reached his goals." (Boy, 16 years)

"Personally, I think you will have achieved success when you have reached a goal that you've had for a long time." (Boy, 16 years)

"Definitely, it's the desire that drives you. The desire to succeed, if you don't have that it's difficult to be ambitious." (Girl, 17 years)

"There are many forms of success. It is always personal how you see success, but you need that drive in ambition. It's an important part of ambition." (Girl, 15 years)

We found that boys and girls were very much aware of societal expectations of success in that objective, measurable success is used as the norm for measuring success,

what we have classified as objective success. At the same time, the students underlined that success criteria are not always based on what society defines as success, but that success is also defined by the individual based on one's starting point, what we have classified as subjective success. And, finally, the students describe success in terms of comparing oneself with other people, what we have classified as other-referent success:

"*The media plays a huge role in how we see success. Society says success is about having an important job or making a lot of money, but it's really up to the individual. For some, success is something completely different. Whatever makes you happy*." (Girl, 16 years)

"There are many kinds of success and I actually believe that success is doing something that you love and care about no matter what it is." (Boy, 15 years)

"There are many forms of success. It is always personal how you see success." (Girl, 17 years)

"Success can be about money, recognition, happiness, material things, the desire to do something, to change something, or to make a difference in the world. It can be about you or you can compare with other people." (Girl, 16 years)

When asked about their perception of success both boys and girls expressed similar views that success is defined by the individual and can be many different things. The girls in particular mentioned a large variety of examples of success such as wealth, education, good health, having a family, being a celebrity, being intelligent, being happy in life, and having good friends or relationships. In contrast, boys more often mentioned that two different kinds of success exist, societal success, that is success defined by society, and individual success, that is success defined by yourself. What was evident from the way the students spoke about success is that success is tied to how the individual views success as something either purely individual (subjective success) or societal (objective success). We found that both boys and girls link objective standards of wealth and career to success, but at the same time, we found that students of both genders valued subjective standards measuring their

success by their level of happiness, relationship with friends and family, or having a partner and having children.

"Success to me is when you have lots of money and have an expensive car, a big house and lots of fun stuff like a boat, great vehicles and lots of space to build the things you want." (Boy, 15 years)

"Financial success is one kind of success." (Boy, 17 years)

"You can be successful at school by getting good grades. You can be successful among friends if you're the most popular or the funniest. You can also be successful making music that people like or if you are a politician and you work for changes that benefit society." (Boy, 16 years)

"Success is having many followers or likes on social media. Or when you're being invited to parties, get good grades in school and have many friends." (Girl, 17 years)

"..there is professional success when you have a good job and make money or your business is doing well. And there is personal success like having children, and physical success if you want your body to look in a certain way. You can have success in one way but not necessarily in other ways." (Girl, 18 years)

Seeing myself as ambitious. Our final question pertaining to ambition was about whether or not the students would describe themselves as ambitious or not. When asked directly whether they would consider themselves ambitious and to what extent based on the definition the students provided in the interviews, 93% of the girls described themselves as highly ambitious compared to only 44% of the boys. Both boys and girls equated their level of ambition with having one or more goals:

"An ambitious person? I would say me. I have many high goals and things I want to do in life. I work hard for the things I want." (Girl, 18 years)

"Yes, highly ambitious. I have a lot of goals." (Girl, 18 years)

"Yes, very much so. I work hard and practice every day to reach my goals." (Girl, 16 years)

"I don't see myself as ambitious. I have never found a purpose or a goal that I really want to achieve. I just want to be me, be happy and take things as they come". (Boy, 18 years)

"NO!. I can have a goal one day, and the next day I have dropped that goal. I am really bad at staying focused." (Boy, 15 years)

Girls more often spoke about having many goals, though the number of goals did not seem to reflect whether they saw themselves as more or less ambitious. Boys more often did not see themselves as ambitious due to a lack of goals altogether. Some girls saw themselves as being ambitious in terms of education and school, others as being ambitious within their sport, and others as describing themselves as overall ambitious:

"I am ambitious when it comes to my dream in life. But I am not particularly ambitious at school, mostly as it doesn't interest me." (Boy, 17 years)

"I want to finish 9th grade, get into upper-secondary school and then university. I want to find me a job that I like, perhaps doctor." (Girl, 15 years)

"To be happy, to have a happy family, to get an education, to live a good life. There are loads of goals, I want to achieve." (Girl, 17 years)

"I want a good life, not necessarily long life, but enjoy it while I can and achieve something. I want people in my life that I love and avoid negative people. I want to feel satisfied and proud of my accomplishments. I don't want to regret anything when I die." (Girl, 17 years)

Secondary findings: Behavioural traits needed for the expression of ambition

Apart from the definition of ambition, the students also spoke about certain behavioural traits that are needed for the expression of ambition. These behavioural traits are not synonymous with ambition but are important drivers that seem to either coexist with ambition or are predictors of ambition. Both boys and girls agreed that the behavioural traits of grit, self-efficacy, self-esteem, and the process of goal-setting are needed for the expression of ambition. These are interesting findings that we will include into our second study.

Self-efficacy. Both boys and girls talked about the importance of believing that you are able to reach your goal and confidence in own abilities to maintain their ambition and conquer adversity:

"I once had difficulties learning German, so I practised everyday with the help from an app. I went from not even being able to speak German to getting the highest grades in written and verbal German. That's what you need to do when you're ambitious." (Girl, 18 years)

"You don't give up when things become difficult. You find a solution. You work hard. You believe in your abilities and yourself." (Boy, 18 years)

Goal-setting. The students also referred to the process of setting an ambitious goal. One thing is to have one or more goals, but the way you select your goals influence how ambitious you are. In this way, the students emphasized the characteristics of the goal or the process of setting a goal such as goal difficulty, overcoming obstacles, and working hard to reach the goal, and that these characteristics were more important than the specific end-goal:

*"Ambitious people don't give up on their values. They set themselves a goal and stick to it. Sometimes the goal might be unrealistic, but if you are ambitious enough and work hard, you will get it. Otherwise, it's just a dream". (*Girl, 15 years)

"Ambition is about having a goal. But ambitious people also make a plan how to reach that goal. The goal is always a long-term goal. If you don't make a plan, you're not really ambitious." (Girl, 18 years)

Grit. Implicit and explicit statements throughout the interviews reflected how the students found self-control in the form of grit, meaning having a long-term goal and sticking to the goal despite adversity, to be equally important behaviours for ambition:

*"I once read about a man who was in a wheelchair because he was paralyzed in his legs. He had a goal to be able to walk again. He was ambitious, but he didn't give up and therefore he reached his goal". (*Boy, 16 years)

"*Sometimes there are things that you need to do to achieve success or to be ambitious. Then you really have to pull yourself together. But once I have done it, I get that satisfying feeling in my body. I did it*." (Boy, 16 years)

"Ambitious people don't give up, but are willing to let go of something to achieve another thing. They give all they can to excel. Not just do good, but do great." (Girl, 17 years)

Self-esteem. We did not ask the students about the relevance of self-confidence in ambition, but throughout the interviews both boys and girls referred to self-esteem as an important factor that predicts ambition:

*"An ambitious person is a person who has self-esteem, self-confidence, and is at peace with themselves". (*Boy, 18 years)

"Goal-orientation and self-confidence. That's what you need for ambition." (Boy, 15 years)

"Willpower, passion and, most importantly, self-confidence. You need those things when you are ambitious." (Girl, 15 years)

Discussion

The aim of Study 1 was to answer the first of our two research questions: How do adolescents define ambition? In Study 1, we found that ambition is about having one or more high goals, but the goal can be anything. You must be driven by a strong motivation or passion for your goal that is strong enough for you to keep the path towards your goal. The essential aspect of ambition is that there must be a certain distance between your starting point to your goal for the goal to be considered ambitious. And finally, you must strive for success and see yourself as ambitious, although, the type of success you aim for can be different from one person to another. This definition is very much aligned with the findings of Harman and Sealy (2017) devoid of specific end-goals and focused on a subjective form of success. That means that using e.g. desire to enter certain universities (Jerrim et al 2020) as indication of ambition in adolescents may not be appropriate as these specific end-goals may not express levels of ambition but merely whether or not the person desires that particular goal. While a majority of previous studies define ambition as a desire for specific

goals within power, prestige, education, or money (e.g. Ashby & Schoon, 2010; Elchardus & Smits, 2008; van Vianen, 1999), we found that adolescents' definitions of ambition are not concentrated around specific end-goals but are much broader and more nuanced.

An additional key element is the distance from your starting point to your goal; the greater the distance, the more ambitious. Study 1 showed that adolescent ambition is about having one or more goals, but the goal can be anything and within any area of life. Rather than specific end-goals, adolescent ambition is more about goal characteristics such as goal difficulty and working hard to reach the goal demonstrating that traditional measures are not always a useful tool for the study of ambition, at least for adolescents. Earlier studies on goal-setting show that difficult goals are often associated with better outcomes and are thus more attractive (Lee et al, 1989; Locke & Latham, 1990). However, our interviews suggest that the definition of a "high" goal depends on your starting point. As people have access to different resources, what may seem as a high goal to one person, may be an easy goal to another (Keller & Zavalloni, 1964). Societally defined high goals (such as income, job positions, or level of education) may not, therefore, be a complete way to measure the level of ambition.

When describing desire for success, the students described that objective success is focused typically on career, education, or income. Subjective success was described as related to emotions or family (e.g. to have a job that I enjoy, to be happy, to have a good balance between work and family/pastime). And other-referent success was described as related to comparison with other people (e.g. to be popular). This perception of success is similar to outcome expectations and personal goals in social cognitive career theory (Harman & Sealy, 2017; Lent et al, 1994; van Vianen & Keizer, 1996). This also ties in with the fact that the students of both genders linked success to career and education as being the

social norm. However, it is interesting that both boys and girls expressed that other types of ambitious goals can also express success such as family and happiness. This is in line with goal orientation theory (Ford, 1992) in which specific end-goals are less important rather it is choosing a goal that you desire and that you are willing to work hard to achieve, that is relevant.

When it comes to motivation for pursuing an ambitious goal, both boys and girls expressed that you need to be highly motivated or passionate about your goal. Interestingly, in this context, competition was not seen as the same as ambition, but rather a tool used to ignite motivation in certain situations. This goes against the traditional view of ambition in previous studies (Booth & Nolen, 2012; Gneezy et al, 2009; Sutter & Rützler, 2010). According to the students, ambition can also be the desire for becoming good at something or being recognised for making an impact, not necessarily through winning or through money and prestige, but also through immaterial rewards. Thus, the gender differences may only lie in the motivation for the goal and not in ambition itself.

Finally, although we did not find any indication of gender differences in the definition of ambition, we did find a gender difference in how the students viewed their own ambition level. In Study 2 we will therefore examine to what extent we will find the same gender difference in a large sample using the definition provided in Study 1.

Regarding our secondary findings, we found that the students related self-efficacy, self-esteem, grit, and the process of setting a goal to ambition. In line with other studies, our findings suggest that self-control is seen to lead to positive or successful outcomes which are often associated with ambition (Duckworth et al, 2007; Duckworth & Kern, 2011; Moffitt et al 2011; 2013). Duckworth and Gross (2016) make a distinction between self-control and

grit based on the hierarchy of goals framework in which higher-order goals are typically more long-term goals, and lower-order goals are short-time. Both self-control and grit are important constructs when people stick to their goals in the face of adversity. However, the difference between self-control and grit is the type of goals they relate to: Self-control is used when there is a conflict between lower-order goals and thus coupled with everyday success (should I make my homework or not), and grit is tied to higher-order goals that often takes months, years or decades to achieve, thus more long-term pursuit of desired goals (I want to find a cure for cancer) (Duckworth & Gross, 2016). When considering our findings from Study 1, it is clear that the students link ambition to the pursuit of long-term goals and that these goals require perseverance due to the timeframe of achievement, due to adversity, due to the challenged nature of the goals, and due to the strong desire for those goals. Based on our findings, we conclude that it is more likely grit than self-control the students are referring to as a necessity for ambition. Regarding gender differences, numerous studies have found no significant differences in grit levels between boys and girls (e.g. Carpenter et al, 2018; Hodge et al, 2018; Sigmundsson et al, 2021). However, Christensen and Knezek (2014) did find gender differences with women scoring slightly higher on grit. We did not locate any significant gender differences in grit in Study 1, however, this does not rule out the possibility that we may find gender differences in the relationship between grit and ambition.

We also found, in line with Harman and Sealy (2017), that students link self-efficacy and ambition. Harman and Sealy (2017) concluded that self-efficacy enables ambition; that is, if you have no or low self-efficacy, you have no or low ambition. Numerous studies have provided evidence for the relationship between self-efficacy and career choices, academic performance, personal relationships and employment success (e.g. Hackett & Lent, 1992;

Lent et al, 1986; Pajares & Urdan, 2006; Solberg et al, 1995; van Vianen, 1999). Huang (2013) found in a meta-analysis on academic self-efficacy that boys score slightly higher than girls, although the effect size is small.

The role of self-esteem in ambition, however, is not clear from our Study 1. Johnson and Patching (2013) found that having a medium or high level of basic self-esteem is a strong predictor of high ambition, so a certain level of positive basic self-esteem is needed for ambition. Recent studies find that women's lower ambitions are related to lower levels of self-confidence (e.g. Kay & Shipman, 2014), which may be the result of gender stereotypes and workplace cultures that favour masculine versions of ambition and success. Gender stereotypes in the school environment may have a similar influence on students' self-esteem, only with opposite results as girls are expected to perform well (Zimmerman, 2018), which can boost their self-confidence, and in turn their ambition. This may explain why most of the girls described themselves as highly ambitious as opposed to the boys who rarely described themselves as ambitious.

Finally, we found that the process of selecting a goal and defining how to reach a goal is an important trait to assist ambition. Research conducted by Locke and Latham (2002) and Gaumer Erickson and Noonan (2018) found that individuals perform better when they adopt a goal-setting approach that relies on identifying goals that are meaningful and based on data. We would therefore expect that goal-setting has a positive impact on ambition. We have not been able to locate any studies that specifically examine the relationship between goal-setting and ambition. We therefore do not know if there would be gender differences in this relationship. However, considering the fact that the process of setting a long-term goal depends on the development of the executive cognitive functions and that girls are often ahead of boys in their cognitive development in adolescence (Torvik et al, 2021), we would

expect that there are gender differences in the relationship between goal-setting and ambition favouring girls.

Study 2

The aim of Study 2 is to answer our second research question: When using the definition provided by the students in Study 1, will we find gender differences in ambition? As we found that 93% of the girls in Study 1 expressed being highly ambitious, and only 44% of the boys said the same, we expect to find the same gender difference in Study 2. Our first hypothesis is, therefore:

> H1: Girls will score themselves higher on ambition than boys

Our findings in Study 1 showed that certain behavioural traits are needed for ambition such as self-efficacy, self-esteem, grit, and goal-setting. However, we do not know whether these traits are indeed related to ambition and to what extent these behavioural traits are able to explain any variations in the level of ambition in adolescents. Our second hypothesis will therefore consider:

> H2: Self-efficacy, self-esteem, grit, and goal-setting will have a significant positive relationship with ambition that combined contribute to the explanation of variance in ambition.

Apart from relationship with ambition, we want to explore if there are gender differences in the relationship between these behavioural traits and ambition as this may explain why the literature shows conflicting results: that it may not be in ambition itself that we find gender differences, but rather in the factors related to ambition. This leads us to our third and final hypothesis:

H3: Gender acts as a moderator in the relationship between the four behavioural traits (self-efficacy, grit, goal-setting, and self-esteem) and ambition. Gender acts as a moderator in the relationship between the four behavioural traits (self-efficacy, grit, goal-setting, and self-esteem) and ambition. We expect that grit and goal-setting will be predictors of ambition for both genders but that the relationship will be stronger for girls than for boy for both predictors. We expect self-efficacy to be a predictor of ambition for both genders, but that the relationship will be stronger for boys than for girls. Finally, we expect that self-esteem will be a stronger predictor of ambition for girls than for boys.

Methods

Participants

The cohort sample consisted of 643 high school students with 49.6% women and 46.3% men, 2.6% non-binary, and 1.5% who did not disclose their gender. 0.6% are under 14 years and the remaining 99.4% are between 14 and 22 (M=16.5 years, SD=1.47).

Procedure

To investigate the research question, we conducted a cross-sectional survey. We conducted the questionnaire online and distributed it using an anonymous link. The data collection procedure was reviewed and approved by the Psychology Ethics Committee at Exeter University before data collection. Six different high schools agreed to participate in the study and distribute the online link to the questionnaire to all their students. The link was distributed through school emails and intranet, through QR codes on flyers and posters at the

schools. We created the online questionnaire using the survey programme Qualtrics. We used an incentive to encourage participation consisting of the option to participate in a lottery for five gift vouchers. The online questionnaire contained a page with information and consent form to which the participants actively had to give consent. We informed students about the study goals (i.e. ambition, goals, and perception of success) except for one aspect: that we were interested in gender differences. This was deliberately left out so as not to discourage students from participating or risk influencing their answers.

Measures

In the present study, the four behavioural traits found in Study 1 were measured by different scales. Ambition was measured by items developed from the definition in Study 1. All scales were measured using a 5-point Likert scale with 1 (Completely disagree) to 5 (Completely agree). The questionnaire also contained questions about type of school, age, and gender.

***Self-efficacy*.** Self-efficacy was measured using the General Perceived Self-Efficacy Scale (GSE) with 10 items (e.g. *If I am in trouble, I can usually think of a solution*) developed by Schwarzer and Jerusalem (1995). The GSE scale is unidimensional and has Cronbach's alphas ranging from .76 to .90 in earlier studies (Schwarzer & Jerusalem, 1995).

Self-esteem. Self-esteem was measured by the Basic SE scale (SE) with 11 items (e.g. *I feel positive and optimistic about life; I can freely express what I feel*.) developed by Forsman and Johnson (1996). Their study revealed that having a medium or high level of Basic SE is a stronger predictor of high ambition. Forsman and Johnson (1996) found Cronbach's alphas between .90 to .92.

Grit. Perseverance for long-term goals was measured by the Grit scale for children and adults (GSCA) with 12 items (e.g. *I always stick to the task I am working on until it is complete; I never give up even when things get tough*). Sturman and Zappala-Piemme (2017) developed the scale which can be used for children as young as third grade up to college graduates. The GSCA scale was tested on different groups, including children and adults as well as people from different socio-economic backgrounds, and the researchers found it to be a better predictor of academic outcome than the Duckworth Grit scale (Duckworth et al, 2007). Cronbach's alpha was found to be .84 (Sturman & Zappala-Piemme, 2017).

Goal-setting. Goal-setting was measured by the Goal Setting Formative Questionnaire (GSFQ) (Gaumer Erickson & Noonan, 2018) with 16 items (e.g. *I set goals to achieve what I think is important; When I set goals, I think about barriers that might get in my way*). The GSFQ consists of three subscales with a Cronbach's alpha of .81 for the meaningful scale, .80 for the personal improvement scale, and .81 for the data-based scale. The total scale showed an alpha of .92 in prior research (Gaumer Erickson & Noonan, 2018).

Ambition. Based on the students' definition of ambition in Study 1, we created 6 items: *1) I set high goals, 2) I always aim very high, 3) I push myself to set goals that are difficult to reach, 4) I am highly motivated, 5) I strive for success, and 6) I see myself as ambitious*. To make sure that the items reflected the definition given by the students, we compared this definition with existing definitions and their items and found that the definition of Duckworth Ambition Scale (Duckworth et al, 2007) was the most similar. We then presented the two definitions to two classes (n = 38). The age range was between 15 to 20. 39.5% of the students were 15 years of age and 60.5% were between 16 to 20 years of age. 47.4% of the students were girls, 50% were boys, and 2.6% did not inform of their gender.

The students were all a different sample than those of the initial interviews. The 11 items (6 items from our definition and 5 items from Duckworth's scale) were presented to the students in random order and we asked the students to rate each item how well the statement would characterise the way they would define ambition based on a rating scale from 1 (Does not describe ambition at all) to 7 (Describes ambition very much). We then interviewed each class as a group about which of the 11 items would sum up their definition of ambition the best. The interviews were not recorded or written down verbatim, but rather feedback from the two classes was taken as notes.

The students expressed difficulties understanding the items of the Duckworth Ambition scale. For the 6 items regarding the definition of ambition derived from our interviews, the students emphasized that they responded to how they define ambition. We did not receive any negative feedback regarding the 6 items, neither in terms of content or context, and we then concluded that the 6 items captured the definition of adolescent ambition quite well.

Data analysis

Hypothesis 1 was examined using an independent sample t-test in SPSS (v27). To explore the relationship between the four behavioural traits and ambition, we propose an integrated model in which each of the behavioural traits and ambition are treated as latent factors whose relationship is moderated by gender. A single model can help researchers better understand the relationship between ambition and other latent factors. For that reason, we utilized a structural equation modelling (SEM) approach for Hypothesis 2. Bivariate correlations between the latent variables ambition, self-efficacy, goal-setting, grit, and self-esteem were calculated. As the data showed normal distribution with low skewness and

kurtosis (Hancock & Mueller, 2013) and there were no missing data, we estimated Confirmatory Factor Analysis (CFA) using Maximum Likelihood Estimation. Beforehand, low-loading items (below .50) were excluded from the analysis in order to reduce the number of items in favour of an economic measurement model by using CFA (Hair et al, 2010) leaving ambition to be operationalised by 6 items, self-efficacy by 10 items, grit by 5 items, goal-setting by 11 items, and self-esteem by 9 items. We used AMOS (v27) for the CFA. We assessed model fit for the CFA using a variety of model fit indices as recommended by Hooper et al (2008): the norms fit index (NFI), the comparative fit index (CFI), the Tucker Lewis index (TLI), the incremental fit index (IFI), the relative fit index (RFI), the goodness of fit index (GFI), the standardized root mean residual (SRMR), the root mean square error approximation (RMSEA). For models to be acceptable SRMR should be .08 or lower and RMSEA should be less than .08 (Hu & Bentler, 1999); CFI, NFI, TLI, IFI, RFI and GFI should be greater than .90 (Hair et al, 2010). At least four of these fit indices must be significant to prove that the measurement and structural models fit well. We have also included the chi-square test as recommended by Hooper et al (2008), however, we are not using this test for model fit as it is highly sensitive to sample size and not useful when the sample size is over 400 as most models are then rejected (Bentler & Bonett, 1980). Hypothesis 3 was examined through a combination of multi-group analysis in AMOS testing the moderation effect of gender on the overall model, and moderated hierarchical multiple regression in SPSS testing for the moderation effect on each of the latent variables.

Results

Hypothesis 1

Means and standard deviations are displayed in Table 1. First, we examined H1 comparing ambition scores of girls to those of boys using an independent-samples t-test (see Table 1). Contrary to our predictions and the findings in Study 1, there was no significant difference in ambition scores for boys (M = 3.59, SD = .88) and girls (M = 3.50, SD = .82; t (573) = -1.24, p = .22). The magnitude of the difference in means showed no effect (mean difference = -.09, 95% *CI*: -.23 to .05). H1 was therefore not supported. We also performed a t-test for the other factors (Table 1). We found gender differences in self-efficacy, grit, and self-esteem with boys scoring higher than girls, but effects were generally small. There were no gender differences in goal-setting and ambition.

Hypothesis 2

Correlations among the latent study variables are presented in Table 2. In order to examine the discriminant validity of the latent factors, the full measurement model including all five factors was checked. As such, all latent variables are considered in one level. As seen in Table 3, all fit indices meet the criteria. Consequently, the full measurement model fits well to the data. The lines between the five latent factors in Figure 2 are the covariances which should be below .85 (Kline, 2010). As the covariances are all below .85, we can confirm that the proposed framework has no multicollinearity with the collected data.

Table 1: Means, standard deviations, and t-tests

	Mean All students	*SD* All students	*Mean* Girls	*SD* Girls	*Mean* Boys	*SD* Boys	*t*	*p*	*Partial eta squared* η^2
Self-efficacy	3.63	.70	3.58	.66	3.72	.71	-2.67	.008	.001 (very small effect))
Self-esteem	3.64	.79	3.46	.77	3.85	.73	-6.68	.000	.06 (moderate effect)
Grit	3.10	.62	3.04	.61	3.19	.64	-3.12	.002	.01 (small effect)
Goal-setting	3.71	.97	3.68	.62	3.78	.65	-1.99	.05	-
Ambition	3.53	.87	3.50	.82	3.59	.88	-1.44	.15	-

Note. $p < .001$. η^2: .01 is small effect, .06 is medium effect, .14 is large effect (Cohen, 1988). SD = Standard deviation

Because of differences in means between boys and girls for self-efficacy, self-esteem and grit, we performed a multigroup CFA to test for measurement invariance to examine whether the measurement model was equivalent among boys and girls. It was found that the configural invariance model fit the data well (X^2/df 2.18, df 1,655, SRMR 0.07, RMSEA 0.05, CFI 0.90) indicating that the number of factors applied to each group was invariant between the two groups and that the indicators loaded on the same factors for both groups. The metric invariance model also showed a good fit (X^2/df 2.17, df 1,660, SRMR 0.07, RMSEA 0.04, CFI 0.90) suggesting that the factor loadings were invariant between the two groups. Finally, the scalar invariance showed an acceptable fit (X^2/df 2.16, df 1,667, SRMR 0.07, RMSEA 0.05, CFI 0.89). These results indicate that further comparison of relationships between the latent variables can be undertaken between the two groups.

Table 2: Correlations between latent variables

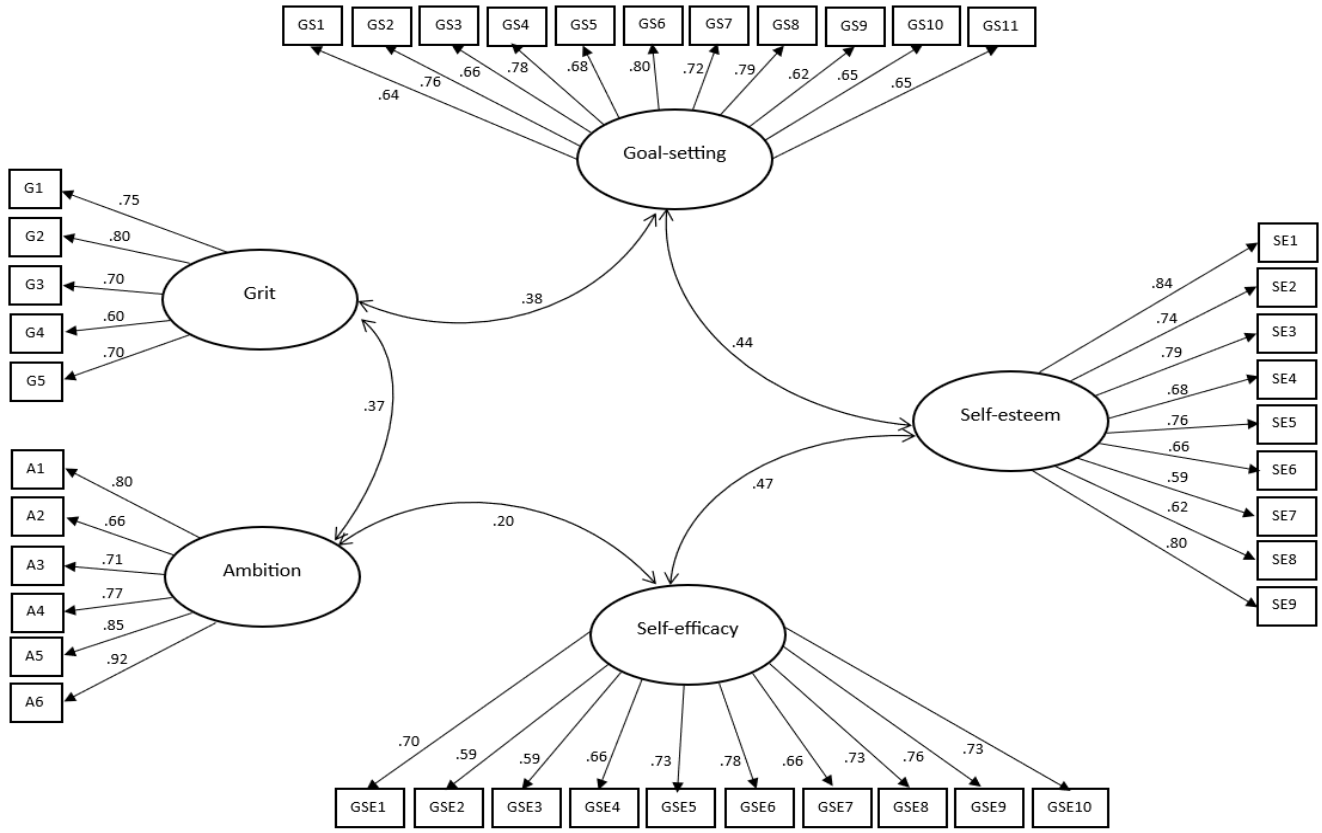
	Ambition	Self-efficacy	Grit	Self-esteem	Goal-setting
Ambition	-				
Self-efficacy	.44	-			
Grit	.38	.17	-		
Self-esteem	.37	.51	.23	-	
Goal-setting	.83	.47	.31	.43	-

Note. The table shows the standardised values. All correlations are significant at $p < .001$ (2-tailed)

Table 3: Model fit results of full measurement model

	NFI	CFI	TLI	IFI	RFI	GFI	RMSEA	SRMR	X^2	*df*	X^2/df	*p*
Model fit	.92	.97	.96	.97	.92	.92	.06	.06	2640.62	769	3.43	.000

Figure 2: Full measurement model



In the measurement model, a suitable level of model identification must be found (Byrne, 2016). The number of unique values can be calculated with p (p+1)/2 where p represents the number of measurable indicators. Based on Figure 2, there are 41 measurable indicators which lead to 41(41+1)/2 = 861 unique values to be estimated. From Figure 2 we are able to calculate 8 covariance values between the latent variables, 36 real factor loadings, 41 error terms, and 5 variances for the latent variables. The measurement model thus includes 90 parameters, leaving 771 degrees of freedom, which signifies that the model is over-identified meaning there is more than enough information in the data to estimate the model parameters.

Finally, we checked for convergence validity. Fornell and Larcker (1981) defined three phases of convergence validity: a) that factor loadings must be equal to or higher than 0.5, b) Cronbach's alpha of every construct must be equal to or higher than 0.7, and c) the average variance extracted (AVE) must be equal to or higher than 0.50. As seen in Figure 2, all factor loadings are above 0.5. In Table 4 Cronbach's alpha and AVE values meet the recommended standards. This means that the convergence validity of the measurement model is adequate.

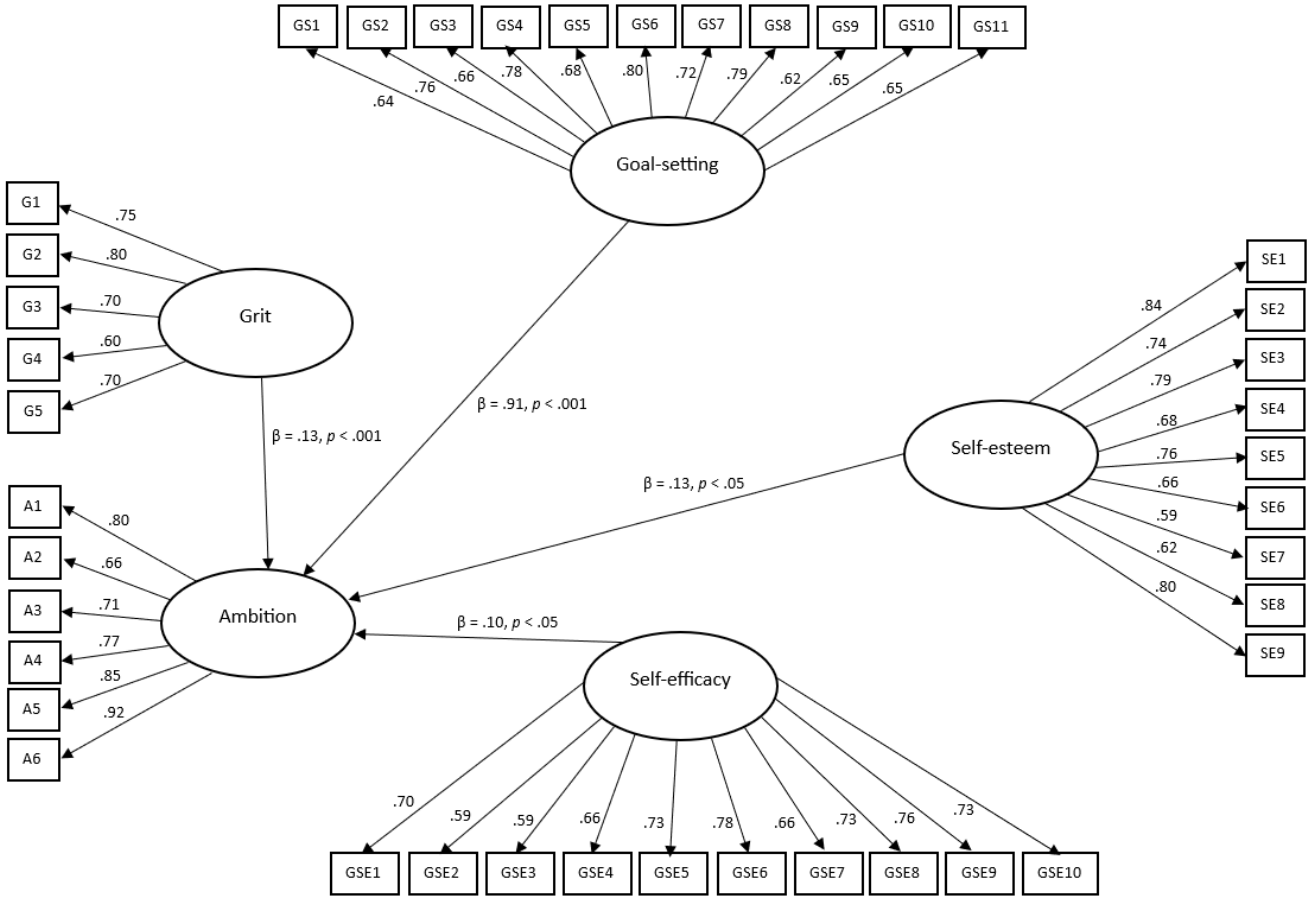
Table 4: Average variance extracted (AVE) and Cronbach's alpha values

Latent variables	AVE	Cronbach's alpha
Ambition	0.62	.90
Grit	0.51	.74
Self-esteem	0.53	.90
Self-efficacy	0.50	.91
Goal-setting	0.50	.92

Structural modelling is applied next to identify the hypothesized connection between the latent variables. In H2 we hypothesized that self-esteem, self-efficacy, grit, and goal-setting combined would have a significant impact on ambition. First, we examined the relationship between each of the latent variables and ambition. Grit has a significant positive relationship with ambition (β = .37, p < .001). Self-esteem also has a significant positive relationship with ambition (β = .39, p < .001). Self-efficacy has an even stronger significant positive relationship with ambition (β = .56, p < .001). And finally, goal-setting has a highly significant positive relationship with ambition (β = .75, p < .001). We then ran the entire structural model. The full structural model showed good model fit for at least four of the model fit indices as required [NFI] = .88, [CFI] = .92, [TLI] = .91, [IFI] = .92, [RFI] = .90, [GFI] = .88, [RMSEA] = .05, [SRMR] = .07, [X^2] = 2640.62, [df] =769, [X^2/df] = 3.43, *[p]*

= .000. Figure 3 shows the full structural model with regression coefficients. According to the analysis, 71% of the variance in ambition is explained by self-esteem, self-efficacy, goal-setting, and grit combined.

Figure 3: Full structural model



Hypothesis 3

Finally, we tested H3 by using moderated hierarchical multiple regression in SPSS. First, we mean-centered all independent variables and we dummy-coded gender (girls=0, boys=1). Second, we created interaction variables between gender and each of the four independent variables. We entered the independent variables in block 1 and the interaction terms in block 2. We did not find support for H3 in that gender did not moderate the

relationship between any of the factors and ambition with *p* values ranging from .113 to .517 (see Table 5).

Table 5: Moderated hierarchical multiple regression with ambition as the criterion variable

Interactions	Unstandardised Coefficients	Standard error	Standardised Coefficients	*t*	*Sig.*
Gender*goal-setting	-.15	.10	-.34	-1.59	.113
Gender*self-esteem	.06	.08	.13	.73	.468
Gender*self-efficacy	-.06	.09	-.12	-.65	.517
Gender*grit	.09	.09	.17	1.01	.311
Non-interaction terms	Unstandardised Coefficients	Standard error	Standardised Coefficients	*t*	*Sig.*
Gender	-.21	.33	-.12	-.63	.529
Goal-setting	.79	.05	.60	17.44	< .001
Self-esteem	-.09	.04	-.08	-2.35	.06
Self-efficacy	.06	.04	.04	1.32	.190
Grit	.26	.04	.18	5.72	.001

Based on these findings we can conclude that there are no gender differences in ambition levels when using a definition provided by both boys and girls. We can also conclude that goal-setting, grit, self-efficacy, and self-esteem combined have a positive impact on ambition and that this relationship is not moderated by gender.

General discussion

The present research examined two questions: First, how adolescents define and view ambition, and second, whether we would find gender differences in ambition when using a definition provided by the participants.

Regarding the first question, we found that girls and boys share similar perceptions of ambition, and that they define ambition to be about having a high goal that is difficult to reach, but that the goal can be anything, not just certain positions, high income or length of education as used as default definition in earlier studies on ambition. We also found that desire for success is an integral aspect of ambition, but rather than relating to societal standards of success, the desire for success is about the person's subjective drive to succeed and to how a person defines when a goal has been successfully achieved.

This perception of ambition is very similar to the findings of Harman and Sealy (2017) that ambition is not about specific end-goals, it is not only related to contexts of education and work, and that success is defined by the individual. In line with the findings of Sools et al (2007) adolescents emphasise that ambition is not just about the attainment of wealth, status and prestige, but that personal growth, learning, and self-realization are seen as equally ambitious goals. Our findings thus confirms that younger generations may have a different approach to ambition than the more traditional perceptions of ambition.

An interesting finding is the students' viewpoint on the desire to succeed. The students viewed desire to succeed to be a vital part of ambition. At first, this could reflect the more traditional approaches in which ambition is equalled to the level of desire for success (Judge & Kammeyer-Mueller, 2012). However, the students expressed shared views that there is no one definition of success. Instead, they talked about three different types of success: subjective success defined by the individual, other-referent success in which success is

compared with others, and objective success which consists of objectives measures. Girls more often related success to family and friends in combination with education and work, whereas boys more often related success to wealth and prestige in line with the findings of Eagly et al (2019). Throughout the interviews girls more often expressed an 'other' orientation in their success perception, that is, they compared their level of success with other people (either peers, parents, society) or they viewed success in relation to others (e.g. being popular). Boys more often expressed a 'self' orientation in their success perception focusing less on the role or influence of others. However, if ambition is measured by only objective success standards, it is very likely not to capture the nuances in adolescent ambition or it may lead to gender differences in findings that are more likely to be the result of a narrow focus on objective success than actual gender differences in ambition.

Regarding our second research question, we found that, when using the adolescents' own definition of ambition, we did not find gender differences in ambition levels.

Our first study indicated that girls were more likely to describe themselves as highly ambitious compared to boys. In the second study, we, therefore, wanted to examine whether girls would score themselves higher than boys on ambition. Existing research shows conflicting results when it comes to gender differences in ambition with girls as more ambitious than boys because they get higher grades (Duckworth & Seligman, 2006), boys as more ambitious than girls because they desire to enter top universities (Jerrim et al, 2020), or no gender differences when level of education is used as measure (Bygren & Rosenqvist, 2020). However, no studies have utilised definitions provided by adolescents when examining ambition in such populations which may explain why gender differences occur. Our results suggest that when using a definition provided by both boys and girls as well as a definition that is not tied to a specific end-goal, gender differences in ambition do not occur.

Studies show that girls are rewarded differently when it comes to ambition and girls may internalize expectations of having success goals pertaining to education, family, friends, and work-life balance, whereas boys are praised for success goals related to wealth, and career (Eagly & Wood, 2012; Larimer et al, 2006; Myklebust, 2019; Undervisningsministeriet, 2017). Indeed, it may explain why girls were more prone to stating they are ambitious than boys: boys are automatically seen as ambitious – girls need to verbally assert their ambitiousness.

Initially, we sat out to only examine possible gender differences in ambition in our second study. But due to the findings in Study 1 in which the students brought up the relevance of behavioural traits such as goal-setting, grit, self-esteem, and self-efficacy for the expression of ambition, we decided to also include this aspect in Study 2.

The process of setting a goal has not previously been explored directly in connection with ambition, at least not when ambition is defined in more broad terms than specific end-goals. Goal-setting defines the approach people use when selecting a goal and the characteristics of that goal (Gaumer Erickson & Noonan, 2018; Locke & Latham, 2002). As the students defined ambition to be about having one or more goals that are difficult to reach and that you work hard to achieve, it is not surprising that goal-setting explains a large part of the variance in ambition. In line with previous studies (e.g. van Vianen & Keizer; 1996; Harman & Sealy, 2017), we found that self-efficacy is also highly important for ambition in adolescents. As goal-setting and self-efficacy has never before been examined together in relation with ambition, our study contributes to a deeper understanding of the behavioural traits involved in ambitious behaviour. Similar to the findings of Duckworth et al (2007) we found grit to be an important predictor of ambition. However, previous studies on ambition and grit only established a link between grit and academic performance where our results

suggest that grit is also an important factor when ambition is treated as a general disposition. When it comes to self-esteem, Johnson and Patching (2013) concluded that having a medium or high level of basic self-esteem is strongly related to ambition but not necessarily the same as ambition which our study confirms.

In sum, we can conclude that goal-setting, self-esteem, self-efficacy, and grit have a significant positive impact on ambition that combined explains a large part of the variations in ambition levels between individuals. As with ambition, we found no gender differences in the influence of these factors on ambition.

Limitations and Future Research

While our studies make an important contribution, they are not without limitations. First, even though the data were collected from several different schools, the schools were all located in the same geographical area. This approach has the potential to introduce sample selection bias (Cuddeback et al, 2004). To minimize this limitation, we took care in selecting schools that had a broad group of students from different backgrounds as well as relying on random students to participate. However, it would be ideal for future research to use data from multiple sources.

Secondly, we were not able to provide conclusions on how non-binary adolescents define ambition as we did not have enough participants from this group. Future studies could, therefore, benefit from exploring how non-binary groups conceptualise ambition and perceptions of success.

Finally, we used a structural equation modelling approach that operates with multiple regressions. This method is often used to establish predictors of the dependent variable, in

this case ambition. However, we are not able to fully conclude that the four behavioural traits cause ambition, or whether ambition causes changes in these traits, or whether they all just happen to be correlated. Experimental and longitudinal studies utilising our definition of ambition should explore true cause and effect between ambition and the four behavioural factors.

Practical Implications

Our contribution through this paper is to provide new insights regarding how ambition is conceptualised and defined by adolescents. Adolescents describe ambition in terms of individual goals and goal difficulty rather than in terms of specific end-goals such as rank, prestige, and money. For this reason, it is important that researchers acknowledge the variety of ways in which participants experience and define ambition, rather than using stereotypically masculine notions of ambition and success as standards. Where the only way to reach success used to be upwards or by gaining more, we need to be aware that nowadays ambition should be understood as "multi-directional", wherein ambition can be a sideway move, a change of direction, and most importantly, a great step from your own starting point within any type of goal, not just in money, power, and prestige. For educationalists and career counsellors, the findings imply that a narrow focus on desires to go to elite universities or pursue high-status educations is not necessarily synonymous with ambition. It is important to understand the nature of students' goals and the starting point for their goals as this reveals critical information about both boys' and girls' levels of ambition. If teachers want to increase students' ambition levels, it would be fruitful to provide the students with strategies to improve their grit, goal-setting and self-efficacy beliefs.

Our results are also important for universities and workplaces. Over the last 10 years we have seen an increase in the Opt-Out revolution with people exchanging high-paid prestigious jobs for lower-level jobs that allow them to focus on ambitious projects in their free time or with their families instead (Kjær, 2023, 23 April) and the Great Resignation revolution among young adults with people quitting their job without having a new job in order to spend time finding a deeper meaning in their work life (Mosbech, 2022, 22 January). These trends are likely to amplify how younger generations define and view ambition and will likely influence what they will be looking for in their studies and in a future job.

Conclusion

Our studies have made an important contribution to the ambition literature providing evidence that conceptualising ambition in purely masculine terms may not reflect how ambition is defined by all and may explain why previous studies have shown mixed findings when it comes to gender differences. Our studies have provided a definition of adolescent ambition that is not based on specific end-goals and that is not context-dependent avoiding gendered bias in goals and social role expectations. Finally, the definition of ambition is not conflated with behavioural traits that may be conceptually closely related to ambition but are not the same as ambition. This discovery allows the future exploration of adolescent ambition and related behaviours of self-efficacy, grit, self-esteem and goal-setting to be examined separately to detect possible gender differences in either ambition or in factors that can influence ambition.

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CHAPTER 3.
REFLECTING ON THE USE OF GOOGLE DOCS FOR ONLINE INTERVIEWS

Abstract

Google Docs is a widely used online word processing software. Despite its broad popularity in business and education, Google Docs is under-utilised as a tool to facilitate qualitative interviews within research. In this article, we reflect on our experiences as two PhDs using Google Docs to conduct synchronous, online, written interviews. We present two case studies, which, to our knowledge, are the first to utilise Google Docs to conduct web-based written interviews. In doing so, we (a) outline the development and implementation of the methodology, (b) highlight the key themes we identified when considering the benefits and challenges of conducting interviews using this technology and (c) discuss possible future uses of the methodology. We argue that synchronous web-based written interviews via Google Docs offer unprecedented opportunities for qualitative research.

Introduction

Using online technologies for qualitative data collection has become commonplace within academia (e.g. Baltar & Brunet, 2012). To date, many studies have utilised online technologies, from observational studies of web-based forums (Baker, 2013) to web-based surveys (Ramsey et al., 2016), and focus groups and interviews (Cater, 2011; Deakin & Wakefield, 2013).

Building on this literature, we introduce an innovative online qualitative methodology, which demonstrates how an online word processor, such as Google Docs can facilitate online interviews. Google Docs is a widely used, freely available online word processing software that has broad popularity in business and education, but it is not, to our knowledge, commonly used in qualitative data collection. We document our experience in developing and implementing an online interview methodology using Google Docs. The experiences stem from the empirical work of the authors. The first study to use the novel method was conducted by Opara et al. (2020) (Case Study 1) in a study of the workplace experiences of British African, Asian and (Black) Caribbean ethnic professional women. Case study 2 further evidenced the utility of the methodology, through its use within online facilitated classroom interviews with adolescents in Denmark about their perceptions of ambition and success (Spangsdorf et al., under review).

We present a short review on the advantages and disadvantages of online and web-based tools in qualitative empirical investigation more broadly. We follow this with an introduction and our rationale for using Google Docs, two case studies, and an integrated reflection of the process of conducting our two studies. The discussion highlights the themes stemming from our reflections of using Google Docs, outlining the strengths and

weaknesses of the approach. The article ends with recommendations and attention points for using Google Docs in future qualitative research. Taken together, we suggest that semi-structured, web-based written interviews are a practical alternative to traditional face-to-face or telephone interviews, and are particularly useful when there are constraints in finances, time or geographical location. This method can be used both synchronously as well as asynchronously, and can provide an insight into the thinking process of participants.

Online qualitative research: Advantages and disadvantages

Over the past 20 years, the use of online and web-based tools in qualitative data collection has gained significant ground. Research has been primarily focused on online tools such as email, web-based forums, chat rooms, blogs, instant message or chat, Skype, social media platforms such as Facebook and conferencing software functions (e.g. Davis et al., 2004; Hawkins, 2018; Iacono et al., 2016). It is important to make the distinction between the analysis of text and discourse that occurs 'naturally' online, from data that is harvested in online forums or from social media sites – and the creation of text and discourse online for the purpose of analysis (e.g. interviews), which is the case when using Google Docs for written interviews.

These methodologies present a range of advantages and disadvantages for qualitative research, in relation to practical considerations, anonymity and data security, engagement and rapport, and synchronicity. We will look at each of these in turn.

Practical considerations

There are a number of practical advantages of using online or web-based tools such as reduction of travel expenses and time spent (Walker, 2013a), and the speed of data

collection is often quicker than traditional methods (Walker, 2013b). It also facilitates access to 'hard to reach' groups and individuals due to geography (Madge & O'Connor, 2002), for cultural reasons (Al-Saggaf & Williamson, 2004) or due to the sensitivity of the subject (Davis et al., 2004), Google Docs can be used both synchronously and asynchronously, and, as Google Docs interviews are transcribed verbatim, there are significant cost, time and travel savings.

Despite these advantages, one of the greatest challenges when conducting qualitative interviews is the transcription of data, which is a time-consuming and costly task, although recent innovations in transcription software, do make automated transcripts easier than they have ever been (e.g. Stream). Online interviews using FaceTime, Skype or other conferencing software are interactive and similar to face-to-face interviews. However, they require the use of audio or video recording, which then has to be transcribed. A limitation to these tools is the risk of poor recording quality, the loss of important information, and, in the case of Skype, the cost of recording software. This limitation can be alleviated by the use of chat rooms, discussion forums, messenger applications or email exchange (Walker, 2013a, 2013b), which allow for immediate transcription, as they are written by the participant in real time. However, these tools often suffer from other limitations, such as lack of synchronicity (messenger and email) which may limit attempts to engage in organic, in-depth dialogue; or difficulties related to obtaining consent and data security (forums, chat rooms; Salmons, 2012; 2017).

Anonymity and data security

Two of the key challenges in online interviewing are anonymity (Bolderston, 2012) and data security (King & Horrocks, 2010). In face-to-face interviews, participants are not

anonymous, and this can pose as a problem for participants who wish to remain anonymous for cultural reasons (Al-Saggaf& Williamson, 2004) or due to the sensitive nature of the research topic (Davis et al., 2004). Online interviewing offers the option of greater anonymity. Chat rooms, discussion fora and social media sites such as Twitter and Facebook allow for some anonymity or at least the possibility of creating false profiles to disguise true identity. It is never recommended that the researcher is anonymous when using online or web-based interview tools as it can be in conflict with ethical behaviour and the issue of deception (Creswell, 2013). But the participants have the option of remaining completely anonymous. Online interviewing, for the most part, offers the

option of anonymity that may facilitate confidentiality through the added element of physical distance. An interview, offline or online, is a social event that carries the risk of bias (e.g. due to race, gender and social class; Perera, 2021). Yet, as both the interviewer and the interviewee are behind a computer screen during online interviewing, this risk of bias is reduced, allowing for better confidentiality between the interviewer and interviewee. This is especially the case with online tools where the two parties cannot see or hear each other (Shah, 2004). This distancing effect is often referred to as ‘pseudoanonymity’ (Wilson et al., 1998).

In relation to confidentiality and anonymity, online interviewing includes the risk of data security as online fora (e.g. social media platforms, chat rooms and email providers) archive data and often make the data accessible to service providers, systems administrators and search engines (King & Horrocks, 2010). The interviewer thus needs to carefully consider which online tools to use to best safeguard participants’ data.

Engagement and rapport

While distance may facilitate confidentiality, it may come at the cost of establishing rapport between the interviewer and the participant. Proximity allows for non-verbal information which is seen as instrumental rapport building and the quality of the interview (Clarke & Milne, 2001). Web-based tools such as Facebook, chat rooms, messenger, blogs and online tools such as email require the participant to write their answers leaving out non-verbal cues. However, previous studies on chat interviews (Meijer et al., 2021) and chat counselling (Lopez et al., 2019) did not find any differences in the quality of interview information provided.

To alleviate the lack of non-verbal information we recommend that the interviewer develops rapport with participants by spending more time online getting to know the participants before the start of the interview (Evans et al., 2010) or using emojis to express positive attitudes, boost group rapport or clarify message intention (Thompson & Filik, 2016).

Synchronicity

When choosing to conduct online interviews as a data collecting method, another decision is whether or not the interview should be synchronous or asynchronous. Asynchronous interviews, whereby the interviewer sends questions in advance, and the interviewee answers them in their own time, allow the participants plenty of time to reflect upon answers, but there is a risk that the dialogue will become stalled (Walker, 2013a, 2013b). Interviews that occur in real time, such that both the interviewer and interviewee are online at the same time, are synchronous (Chen & Hinton, 1999). Synchronicity has the advantage of facilitating rapport building and trust. It also helps mitigate the need for participants to have a high level of technical skill, as the interviewer can assist the process in

a more direct manner. Synchronicity also facilitates spontaneous answers and discourages participants discussing their answers and thoughts with others, which reduces the risk of influence (Chen & Hinton, 1999). Tools such as FaceTime, Skype and other conferencing systems are synchronous in nature, but they require programs to be downloaded or an individual profile which not all participants may have or wish to have. Online and web-based tools (e.g. email, chat rooms, discussion forums and social media platforms) tend to be more asynchronous in nature, but they do allow for synchronous conversation if the parties agree on a set time to engage in the interview (Salmons, 2012).

The use of Google Docs

The strengths and limitations of online and web-based tools are vast and wide ranging. Yet, we believe that the use of Google Docs as a data collection method has many of the advantages of other online methodologies, while helping to address some of the disadvantages. We suggest that Google Docs provides the interviewer with a combination of advantages relative to other options.

First, it allows interviewers to conduct online interviews in written form, which removes the need for transcription. While other online tools provide similar options (e.g. chat rooms), these tend not to present the text in a complete document, but rather in numerous posts that have to be copied into a document and processed. Second, as Google Docs can be used synchronously, it can be used as an alternative to face-to-face interviews (individual or group) reducing time for travel and allowing for the possibility of reaching groups that are difficult to access either geographically or culturally (Al-Saggaf & Williamson, 2004). Furthermore, when using Google Docs synchronously interviewer and

interviewee do not see or hear each other, which provides a sphere of pseudoanonymity (Wilson et al., 1998). This is important when trying to reach minoritized groups or participants who would be required to talk about sensitive subjects (Davis et al., 2004). Third, Google Docs allows the interviewer to see what the other person is writing as the writing takes place. Finally, Google Docs is relatively accessible, as it does not require download of programs or creating profiles, it is easier to obtain consent, and it is similar to other well-known word processing systems making is more familiar to many people.

For these reasons, we see Google Docs as a viable online interview method as it maximises the advantages. We present two case studies that outline how the methodology has been implemented, and explore the advantages (and disadvantages) in greater depth.

Case Study 1

Google Docs, as an online interview method, was first used as a way to better understand the workplace experiences of professional women of African, Asian and Caribbean (AAC) ethnicities (Opara et al., 2020). The study took place in the UK, with the aim to 'give voice' to the organisational experiences of British AAC professional women, which have, hitherto, been almost absent within organisational scholarship. Conducting interviews with an underrepresented population has its difficulties. The voices of AAC professional women have been 'hidden' or 'absent', predominantly due to systemic racism and an unwillingness to represent their lived organisational experiences, but also because of the difficult nature of accessing these particular groups in a UK context. The sensitive nature of the stories that AAC professional women may want to tell, adds an extra element of difficulty and inherent restriction.

We first considered conducting face-to-face interviews. However, this had a number of disadvantages, including (a) the practicality of accessing the sample – the travel and time required to meet participants face-to-face was limited and (b) the need for confidentiality given the sensitive nature of the interviews which focused on gender and race discrimination.

We felt that the relative privacy of Google Docs would reduce any concerns that participants may have felt that their interviewer was able to judge them based on their race, gender or on the basis of their thoughts and feelings.

Thus, a qualitative exploratory methodological design via Google Docs was chosen, which allowed for the gathering of accounts through real-time web-based written interviews.

Process

Participants were sent email invitations to participate in the study. They then elected a suitable day and time when they could access the Google document at the same time as the interviewer. During each 1-to-1 interview both the interviewer and the interviewee had access to the Google document. The interviews were synchronous, that is, both interviewee and the interviewer engaged with the document at the same time, in real time. This allowed for a good level of interaction between the interviewer and interviewees, which facilitated the building of rapport. To encourage rapport, the interviewer pasted an introductory paragraph into the Google document to welcome the interviewees, and then asked them how they were doing and if they had understood the interview process.

The interviewer followed a semi-structured interview outline, asking about workplace experiences, issues of identity and health and well-being. The interviewer typed each

question into the Google document, and the interviewee responded in turn by typing in her answer. The interviewer was able to probe or add further questions, similar to a face-to face interview. Probing occurred once the interviewer could visibly see that the interviewee had stopped typing. The cue for this was by the interviewee typing 'END' at the end of a sentence, or once they had finished answering a question. Each interview session lasted about 1½ hours.

Reflections from the methodological conception, development and use of Google Docs

In practice, Google Docs was a useful methodology in this study, having many advantages, although there were some disadvantages. One advantage was the ease of use. The Google Docs methodology reduced the challenge of participants needing to be familiar with the interface, as it is extremely intuitive. For example, for one participant, who was unfamiliar with Google Docs, I was able to 'walk' her through the interface, explaining that I am able to see everything she is typing. I also explained that Google Docs will save all iterations of this document, so she was able to delete and re-write her thoughts if she felt she needed to. After this explanation, the participant managed to engage with Google Docs with little difficulty. Adding to this, Google Docs has instructional cues embedded in the software, this enables users to click on 'help' and be provided with a number of suggestions.

Considering the subject and the confidential nature of the interviews – workplace experiences, relative to treatment and discriminatory practices and behaviours – issues of confidentiality were key. It was likely that participants would recall instances of discrimination or unfair treatment due to AAC women facing high rates of discrimination (Feagin & Elias, 2012; Kenny & Briner, 2013; Tariq & Syed, 2018). It was possible that participants may have felt unwilling to come forward or open up due to the personal or

emotional nature of the interview. Indeed, the interview questions often provoked reactions of frustration or upset (e.g. 'Please describe your experiences at work […]' 'Can you describe the opportunities (or lack) that you have been given for promotion and progression?'). Participants were also asked to consider their answers in the context of their ethnic and gender identities, making gender and race salient.

As with traditional interview approaches, identity categories have the ability to influence the relationship formed between interview participants and interviewer, and subsequently the type of data produced (Jowett et al., 2011). This has particular relevance to Case Study 1, where issues of identity and stereotyping are core to the interview. Thus, use of Google Docs highlighted the role of 'privacy' and 'anonymity' within interviews. This method helped interviewees to answer the questions in an honest and open way, as the perceived distance and heightened sense of anonymity allowed for a greater sense of privacy. Indeed, not having to be in the participants' physical space nor needing to hear their voices, was a distinct advantage, as context, appearance and voice proxies' race, gender and often class. This allowed participants to open up, without worrying about possible backlash to the responses that they have given.

Google Docs interviews limit the ability to convey mood and emotion. This is a disadvantage as it may lower levels of engagement and rapport or prohibit the interviewer's ability to present oneself as a trustworthy person. While being open about oneself as a researcher is important in any qualitative research, it is perhaps even more so when using Google Docs where the researcher is invisible. Thus, interviewer invisibility can be a benefit as well as a challenge. This meant that the interviewer took extra lengths to build rapport in the first instance, by having more informal conversations (via the Google Docs platform) and trying to find common ground to discuss about before proceeding. Thus, it is advisable

that the interviewer allocates an extra 10 or 15 minutes at the beginning of the interview – to allow for ‘general’ conversation with the interview participant, this ensures that the ability to rapport is not neglected and remains a crucial element of the interview process.

This rapport is especially important when discussing sensitive topics such as race and gender. The interviewer did this by revealing their gender and race/ethnic identity to the women ahead of time. In turn, participants made mention of an increased ability to reveal their authentic experiences due to the diminished sense of possible judgement from the interviewer (Qu & Dumay, 2011).

One consideration when utilising Google Docs, is that it relies on participants having a level of technological competence. This means that this method is perfectly suited to the sample of professionals within this study. While online methods have the risk of technological problems (Jowett et al., 2011), we faced no issues within this particular study. It is possible that we did not face issues due to the simple interface of Google Docs being very similar to common software packages such as Microsoft Word. In this way, this ease of use is a clear advantage, although we recognise that this ease may not generalise to other samples. For example, for samples of older people or in those contexts where access to the internet or digital literacy may be limited, it is likely that technological issues may be more prevalent.

Case Study 1 demonstrates that Google Docs is a practical tool to use when conducting interviews with a sample that is difficult to research. Moreover, the method allows for a level of anonymity that is useful when the subject matter is sensitive or personal, while still allowing for sufficient rapport to be built between interviewer and interviewee.

Case Study 2

The second case study describes a study where we explored how perceptions of success and ambition are perceived by adolescents (Spangsdorf et al., under review). We designed the study to lay the foundation for a thematic analysis exploring gendered notions of ambition. As little research about this topic has been conducted among adolescents, we decided that qualitative data collection was needed in the form of interviews.

We built on the Google Docs method originally outlined by Opara et al. (2020) to reduce time and costs for transcription. In qualitative research, individual interviewing is very time-consuming and can greatly limit the number of people being interviewed. However, we needed to interview a large group of young students and by using the Google Docs method, we were able to conduct multiple individual interviews simultaneously, without resorting to the use of group interviews, which typically do not provide a lot of detailed information from each participant. Another reason for choosing the Google Docs method is the transcription of data occurs as the interview takes place. Finally, we also carefully evaluated the technological ability of our adolescent sample and concluded that they would feel comfortable communicating online as they were already using the online tools as part of their school work.

Participants

The participants were 30 Danish high-school students. Age range was between 14 and 18 years with an average age of 15.8 years; 46.7% were girls and 53.3% were boys.

Process

Students were given a group introduction to the study where they received an information sheet and consent form. Students giving consent provided an email address to which they received a link to a Google Document at the beginning of their interview. This was done to facilitate the synchronous nature of the interview, and avoid students preparing answers in advance or talking to others about the questions beforehand. Each student only had access to their own Google Doc. The interviews were conducted as a semi-structured interview. Each Google Docs contained 16 pre-written questions: demographic questions (age, gender and school level) and 13 open-ended questions about ambition and perception of success. As the students could read all the pre-written questions when opening the document, they were able to start with the questions they felt were most relevant. However, most students completed the questions chronologically and only switched between questions a few times. All students completed all the questions.

The students were divided into four groups of approximately 7–8 students. Within each of the four sessions, students sat in a classroom with their own laptop writing their answers to the questions in their own Google Docs. The researcher was in the room with the students to help with any technical issues. The researcher had access to each of the Google Docs simultaneously on her own screen and could see all the Google Docs in process, and switch between them as necessary. As the students wrote and paused at different speeds, it was possible for the researcher to read what had been written and, similar to a traditional face-to-face interview, add further questions to each interview. Students knew to look for further questions being added.

The process of conducting the interviews simultaneously was based on online interviews using emails or chat rooms in which the interviewer has interaction with multiple participants answering questions or commenting at the same time (Shepard, 2003). Having

pre-written the questions in the Google Docs meant that the interviewer was able to pay attention to what the participants were writing. Each Google Docs was given a unique title (e.g. Participant A) so that the documents would not be confused with one another. Google Docs also has a special feature where the cursor in each document can become a small drawing of an animal (e.g. fox, badger) which makes it easier to recognise different participants. Each interview session lasted about 1½ hours.

Reflections from the methodological expansion of Google Docs

The data collection process was an efficient one. Due to the written nature of Google Docs, we spent only 6–8 hours on carrying out the interviews, which resulted in 30 individual transcribed interviews. In comparison, we estimate that it would have taken approximately 200 hours if we had recorded face-to-face interviews and then had to transcribe them.

Apart from saving time and costs, our study revealed a number of other strengths when using Google Docs. We used Google Docs in an attempt to reduce the risk of peer and social desirability. The research topic for this study was ambition and perception of success. While ambition is not a sensitive topic per se, it is a topic that is subject to strong social norms and social desirability (Sools et al., 2007). At the same time, the students are of the age where they strongly orient themselves towards others, especially peers, and are very observant of social norms and expectations (Myers & Twenge, 2013). Using traditional face-to-face or group interviews therefore carries the risk that participants will not answer honestly, or may deliberately choose not to express views that might oppose popular opinion. As the participants could not see each other's Google Docs, their answers therefore

remained private. Indeed, research demonstrates that people tend to answer more honestly when writing online instead of being face-to-face with an interviewer (Hancock et al., 2004).

In our experience, the students were extremely honest about their thoughts. For example, one student wrote about her diagnosis of anxiety (Success to me is when I can walk into the classroom without feeling anxious and that nobody can see that I suffer from anxiety), and another student wrote about feeling lonely (I don't have any friends at the moment and I just lost my job. It affects me. I used to feel ok, but now I struggle with my motivation because I feel lonely). Although, this could also be the case with other online or web-based channels, Google Docs has the advantage that it allows for real-time interaction between interviewer and interviewee simulating an in-person interview by being completely synchronous.

Google Docs also allows the interviewer to have an insight into the thinking process of the interviewee as you can see what they are writing, deleting and rephrasing in real time. For example, one student initially wrote that success was about being rich and having expensive things, but deleted his answers right away and instead wrote that success was about being happy in life. This feature is highly similar to face-to-face interviews where the interviewer is able to obtain information about emotional state when the interviewee cuts off sentences, rephrases words or hesitates. We did not foresee this feature and therefore had not prepared how to collect this information systematically. These cognitive shifts in writing were thus only observed and noted more broadly.

We also learned that the written methodology is not necessarily suited to everyone. Some participants may not feel comfortable with written communication. Indeed, students with dyslexia or those who had difficulties expressing themselves in the language of the

interview (e.g. non-native speakers) expressed some doubts about participation. Only two students declined participation due to these reasons.

Another possible downside of the method is that it tends not to capture direct emotional and non-verbal information in the same way that video or audio interviews may do. However, some emotion was conveyed in the form of emojis – small digital images designed to convey emotions. In particular, students used emojis to convey sarcasm, irony and jokes, for example, 'What can motivate you at school? If I knew, I would have done it already (winking face emoji)'. This kind of communication simulates the kind of communication the students have with each other messaging each other over the phone or on social media (Li & Yang, 2018).

Our greatest challenge concerned issues of anonymity and access. Google Docs is not anonymous as it requires an email from each participant. However, as we used Google Docs as an alternative to traditional face-to-face interviews and group interviews, there was no difference in the approach to anonymity. In our study, no personal information was written in the Google Docs and once the interviews were carried out the data was transferred to a Word document and all the Google Docs were deleted including the email addresses. When it comes to access, Google Docs has the greatest advantage compared to other online methods in that the document can be accessed via a link. The students were not required to create a profile, have an account or download any kind of software in order to use the Google doc. The link was sent to the student's email directly from Google Docs.

Finally, as the researcher accessed each Google Docs simultaneously with each of the students, it allowed the researcher and student to see what the other person was writing as they were writing. This synchronicity allowed the researcher the option of quickly

responding to the students with follow-up questions (e.g. Can you give an example of a situation in which you felt you were successful?), and the students could see immediately where the researcher was interested in more information. Initially, we were curious as to how the approach could be used with 7–8 interviewees simultaneously. However, this did not pose a problem as some students reflected while others wrote and thus questions were asked in real time. This approach comes very close to a face-to-face interview in terms of dialogue, something that is not possible using asynchronous tools such as emails.

Our Case Study 2 showed that Google Docs is an effective tool when conducting multiple individual interviews simultaneously, provides an insight into the thinking process of the interviewee and creates a space of intimacy in which the interviewee feels comfortable sharing personal thoughts and experiences.

Integrated methodological lessons

These two case studies provide an introduction to an innovative approach to online qualitative interviews and provide practical suggestions for those considering the use of Google Docs. In this section, we discuss the key ways in which Google Docs differs from other online tools when it comes to data security, synchronicity and insight into the thinking process of interviewees. We also consider the key aspects that set apart written Google Docs interviews from traditional interview methods, including time saving, geographical distance and anonymity in sensitive topics. Here, we offer suggestions to assist other researchers in conducting qualitative web-based interviews via Google Docs, and enable them to fully consider the challenges and benefits that the use of Google Docs could present.

Synchronicity and flexibility

Google Docs can be used both synchronously and asynchronously. In both case studies we conducted the interviews synchronously, which required the scheduling of interviews ahead of time, similar to traditional arrangements for face-to-face interviews. A challenge posed by online interviewing is that the researcher often has less control over the conversation compared to traditional face-to-face interviews. Several studies have found that online participants are often more easily distracted by simultaneously checking emails or browsing the internet (Chen & Hinton 1999; Voida et al., 2004). This distraction is still a potential challenge when using Google Docs; however, this was not our experience. In Case Study 1, the participants were highly motivated and because the interviews were conducted synchronously, it reduced the issue of distractions as focus was directed towards the interview. In Case Study 2, we reduced this challenge by simulating a group interview, with participants in the same room throughout the interview. This, together with the classroom context, encouraged participants to focus and still allowed for multiple interviews to be carried out simultaneously.

However, if there are external barriers to time arrangements, Google Docs allows interviews to be carried out asynchronously, with the interview being carried out over a longer period of time and the interviewer and interviewee returning to the Google Docs over multiple time points. This provides flexible scheduling as the interviews can be adapted to suit each participant concerning time and place. On the negative side, there may be a higher risk of drop-out due to loss of motivation, it may be more difficult to have an actual conversation, and it may be difficult for the researcher to know when the interview is done.

Thinking process

Writing is a real-time process, as writing and thinking happens simultaneously. This is true whether Google Docs is used synchronously or asynchronously. Despite sharing many of the same advantages and disadvantages as other written channels (email, chat rooms), Google Docs is unique in one aspect: live writing. Google Docs allows for both the interviewer and the interviewee to see what the other person is writing as they are writing. This gives the possibility of gaining an insight into the interviewee's thinking process when writing. In our experiences, the pace and rhythm of typing provides information about the interviewee's cognitive and emotional states in the form of hesitation, speed of writing, pauses, cursor highlights, corrective steps and the emergence of ideas that may be changed in the writing process (Hale, 2008; Lee et al., 2016). This not only gives us insight into the thoughts of the interviewee but also their thinking process. This information can be noted and used in the thematic analysis similar to using non-verbal cues in face-to-face interviews. For both case studies, we did not anticipate this feature and, thus, did not collect these data systematically. We did, however, make broad observations of this process and recommend that future studies investigate this feature in more detail to explore how it can be utilised in online interviews.

Data security

Google Docs, like email, Facebook and Skype, is not anonymous. But if these tools are used as an alternative to traditional face-to-face interviews, there is no practical difference in anonymity. It is possible to allow participants anonymity by not obtaining personal information. In both studies, no personal information was written in the Google Docs. Once the interviews were carried out, the data were transferred to a Word Document and all the Google Docs were deleted including the email addresses, ensuing anonymity.

However, until this procedure has been carried out, the participants are not anonymous, which may deter some participants. In the two case studies, we did not experience any concerns about data security with our sample groups or topics, but topics involving more vulnerable groups or groups that are subjected to persecution or stigma may be less willing to participate when using Google Docs.

When using online interview tools, there is also a risk concerning broader data security especially with sensitive or personal information (Jowett et al., 2011). Some platforms, such as Facebook and chat rooms, store information, even after one's profile is deleted (Picchi, 2018). That information can be misused, leaked or hacked. Google Docs stores the data as long as the Google Document exists and for 30 days after it is deleted (Parker, 2018). But if the data are copied to a secure platform and the Google Docs deleted right after the interview, the risk of data breach is reduced.

The fact that participants are not anonymous and that an email address is required for a Google Docs interview is advantageous when obtaining consent. Online interview tools where participants are 100% anonymous typically pose a problem for consent. This is especially that case when complying with the requirements of the EU General Data Protection Regulation (EU GDPR, 2019) that stipulate that consent must be specific, unambiguous, informed of rights including right to retract consent and that the researcher must be able to prove that consent was given according to the above requirements which underlines the importance of obtaining clearly written consent forms.

Most studies on online qualitative research acknowledge the need for consent, but to our knowledge no studies have specifically examined how this can be done with the stricter requirements of the GDPR (Horrell et al., 2015; Jowett et al., 2011). Consent either needs to

be included within the writing (e.g. within the thread in the chatroom), which is not always possible or realistic, or it must be obtained separately by paper or email, or be audio/video recorded. The researcher must also ensure that participants understand to what they are consenting, which might become lost in an online conversation using only comment features.

Instead, it is recommended to obtain written consent through email prior to the interview, which can pose some difficulty if the participant wants to remain anonymous (Eysenback & Till, 2001). Obtaining an email address for gaining consent can be done at the same time as obtaining an email address for sending a link to Google Docs. Consent forms can be emailed to the participants, having them sign it and return it via email.

Sensitive topics and anonymity

Because both the interviewer and the interviewee were in different locations (Case Study 1) or behind computer screens (Case Study 2), issues of bias between interviewer and participant are reduced, allowing for increased anonymity and confidentiality between the parties. However, this raises the challenge of building rapport with participants (Evans et al., 2010). In Case Study 1, we chose to conduct the interview from separate physical locations resulting in a greater sense of privacy. In Case Study 2, we chose to be in the room with the students when conducting the interviews giving it a feel of being a part of a group. This approach helped create a trusted and relaxed atmosphere. This suggests that it is possible to build rapport, create trust and reduce bias between interviewer and interviewee when using Google Docs.

Across both case studies, we demonstrated that research participants were more able to honestly share their thoughts. In Case Study 1, participants mentioned the seeming

invisibility of the interviewer and how that contributed to a greater sense of privacy. In Case Study 2, although ambition is not a sensitive topic it does carry strong social norms that can deter participants from expressing their real thoughts. East et al. (2008) found that participants may fear appearing as 'socially deviants' in sensitive topics if they subscribe o other views than dictated by social norms. This can be overcome by using a web-based interview method and especially Google Docs as it has the added advantage that no one other than the researcher can see what the participant writes.

Studies that collect information about sensitive topics such as sexual exposure, stigmatised diseases or abusive or discriminatory treatment may be biased if participants give distorted accounts to avoid embarrassment or safeguard their privacy. These types of studies may benefit from the use of a platform such as the Google Docs to provide a greater degree of anonymity and thus yield more truthful answers to sensitive questions. As Case Study 1 required participants to provide sensitive information around discriminatory treatment, the online written Google Docs interviews enabled participants to present a comprehensive picture of discriminatory treatment and the implications that this type of treatment had on their well-being.

Time saving and sample group

As Google Docs interviews are transcribed verbatim immediately while being conducted, there are significant cost and time savings with the added option of conducting multiple interviews simultaneously. For many researchers, in particular PhDs and early career researchers, time and money are common barriers to conducting interviews, especially if more than a few interviews are needed.

Traditional group interviews have a number of limitations, including (a) participants might influence each other's answers (Smithson, 2000), (b) more introverted participants may feel uncomfortable expressing their views in a group (Jones, 2014) and (c) the interviewer risks influencing participants unintentionally via non-verbal cues such as body language (Jones, 2014). Google Docs avoids these disadvantages. From our experience, a maximum of 6–8 participants for a simultaneous interview is advised to allow the researcher to keep track of all of the interview documents at any given time.

Care should be taken with particular samples. Participants should feel comfortable using the Internet and communicating online. Using Google Docs with sample groups such as young or elderly people, people not familiar with the internet, or people who are illiterate has to be considered carefully. The youngest participants in Case Study 2 were 14 years old. Our advice is not to use Google Docs for children under the age of 12–13 as they may not be sufficiently skilled at putting their thoughts into writing. Participants must feel comfortable with written communication. Interviewing sample groups such as people with dyslexia or people who have difficulties expressing themselves in the language of the interview may be better using other online tools or in-person interviews.

Conclusion

In this article, we have described the development of an innovative methodology with which to conduct online qualitative interviews: Google Docs. We have outlined some of the features of the Google Docs and have reflected on the process through two case studies. It is particularly useful when time, financial or geographical constraints create barriers to empirical investigation. Moreover, Google Docs offers other advantages over other web-based technologies including insight into the thinking process of interview participants and

the flexibility to be used completely synchronously as well as asynchronously. The methodology also demonstrated that the method can be used in different ways. It can be adapted to groups as well as individual interviews, and it works at a distance as well as face-to-face. This flexibility means that Google Docs can be considered a viable alternative to the traditional face-to-face and telephone interviews.

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CHAPTER 4.
IMPACT OF CONTEXT ON ADOLESCENT AMBITION

Abstract

We investigate how context might influence adolescent boys' and girls' ambition and the impact of gender role conformity and social status. Adolescent participants (N = 270) reported their ambition in one of three experimentally manipulated contexts: future education, future work, or a control. Boys experienced a significant negative drop in ambition in a future education context versus control. There was no difference for girls. Gender role conformity moderated the effects for boys such that the more conform, the less ambitious in an educational context. There was no moderating effect for girls. Social status had no moderating effect. Explanations are discussed, including how negative academic gender role stereotypes may affect boys' ambition and the importance of addressing boys' cultures at school.

Keywords: Ambition, gender similarities hypothesis, gender role conformity, negative educational stereotypes, adolescents

Introduction

Research on adolescent ambition shows conflicting results when it comes to gender differences. As such, Duckworth and Seligman (2006) concluded that girls are more ambitious than boys because they get higher grades. On the other hand, Jerrim et al. (2020) believed that boys are more ambitious than girls because boys are more likely to enter elite universities. Most recently, Bygren and Rosenqvist (2020) found no gender differences between adolescent boys and girls when it comes to the level of education—the higher the level, the more ambitious for both genders. Research on ambition in adults shows similar conflicting results. Women are believed to be less ambitious than men because they have lower managerial intentions (van Vianen & Keizer, 1996), but at the same time believed to be more ambitious as they are more likely to desire promotion than men (Strovik & Schøne, 2008).

Ambition is mostly defined in terms of educational and work attainments such as the willingness to work full-time and the type of work preferred (Dick & Hyde, 2006; Hakim, 2000), the desire for promotion and professional future (Ashby & Schoon, 2010), the desire for top universities (Jerrim et al., 2020), the level of grades (Duckworth & Seligman, 2006) or managerial intentions (van Vianen & Keizer, 1996). It is thus evident that ambition research is very much focused on educational and work contexts. Results from qualitative and quantitative studies have found that ambition might be subjected to contextual influences (e.g. Abouzahr et al., 2017; Harman & Sealy, 2017; Pisinger et al., 2019), but to our knowledge, experiments on the influence of context on ambition have not been performed before. Perhaps different contexts such as education and work are the reasons, we see conflicting results in ambition research on adolescents. We, therefore, ask: If context is made salient will that change how boys and girls score on ambition?

Influence of context on ambition

Hyde (2005) conducted a meta-analysis of gender studies and presented the gender similarities hypothesis: that men and women are more alike than different and that whenever gender differences occurred it was due to the context. Hyde found that gender roles and social context strongly determined a person's actions and that this is true for both men and women. This has also been shown to be true for competition, risk taking, negotiating, and confidence (Amanatullah & Morris, 2010; Gneezy et al., 2009; Meyers-Levy & Loken, 2015).

Looking at ambition, Harman and Sealy (2017) found that corporate cultures influence women's perception of ambition. Here, positive cultures that support women's goals and definition of success had a positive effect on women's ambition levels whereas negative cultures saw a greater number of women opting out of the workplace. Abouzahr et al. (2017) conducted a large survey of 200,000 people and found that women's level of ambition exceeded that of men when entering the labour market, but their level of ambition declined over the first 2 to 4 years of professional life and ended up being lower than that of men. In a study among 27,000 Danish high school students, Pisinger et al. (2019) found that both boys and girls enjoy high school but that boys are more likely to drop out, to take school less seriously, and to get lower grades than girls. Pisinger et al. (2019) concluded that these results most likely stem from boys being less ambitious than girls in an educational context.

A study by Ammassari et al. (2022) found that small differences in a political context combined with perception of gender roles can influence young women's desire to pursue a career in politics. By examining the nascent political ambition of young wing party members, they found that men and women are equally interested in pursuing a non-electoral

political career, but when it comes to elected political positions, men are more interested to pursue these than women (Ammassari et al., 2022) despite being in the same political context. Ammassari et al. (2022) suggest that the reason why young women are less likely to pursue elected political positions is due to gender expectations that women are more likely to be penalized for wanting political power than men and that women are socialized into acting behind the scenes rather than center stage. The study from Ammassari et al. (2022) shows that not only can context be an influence but is also shows the importance of including the influence of gender roles when exploring context as a factor.

Educational vs work contexts

Many Western societies uphold a gender stereotype that expects girls to do well in school, just because they are girls (Miller, 2017; Wolter et al., 2015). This means that both parents, teachers and others have greater expectations and put greater academic demands on the girls. This creates a link between being a girl and doing well in school. Girls who follow this gender stereotype will typically do well in school. On the other hand, the opposite gender stereotype exists more often in relation to boys, that is, that parents and teachers do not have the same expectations that boys are academically oriented or adept (Miller, 2017; Wolter et al., 2015). Boys are therefore not subjected to the same requirements and expectations in an educational setting.

This kind of gender role expectation can easily affect how boys and girls view their level of ambition in relation to school and academic performance. When boys are constantly being met by lower expectations from teachers and parents and being seen as less ambitious than girls in an educational context, it affects their own perception of ambition: they are less academically ambitious *because* they are boys (Zimmerman, 2018). Yu et al. (2020)

examined the link between exam grades and the students' perception of gender roles and their own gender role identity. They found that boys who strongly follow traditional male gender stereotypes get lower grades than students who do not follow gender stereotypes very strictly. This is especially the case when boys experience incongruity between being a student and being masculine (Elmore & Oyserman, 2012); if being academically adept is seen as predominately feminine, then asserting a masculine identity can only be done by not being academically ambitious (Zimmerman, 2018).

In a Swedish study of academic achievement, Skolverket (2006) found that girls from primary school to university level outperform boys academically. The report examined possible explanations for this difference and found that it is partly due to the delayed maturity of boys, partly due to gender role incongruity. Skolverket found that boys experience incongruity between their identity and masculinity perception and the role of being a student in school; boys are expected to be loud, messy and not good at school, and girls are expected to be the opposite.

Though boys are seen as less ambitious when it comes to an educational context, it is the opposite once the students enter a work context. Myklebust (2019) investigated perceived barriers in young Norwegian women who had chosen a nautical education, a very male-dominated field. Myklebust found that it was not the girls' skills or abilities that were questioned in relation to their choice of education, but instead their future role as mothers. The girls were met with expectations that, as women, they naturally have the primary responsibility for their future family and children and thus a responsibility to choose a job where this role expectation can be fulfilled. The girls were not seen as ambitious because they had entered a male-dominated work field, but rather that they would be poor caregivers for not prioritizing children and family.

Research has shown that ambition is seen as a positive trait in men, yet criticized in women. In a professional context, it is common to associate an ambitious woman with descriptors such as “difficult to work with.” In 2003 professor Frank Flynn from Columbia Business School presented half his class with a case study using the name “Heidi” on it and gave half the class the same case study but with the name changed to “Howard” (Katsarou, n.d.). When the students were polled about their impressions of Heidi and Howard, the students rated both as equally competent, but when asked who they would prefer to work for, Howard was almost universally seen to be a more appealing colleague, with Heidi seen to be selfish and “not the type of person you would want to hire or work for.” Leadership research has found that stereotypical masculine perceptions dominate the perception of a leadership role and that it negatively affects women in a work context leading to women being less ambitious about pursuing top managing positions (e.g. Spangsdorf & Forsythe, 2021).

In role congruity theory (Eagly & Karau, 2002) ambition and being ambitious is seen as agentic characteristic, that is, prescriptively male. The examination of gender roles as constructed within this theoretical frame provides insight into the “normative” expectations of the roles that manifest from the constructs. These dimensions provide theoretical context for the expectations that, “a group will be positively evaluated when its characteristics are perceived to align with the requirements of the group’s typical social roles” (Diekman & Goodfriend, 2006, p. 369). Applying this to ambition, it is clear that the male roles and measures of success fall into what Eagly and Karau (2002) categorized as “agentic.” However, women tend to either self-select into, or be encouraged into roles that are more social, what the researchers categorized as “communal” which includes being concerned with the welfare of others and a tendency toward being affectionate and nurturing.

Although we know that not all men can be described as being agentic and that not all women feel comfortable in roles categorized as communal, Eagly and Karau argue that these bifurcated roles are innately gendered, thereby causing gendered implications when applied in educational, professional, or research contexts. According to this approach, if both men and women consider being ambitious to fulfill an agentic role, and lack examples that support communal roles, women must either co-create their gender and ambition identity (Faulkner, 2001) or approach their work with pre-determined congruities existing between their identities as Sader (2011) observed. However, the gender similarities hypothesis would argue that the agentic role of being ambitious may differ depending on the context as well as how likely a person is to conform to gender roles. It is acceptable for girls to be ambitious in school but not at work and the opposite for boys. The role of being ambitious thus may change depending on the context in which ambition is expressed.

Gender role conformity as moderator

According to social role theory (Eagly & Wood, 2016) differences observed between men and women are the result of a combined impact of socialization, gender stereotypes, gender roles, and physical differences that direct the behavior of men and women. Expectations about gender roles and the behaviors expected from women and men influence people to adhere to gender stereotypes. Gender roles and gender stereotypes are learned and internalized through socialization where children learn which behaviors are considered to be appropriate or inappropriate in society. Adolescence is a critical period in which gender attitudes and behaviors intensify and new gender roles emerge (John et al., 2017). As roles are cognitive schemas that are associated with specific goals and expectations that organize

and guide individuals' perception and preferences, the social roles individuals assume affect their choice of goals and motivation (Arieli et al., 2020).

Gender role conformity is the act to which men and women conform to the prevailing gender norms in society (Kachel et al., 2016). In Western societies, conformity to feminine roles has been linked to characteristics and behaviors such as caring for others, modesty, domesticity, passivity, and communal behavior (Eagly & Wood, 2016; Kachel et al., 2016) and masculine roles has been linked to characteristics such as assertiveness, risk-taking, dominance, and competition (Kachel et al., 2016; Mahalik et al., 2005). According to Eagly and Crowley (1986) and Hyde (2005) contexts can yield men and women to adapt their behavior according to what is expected of them in that context.

Yet, in her study, Fuller (2009) found that context alone does not necessarily make a difference for the behavior of girls. Fuller (2009) followed three groups of high school girls from a working-class area in the UK. She concluded that how the girls were received and viewed at school only partly influenced their educational and future occupational choices; the amount of emotional support from their families and the girls' self-identification were equally responsible for how they perceived the school environment and, thus, their ambitions. Fuller (2009) found that low aspiring girls were more likely to identify with traditional gender roles of motherhood and being with a partner to be giving them status rather than educational achievements, thus for these girls following a traditional gender role was more rewarding than pursuing education. Middle aspiring girls also identified with more traditional gender roles of motherhood and family but from a point where they wanted to combine family life with a job. They were predominately focused on traditional female-dominated occupations such as nursing, teaching, and social care. High aspiring girls, on the other hand, were more likely to identify with their future occupations seeking to enter

university and getting high-paid jobs to be more self-sufficient and economically independent. In all, gender role conformity was the driving factor of the influence of the educational context just in different ways for each group of girls.

Both Yu et al. (2020) and Skolverket (2006) found a link between gender role identity and academic performance in young students and that this influences how the students view themselves in terms of ambition. Yu et al. (2020) observed that students who adhered to traditional gendered ideals in terms of behavior and appearance were more likely to emphasize the importance of status than students who were less concerned about gendered roles or ideals. A study by Van Grootel et al. (2018) concluded that teenage boys who do not really want to exhibit stereotypical masculine behavior often feel pressured to conform to social expectations of masculine behavior, primarily because they believe that their classmates expect them to. Thus, boys who would rather be bookish can end up appearing as lazy and disruptive students who do not bother with school or homework because they believe that this behavior is expected of them or that the behavior gives them status in class.

Carter et al. (2019) found that men are more likely to conform to gender roles than women. The ability to violate gender-role norms does not seem to be the same for men. Instead, men may be pressured to comply with most gender norms because they could otherwise run the risk of having their masculinity questioned, which could put their social status in jeopardy (Vesciuo et al., 2010). Powerful individuals are "more guided by activated constructs" (Guinote, 2010, p. 159) such as social norms. The relationship between power and masculinity can be an explanation for why men, in general, attempt to retain power to maintain their identity (Schultheiss et al., 1999, 2003, 2005; Sellers et al., 2007). If we expect that ambition will change due to context, does conformity to gender roles then

moderate the relationship between context and ambition? For example, will boys who conform less to gender roles yield similar results to that of girls in an educational context?

Social status as moderator

Studies on goal achievement have shown that the socioeconomic status (SES) of parents is a significant factor in the types of goals young students choose (Giota & Bergh, 2021) and that socioeconomic factors such as parents' educational level and income can affect how adolescents perform academically (Jamil de Montgomery & Sievertsen, 2019), their adult earnings (Ashby & Schoon, 2010), and their choice of education or future job (Carneiro & Heckman, 2003). In a British study from Sabates et al. (2011) adolescent ambitions (educational and occupational expectations at 16 and educational and occupational attainment as adults) were shaped by socioeconomic factors in childhood. As such, the majority of adolescents with high and aligned ambitions belonged to the highest social classes. However, this may be due to social stratification in the UK with high-income parents being able to afford private tutoring, good private schools, and university tuition fees benefiting their children to have a better alignment between educational expectations and adult attainments. However, in Scandinavian countries there seems to be a paradox in that despite comprehensive social security systems and education free of charge, the countries still see great inequalities in educational and occupational achievements among adolescents from low socio-economic backgrounds (Holm & Jæger, 2007). In their study, Holm and Jæger (2007) found that, in a Danish setting, using only economic stratification as explanation is not plausible. Rather the inequalities in achievement between different social groups must be viewed from both economic, social, and cultural capital, where social and cultural capital are the non-monetary background factors. They suggest that when examining

achievement of goals, perception of one's social status is a better approach than parents' income levels. This is in line with the findings of Keller and Zavalloni (1964) who found that wealth is not a good measure of ambition as people have access to different resources and may not perceive the attainment of wealth as possible. We are therefore curious to learn whether social status moderates the relationship between context and ambition so that the higher the social status the less influence of context.

The current study

As the influence of an educational versus work context has not been examined experimentally before, especially not in young students, we have chosen to conduct a 2 × 3 factorial experiment with Danish high school students. The dependent variable is ambition. The independent variables are 1) Context with three levels: future education, future work, and control group, and 2) Gender of participants: male, female. The control group was not presented with a context, but instead an unrelated task. The moderator variables are conformity to gender roles and social status, both treated as continuous scales.

In the experiment we want to examine the following hypotheses:

H1: When future education context is made salient, we expect girls to have a higher score and boys to have a lower score on ambition than the control group.

H2: When future work context is made salient, we expect boys to have a higher score and girls to have a lower score on ambition than the control group.

H3: The relationship between context and ambition will be moderated by conformity to gender roles such that the influence of context on ambition will be weaker for those who do not conform to traditional gender roles.

H4: The relationship between context and ambition scores will be moderated by social status such that the influence of context will be weaker for those students that come from high social status backgrounds.

Materials and Methods

Five Danish high schools participated in the study during the Fall of 2021. Classes were selected at random at each school and an online questionnaire was then distributed to the students. The manipulated variable (future education, future work, control) was randomized in the questionnaire so that no one, including the researchers, would know which group (education, work, control) the students would be assigned to. The online questionnaire was created using the survey program Qualtrics. In the findings of Eagly and Crowley (1986) and Hyde (2005) social influences through the presence of others within the chosen context are believed to drive changes in behavior in men and women in that context. We, therefore, decided to mimic this social influence by carrying out the experiments in the classrooms at the schools and have the researcher present while the students completed the questionnaire.

Participants

Power analysis in G*Power v3.1 revealed a minimum sample size for this study was 200 respondents for an experiment with two independent variables and one dependent variable. The data collection resulted in 282 responses. Incomplete responses were left out of the study. The current study thus has 270 participants (46.7% boys, 53.3% girls, 0% non-binary, 0% did not wish to inform). 97.4% are between 14 and 22 years of age (M = 16.9, SD = 3.2) and 2.6% are over 22 years of age. The students represent different types of

Danish high schools with 18.9% from 9th-grade high school, 24.8% are from HF (higher preparation exam), 28.9% are from STX (general high school exam), 9.6% are from HTX (technical high school exam), and 17.8% are from HHX (mercantile high school exam).

The three experimental groups consisted of 92 students in the control group (48 male, 44 female), 89 students in the future education group (40 male, 49 female), and 89 students in the future job group (38 male, 51 female).

Ethical considerations

No incentives were used to encourage participation. The online questionnaire contained a page with information and a consent form to which the participants actively had to give consent in order to proceed to the questionnaire. The students were 100% anonymous in the questionnaire as no personal information was collected. For students under the age of 18, the schools informed the parents about the study, however, the students participating in the study provided their own consent.

Before the students were given a link to the questionnaire, they were informed about consent, the option to decline participation, and that they could withdraw from the study at any time without consequences. The students were also informed about anonymity and confidentiality.

Some deception was used when presenting the experiment to the students. The students knew that they took part in an experiment and that it was about ambition. However, we did not disclose that we wanted to examine whether context or conformity to gender roles influence the students' scores on ambition as we did not want to make this salient to the students to avoid contaminating the responses. We also chose not to disclose this

information in the debriefing document as we did not want the students to share this knowledge with other students who were to participate in the experiment at a later date.

Measures

The measures of the questionnaires were presented in a specific order to ensure that context would act as the manipulating factor. The questionnaire contained questions about type of school, age and gender as well as social status, conformity to gender roles and ambition scale.

Social status. A Danish-translated version of the youth version of the Subjective Social Status scale was used in this study to measure the participant's subjective perception of social status in society (Steen et al., 2020). This instrument consists of a 10-rung ladder with instructions. Cronbach's alpha for this measure is not available, but several studies have found good test-retest results (e.g. Giatti et al., 2012; Ritterman et al., 2009).

We analyzed the scale as a continuous variable. The instruction for the questionnaire used for the ladder measuring social status in society was as follows:

> "Imagine that this ladder pictures how the Danish society is set up.
>
> At the top of the ladder are the people who are the best off – they have the most money, the highest amount of schooling, and the jobs that bring the most respect.
>
> At the bottom are people who are the worst off – they have the least money, little or no education, no job or jobs that no one wants or respects.
>
> Now think about your family. Fill in the circle that best represents where your family would be on this ladder."

Conformity to gender roles. Kachel et al. (2016) developed the Traditional Masculinity-Femininity scale (TMF) which is a one-dimensional measure of conformity to gender roles. The advantage of the TMF is that it is measured on a global level and not by various specific indicator items. Different from other masculinity-femininity gender role scales such as Bem's Sex Role Inventory (Bem, 1974) and the Conformity to Feminine Norms Inventory (Mahalik et al., 2005 and Conformity to Masculine Norms Inventory (Mahalik et al., 2003) which infer masculinity-femininity from the degree of affirmation of specific traits and behaviors, the TMF aims to directly assess masculinity-femininity. The TMF is thus independent of specific stereotype content regarding masculinity and femininity that depends on culture and time (e.g., ambitious as masculine, caring as feminine). The TMF consists of six items only: One for gender-role adoption ("I consider myself as . . ."), one for gender-role preference ("Ideally, I would like to be . . ."), and four for gender-role identity ("Traditionally, my 1. interests, 2. attitudes and beliefs, 3. behavior, and 4. Outer appearance would be considered as . . .") to measure an individual's gender role self-concept in a parsimonious way. The 6 items are measured on a 7-point Likert scale ranging from 1 (*Mostly masculine*) to 7 (*Mostly feminine*) and have shown to have a Cronbach's α from .89 to .90 (Kachel et al., 2016).

Context. The manipulated variable was designed to make context salient. The variable contained three conditions: Condition A (future education context), Condition B (future work context), and Condition C (an unrelated task). Condition C was used as control. Condition A and B consisted of a task asking the students to describe a future higher education school day or future work day. The students were only presented with one of the three conditions which were distributed randomly. Condition C was an unrelated task

presenting the students with three optical illusion pictures in which the students were asked to locate the number of faces, horses, and animals.

Ambition. Ambition was measured based on the 6 items developed from the definition provided by students in two studies (the authors, in review) (*I set high goals; I am highly motivated; I strive for success; I see myself as ambitious; I always aim very high; I push myself to set goals that are difficult to reach*). The ambition scale was measured using a 7-point Likert scale with 1 (*Completely disagree*) to 7 (*Completely agree*) and has a Cronbach's α at .90.

Data analysis

We analyzed H1 and H2 using 2 × 3 factorial ANOVAs with ambition as dependent variable, context as independent variable with three levels (control group, future education group, and future work group) and gender of participants as independent variable (male, female). Prior to the ANOVAs we examined Levenes' test for homogeneity of variances for each of the three context groups. We performed post hoc tests using Tukey honestly significant difference as sample sizes are equal. For effect size, we used partial eta squared as recommended by Keppel (1991) as it allows for comparison of effect size with future experimental studies. Partial eta squared values are .01 (small effect), .06 (medium effect), and .14 or higher (large effect) (Keppel, 1991). For H3 and H4 we conducted two moderation analyses using PROCESS (v4.1, Model 1 and Model 3; Hayes, 2018) with ambition as dependent variable, context as independent variable, and for H3) conformity to gender roles, and for H4) social status as moderator variables. For H3 the moderation analysis was carried out on each gender group separately as conformity to gender roles is a

continuum measure in which a low score equals mostly masculine and a high score equals mostly feminine and the level of conformity is therefore opposite for each gender group.

Results

Means and standard deviations can be seen in Table 1 and Table 2.

Table 1: Means and standard deviations for level of ambition for the three context groups

	Mean All students	*SD* All students	*Mean* Girls	*SD* Girls	*Mean* Boys	*SD* Boys
Condition A: Future education	4.75	1.05	4.75	.92	4.75	1.23
Condition B: Future work	5.18	1.06	5.23	1.03	5.12	1.09
Condition C: Control group	5.16	.99	5.03	.98	5.29	1.00

Table 2: Means and standard deviations for social status and conformity to gender roles

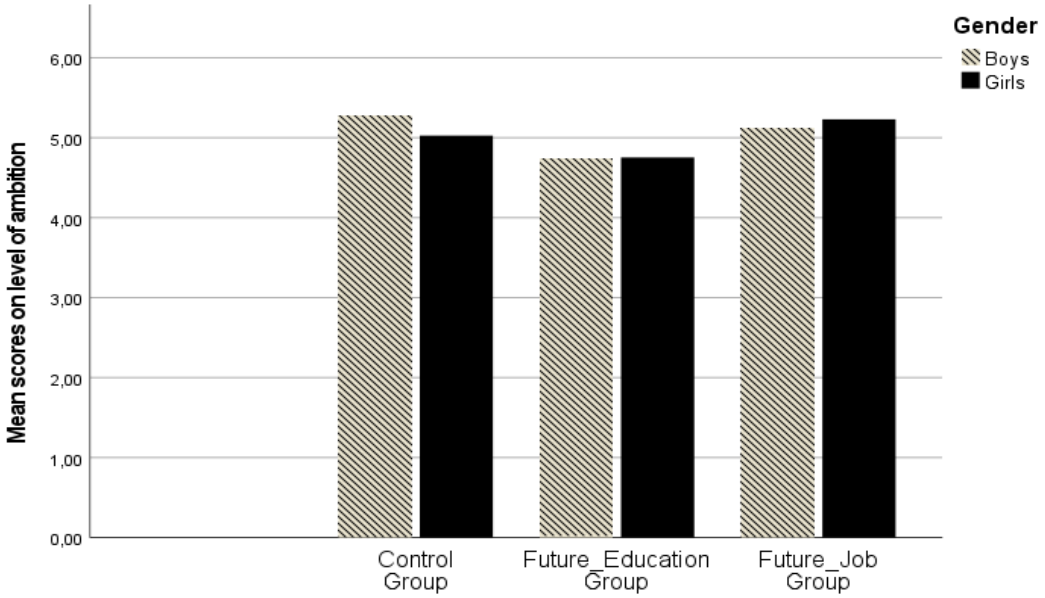
	Mean All students	*SD* All students	*Mean* Girls	*SD* Girls	*Mean* Boys	*SD* Boys
Social status	6.64	1.72	6.49	1.69	6.81	1.75
Conformity to gender roles	3.80	1.91	5.27	1.00	2.13	1.19

Note. The lower the mean for conformity to gender roles, the more masculine. The higher the mean for conformity to gender roles, the more feminine.

First, a factorial ANOVA was conducted to compare the main effects of gender and context (independent variables) as well as their interaction effects on ambition scores (dependent variable). Levene's test of homogeneity was not significant, F (5, 270) = 1.61, p = .16. There was no main effect of gender F (2, 270) = .15, p = .70, and also no interaction effect of context and gender F (2, 270) = .77, p = .46. However, there was a main effect of context F (2, 270) = 4.67, p < .01. The main effect of context yielded a medium effect size of η2 p = .034. Post hoc analysis (Tukey) indicated that the control group (M = 5.16, SD =

0.99) had significantly ($p < .02$) higher ambition scores than the future education group ($M = 4.75$, $SD = 1.05$), but not significantly ($p = .99$) higher ambition scores than the future work group ($M = 5.18$, $SD = 1.06$). To see if there would be differences between the three context groups within each gender, we performed a simple contrasts analysis (one-way ANOVA with spilt file on gender). The analysis showed that for boys there was a significant difference between the control group and the future education group ($p < .05$), but not between the control group and the future work group ($p = 1.00$). For girls, there was no significant difference between the control group and the future education group ($p = .54$) or between the control group and the future work group ($p = .95$) (see Figure 1). The main effect of context is therefore found within the group of boys.

Figure 1: Comparison of mean scores between context groups



Overall, we did not find any gender differences in ambition scores between the three context groups meaning that H1 and H2 cannot be accepted. However, we found a

significant difference within the group of boys between the control group and the future education group. This difference is mainly driven by boys' high ambition scores in the control group.

We then examined H3 to see if conformity to gender roles moderated the effect of context such that the effect of context will be weaker for those boys and girls who do not conform. The moderation analysis was carried out on each gender group separately and showed that the relationship between context and ambition scores was not moderated by conformity to gender roles for girls in either the future education group $b = 0.21$, 95% CI [−0.48, 0.35], $t = -0.30$, $p = .76$, or in the future work group $b = 0.19$, 95% CI [−0.30, 0.49], $t = 0.46$, $p = .64$ when compared to the control group. For boys there was no moderation effect in the future work group $b = 0.19$, 95% CI [−0.31, 0.42], $t = 0.29$, $p = .77$, however, we found a moderating effect of conformity to gender roles in the future education group $b = 0.23$, 95% CI [−0.97, −0.05], $t = 2.18$, $p = .03$ compared to the control group such that the more conform (i.e. the more masculine), the lower the ambition level. H3 is therefore partially accepted.

Finally, for H4, we performed a similar moderation analysis to see if social status moderated the effects of context such that the effect of context will be weaker for those boys and girls who come from a high social status background. The moderation analysis showed that the relationship between context and ambition scores was not moderated by social status, $b = 0.23$, 95% CI [−0.14, 0.60], $t = 1.22$, $p = .23$, and that a combined moderation effect of gender and social status did not affect ambition scores in either the future education group, $b = 0.09$, 95% CI [−0.27, 0.45], $t = 0.48$, $p = .63$, or in the future work group $b = -0.14$, 95% CI [−0.49, 0.20], $t = -0.81$, $p = .42$, when compared to the control group. H4 can therefore not be accepted.

Discussion

This study examined how context affects ambition scores in adolescents and whether there would be gender differences in the influence of context. We used an experimental approach to explore causality. We argued that girls, when presented with a future educational context, would score higher than the control group, that boys would score lower, and that this would be the opposite for boys and girls when presented with a future work context. We also expected the relationship between ambition scores and context to be moderated by conformity to gender roles such that the effect of context would be weaker for those students who did not conform to traditional gender roles. Lastly, we expected that social status would moderate the relationship between ambition scores and context so that students from a high social status background would be less influenced by context than students from medium and lower social status backgrounds.

Results show that ambition levels are indeed influenced by context, but only within the group of boys in the future education context. In the future work context, there was no difference compared with the control group for either boys or girls. We could not establish an absolute gender difference in the influence of context on ambition. But we found that within the group of boys there is a significant difference between the control group and the future education group. This supports Hyde's (2005) gender similarities hypothesis that boys and girls are more alike than different. Yet, the gender similarity hypothesis states that gender differences in studies are the results of contextual influences. However, despite finding a moderate effect of context, we could not find support for the hypothesis in the sense that context is the source of gender differences. We used the same approach as Eagly and Crowley (1986) mimicking social influence by being present at the experiments as this have shown to be a key element driving gender differences in study results but despite that

we did not find any gender differences in the influence of context, at least not when it comes to ambition in adolescents. One explanation could be that we have used a definition of ambition that is not affected by gender bias in a social context. This is in line with the findings of Zell et al. (2015) who tested the gender similarity hypothesis using a meta-synthesis approach. They found that when it comes to social behavior and personality variables gender differences hardly exist and that the differences are greater within one gender than across genders (Zell et al., 2015). Another explanation could be that, in line with the findings of Fuller (2009), context itself is not the driving force of differences in behavior between men and women, rather it is the self-identification (and conformity) with gender roles that drives these changes which may explain why we found differences within the group of boys despite being subjected to the same educational context.

The effect of context on boys and girls was not moderated by social status. Interestingly, the effect of context on girls' ambition levels was also not moderated by conformity to gender roles, but the more conform boys are to gender roles, the lower they score on ambition in the future education group.

So why are boys affected by gender role conformity in an educational context? A long tradition of research shows that perceptions of masculinity, boy culture, and negative stereotypes about boys' academic ability guide boys' behavior in a school setting. Morris (2012) found how boys' adolescent peer groups disparage academic efforts and endorse school-related rebellion in an attempt to keep up ideas of "a real boy." Epstein (1998) found that boys who are committed to schoolwork get called "queer" by classmates questioning both their masculinity as well as their sexuality. Mittleman (2022) concluded that negative stereotypes depicting working hard in school as feminized and portraying boys as having less academic ability lead not only boys themselves but also parents and teachers to have

lower academic expectations and demand less of boys. Similar negative stereotypes are found in Danish and Scandinavian contexts with studies showing that boys and girls are met with highly gendered expectations in schools (Undervisningsministeriet, 2017). In their study on gender differences in educational attainment, Yu et al. (2020) concluded that boys and girls should not be viewed as two independent groups but rather that differences between the two gender groups are driven by sub-groups within each gender group. Based on their research, they classified boys and girls into seven groups depending on their educational attitude and attainment. Differences in educational attainment are predominately driven by "cool guys" (boys who are very competitive, take risks and are very concerned with their appearance and having success with the girls) and "tough guys" (boys who exhibit an image of being "hard" or "tough" and who come across as confident and assertive) who tend to get very low grades, and by "relational girls" (girls who are not concerned with their appearance and who emphasize relationships with others) and "tomboys" (girls who are not interested in traditional feminine behavior and are often considered "one of the boys") who tend to get very high grades. Yu et al. (2020) recommend that instead of addressing the differences between boys and girls in an educational context, focus should be on the sub-groups of boys and girls who are the source of the large grade differences found between boys and girls.

Another interesting result is the fact that future work context did not affect ambition scores in either boys or girls. This follows the findings of Abouzahr et al. (2017) in which women's level of ambition are high when completing their higher education but declines as they enter the labour market and gain experience with corporate cultures and gender stereotypes in the workplace. Adolescent girls equally show high levels of ambition similar to boys, and this is likely a result of optimistic hopes for the future and the fact that

adolescents have not yet gained experience with a job context and possible gender stereotypes in the work place. Generally, boys and girls have the same expectations about their future work life, but as gender stereotypes become more pronounced with age (younger people are stereotyped less than older cohorts) it has a negative influence on women's ambition levels in adulthood (Lopez-Saez & Lisbona, 2009).

Limitations and future studies

There are three major limitations in this study that could be addressed in future research. First, our study only had boys and girls, but no students identified as non-binary. Examining groups that identify as other than female or male may yield different results of the influence of context on ambition. Nonbinary groups are more often subjected to negative stereotypes (Martin & Thomsen, 2021) that, when combined with stereotypes relating to educational settings, may create a stronger negative impact on ambition. Second, our study focused on gender. However, as context can be highly influenced by social norms, intersectional stereotypes between gender and ethnicity or gender and race can alter the influence of context. For example, in Denmark boys of immigrant parents do worse academically when compared to ethnic Danish boys (Fallesen, 2015: Jakobsen & Liversage, 2010). This could lead to different results within the group of boys as boys of immigrant parents may be even more affected by negative stereotypes pertaining not only to their gender but also their ethnicity. This could benefit from being explored in future studies. Finally, to our knowledge, this is the first study to examine the influence of context on ambition using an experimental method. Previous studies have primarily utilized either qualitative (e.g. Harman & Sealy, 2017; Sools et al., 2007) or correlational methods (e.g. Ashby & Schoon, 2010; Jerrim et al., 2020; van Vianen & Keizer, 1996). There is a need for

more experimental studies to fully understand how context influences ambition positively or negatively in an educational setting including studies among different age groups.

Conclusion and practical implications

The purpose of this research was to examine if a future education or future job context could influence how adolescents score on ambition. Based on the analysis of our experiment, we can conclude that there is no gender difference between boys and girls when it comes to the effect of context on ambition. However, we found an indirect effect of context within the group of boys as a future educational context has a negative effect on boys' ambition scores, whereas there are no differences in ambition scores for girls regardless of context. This supports the gender similarities hypothesis; that boys and girls are more alike than different. But we did not find support for the gender similarities hypothesis that context is the main driver of gender differences. Instead, we found that boys' ambition scores were moderated by gender role conformity so that the more conform the less ambitious in an educational context.

As an educational context can have a negative effect on boys' ambition levels, schools and teachers are encouraged to be aware of the explicit and subtle stereotypes concerning education and academic ability that teachers and students often carry, as well as making these stereotypes explicit to parents. Heyder and Kessels (2015) concluded that teachers' stereotypical perceptions can have great significance for boys. Yu et al. (2020) recommend specifically targeting the sub-groups of boys who are especially affected by masculine gender stereotypes as it has a negative effect on their perception of school and academic attainment. By addressing these kinds of gender role stereotypes both in class and at the school, teachers can work together through peer-to-peer supervision to change pedagogical

and didactic practices aiming at raising ambition levels of these sub-groups of boys in an educational setting.

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CHAPTER 5.
CORRELATION BETWEEN EDUCATIONAL CHOICE AND AMBITION

Abstract

Ambition research within education often assumes that the more ambitious a student is, the more likely the student will be to choose university level educations compared to lower-level educational programs. However, this link between ambition and educational choice has not been explored in detail. We address this lacuna in the context of gender differences in educational choices that fuel the belief that women are less ambitious than men. We report two studies that explore these assumptions through moderation and partial correlations analyses among Danish high school students (N =287) and Danish students in higher education (N = 301). Results show no correlation between educational choice and ambition level in either group of students. However, we found that the reasons for choosing an educational program are different for high school boys compared with adult male students, but we found no differences for girls and women. Findings and possible explanations are discussed.

Keywords: ambition, educational choice, gender, stereotypes, success

Findings on educational choice and ambition (Ashby & Schoon, 2010; Campbell et al, 2020; Jerrim et al, 2020) imply that teenagers who score high on ambition are more likely than their less ambitious peers to enter specific educational programs and occupations. However, if this is the case, we would expect girls to score higher on ambition than boys as more girls in Denmark enter university educations than boys (Kølln, 2020). Recent studies suggest, however, that there are no gender differences in ambition when no specific end-goals are defined (Hirschi & Spurk, 2021; Spangsdorf et al, 2023). This suggest that educational and occupational choices may not be related to ambition levels in an upward progression and may be more nuanced than previously believed.

A second paradox is related to the status of the educational program. Bygren and Rosenqvist (2020) found that Swedish girls generally had a higher application rate for low-status educational programs than boys despite often having higher grades. Being similar to Sweden, we would like to know if this is also true for girls who score high on ambition.

Finally, the gender differences observed in educational choices have a strong link to how success is perceived by boys and girls (Uddannelses- og Forskningsministeriet, 2020). Because adolescence is a critical developmental period where perception of self and identity are formed, teenagers' notions about success is a key element in their construction of their imagined future (Karabanova & Bukhalenkova, 2016). Their understanding of success impacts their goal-setting process while being influenced by gender roles and social norms at the same time (Nielsen & Sørensen, 2004). In a previous study we found that girls more often related success goals to family and friends in combination with education and work especially by comparing themselves with others (other-referent success), whereas boys more often related success goals to wealth and prestige (objective success) (Spangsdorf et al, 2023). We would therefore expect that girls will be more likely to select other-referent

success reasons for their choice of education, and boys will be more likely to select objective success reasons for their choice of education.

Ambition and educational choice

Traditionally, level of ambition is equalled to job level, so that the higher the salary or the higher the hierarchical position of the job, the more ambitious a person is believed to be (Elchardus & Smits, 2008; O'Leary, 1997). This is also the case in educational settings, where the higher the level of education, the more ambitious the person is believed to be (Bygren & Rosenqvist, 2020; Støren, 2011). However, research suggest that young students perceive ambition to be about more than just professional or educational attainment (Epinion, 2022; Spangsdorf et al., 2023) suggesting that educational choice is not necessarily a good indicator of ambition levels. Moreover, the link between educational choice and ambition has so far been assumed, but we do not know if there is a relationship between the two.

Ambition is about striving towards one or more goals that are difficult to reach, that you are passionate about, and to which you believe that you can achieve some kind of success (Hirschi & Spurk, 2021; Spangsdorf et al, 2023). Ambition in education is believed to be important as it can influence key choices and outcomes such as grades, future job prospects, future income, and life satisfaction (Ashby & Schoon, 2010; Duckworth et al, 2007; Jerrim et al, 2020; Judge & Kammeyer-Mueller, 2012; Støren, 2011). If this is true, we would expect educational choice to be correlated with ambition levels.

Regarding gender differences, girls are more likely to achieve high grades in high school allowing them to enter a broader array of higher educational programs from vocational to university educations (Kølln, 2020). Based on this, we would expect that girls

are more ambitious than boys, but research is showing mixed results. Jerrim et al. (2020) used university application plans as measure of ambition and found that amongst British 15-year-olds, boys more often planned on applying for top universities, but that students of both genders with high grades had a higher desire for applying to top universities than students with low grades. In a similar line, Campbell et al. (2020) showed that among university students with the same academic achievement in high school, males and females enrol in university courses with similar academic requirements, but men are more likely to enrol in courses that lead to higher returns in the labour market. Focusing on future income and educational attainment, Ashby and Schoon (2010) found that ambition value predicts adult earnings for males and adult earnings as well as social status attainment for females, though their findings are not divided according to educational choices, only adult income levels.

To our knowledge, no studies on educational choice and ambition have specifically included students that have chosen vocational and lower-level educational programs. Therefore, we do not know whether the above findings only apply to university programs or to all types of higher education. We therefore ask: Are students high in ambition more likely to desire certain educational programs compared to less ambitious students? And is the relationship different for boys and girls?

Perception of status and educational choice

Besides ambition levels, a number of Danish studies indicate that how prestigious an educational program is believed to be can drive educational choice. Students with high grade levels from high school are more likely to pursue higher educational programs that require high grade levels to enter (Uddannelses- og Forskningsministeriet, 2020). Yet, experiments show that students with high grades do not necessarily pursue the education due to an

academic interest (Uddannelses- og Forskningsministeriet, 2020). When entry requirements are changed, the students with high grades switch to other educational programs that have high entry requirements, even if the educational programs do not lead to a higher future income (Uddannelses- og Forskningsministeriet, 2020).

The studies did not differentiate between men and women. However, we would expect there to be gender differences as Denmark has a highly gender-segregated labour market with more women choosing traditional female occupations and men choosing traditionally male occupations (Ministry of Higher Education and Science, 2021; Statistics Denmark, 2019). Generally, Danish women often choose educational programs that lead to lower income or that are considered to be low-status (Nielsen & Sørensen, 2004), but we do not know if there are differences within the group of women so that women scoring high on ambition are more likely to choose educations that they perceive to be of high-status than their less ambitious female peers.

In a Swedish study, Bygren and Rosenqvist (2020) examined if school choice, through its effect on sorting across schools, affected high school graduates' application decisions to higher education. They found that low achievers increased their propensity to apply for the 'low-status' educational programs, on average destining them to less prestigious, less well-paid occupations, and high achievers increased their propensity to apply for 'high-status' educational programs, on average destining them to more prestigious, well-paid occupations. Their study was based on a Swedish reform of school admission. Before the reform, admission was based on residence; students living close to a school had priority in the admission process. After the reform, admission was based on grades; students with high grades were given priority in admissions to schools. A consequence of the reform was that achievement sorting across schools increased dramatically, while socioeconomic and ethnic

sorting was unaltered. After the reform, increased achievement sorting increased girls' likelihood of applying to high-status educational programs in relation to boys, although girls still had a higher application rate for low-status educational programs overall. Denmark has an admission system similar to Sweden, and we would therefore expect that girls who score high on ambition are more likely to select educational programs that they consider to be high-status.

Gender differences in perception of success

The studies from the Danish ministry on educational choices of high school students (Uddannelses- og Forskningsministeriet, 2020) conclude that young students predominately choose their higher education based on objective reasons such as grades, the level of future income, and the status of the educational program. Yet, the results from Bygren and Rosenqvist (2020) indicate that gender expectation and social roles are influencing girls' educational choices as they more often opt for low-status educational programs despite having high grades. Gender differences observed in educational choices have a strong link to how success is perceived as perception of success leads boys and girls to make educational choices that are seen as appropriate for each gender. According to Fels (2004; 2005) and Eagly (1983) men and women have different levels of self-concern and other-concern due to social roles and gender stereotypes. Men are, on average, more concerned about appearing to have high status and may be able to demonstrate this status by acting independently from the opinions of others. On the other hand, women are, on average, more concerned with connecting to others and maintaining group harmony. The strong influence of others on girls' educational choice is also found in a Danish study by Nielsen and Sørensen (2004) who concluded that the educational choices among young Danish students are heavily

influenced by gender stereotypes leading to the highly gendered labour market found in Denmark.

In a similar line, Keller and Zavalloni (1964) argue that traditional standards of success such as income levels or professional aspirations cannot be used as measures of individual ambition as they may not be equally accessible for all people, and that this type of measurement does not take into account the different social evaluations placed on the success desired due to social class differences.

Heslin (2003) describes that objective career success is most often measured by measurable attainments such as pay, promotion, position, and work performance (objective success). This reflect the traditional definition of ambition in which ambition is seen as striving for objective success measures. Heslin (2003) found that people evaluate their career success partly according to their own expectations and values (self-referent), but that they also compare their level of success against others (other-referent), either against specific people or the cultural social norm. This is very likely also to be the case for educational choices.

The findings of Heslin are supported by a study from Danmarks Evalueringsinstitut (2019) showing that between 80-90% of students in higher education gave subjective success reasons for choosing their educational program. The study did not differentiate between men and women, but it indicates that personal interest and aim for mastery are strong motivators in the decision-making process combined with factors of objective and other-referent reasons.

None of the studies on educational choice have adopted a gendered perspective, but based on the findings of Bygren and Rosenqvist (2020), Fels (2004; 2005) and Eagly (1983), we would expect that boys are more likely to have objective success reasons for their

educational choice, and girls are more likely to have other-referent success reasons. Our studies will therefore explore whether we will find gender differences in success reasons for their educational choice.

Although the findings of Uddannelses- og Forskningsministeriet (2020), Bygren and Rosenqvist (2020), and Nielsen and Sørensen (2004) are interesting, there is one major weakness: they are all based on high school students that have not yet entered higher education. The students have responded with the kind of educational program they hope to enter. Thus, their answers can be considered somewhat hypothetical and not reflect their actual choice which may alter their responses. We have therefore chosen to conduct two studies: one among high school students, and a replicated study with an older group of students who have already entered higher education. Doing so, allows us to examine whether our findings only relate to high school students or whether they are also applicable to young adults.

The current studies

Together this leads to the following questions and hypotheses: Is the type of educational program related to ambition level? And is this moderated by gender? Are highly ambitious girls more likely to choose high-status educations than their less ambitious female peers? And are boys more likely to have objective success reasons for their educational programs compared to girls?

Hypotheses:

1. Level of ambition will be associated with the type of educational program such that the longer the educational program, the higher the level of ambition. This

relationship will be moderated by gender, such that it is stronger for boys/men than for girls/women

2. Girls/women who score higher on ambition are more likely to choose educational programs that they perceive as being high-status than girls/women who score lower on ambition.
3. Boys/men are more likely to have objective success reasons for their educational program whereas girls/women are more likely to have other-referent success reasons. There will be no gender differences in subjective success reasons.

Study 1

Methods

Study 1 was conducted as a survey study using an online questionnaire created in Qualtrics. Ambition was used as independent variable, choice of education as dependent variable and gender as moderator.

Participants

The study had 287 participants (34.7% boys, 64.5% girls, 0.7% non-binary, 0.3% did not inform about gender) from six Danish high schools (all public schools and co-ed). Ages were between 16 to 22 (M = 17.6, SD = 1.25). A priori test in G*Power 3.1 showed that with a power of 95% (two-tailed) and effect size set to .25, the minimum sample size should be between 180 (for correlation analysis) to 260 (for moderation analysis).

Ethical considerations

The questionnaire was distributed using an online anonymous link. The link was distributed through school emails and intranet and social media platforms. The online questionnaire contained a page with information and a consent form to which the participants actively had to give consent in order to proceed on to the questionnaire. The students were 100% anonymous in the questionnaire as no personal information was collected. According to the European General Policy Data Regulations, it is possible for young people from the age of 13 and up to give consent to participate in online questionnaires without obtaining consent from parents. An incentive was used to encourage participation. At the end of the questionnaire the participants had the choice to participate in a lottery of three gift vouchers. Consent for this had to be given specifically. Name and email address for the lottery was obtained but kept separate from the survey responses so the participants' answers remained anonymous. The data collection procedure was approved by the Psychology Ethics Committee at Exeter University before data collection.

Measures

The questionnaire contained questions about age, gender, and social status as well as their educational choice and ambition levels.

Social status. According to Keller and Zavalloni (1964) how you perceive your level of ambition can be influenced by your social status and what you perceive as possible based on your social stand e.g. if you come from a low social status, you may think that you are less likely to achieve grades high enough to enter prestigious educational programs so you opt for other educational programs. In fact, this effect has shown to be higher in Denmark compared to all other Nordic countries (OECD, 2010). To make sure that the influence of social status does not affect our results in this study, we have chosen to control for social

status in the analyses. We used a translated version of the youth version of the Subjective Social Status scale to measure the participant's subjective perception of their social status in society (Steen et al, 2020). This instrument consists of a 10-rung ladder with instructions. Cronbach's alpha for this measure is not available, but several studies have found good test-retest results (e.g. Giatti et al, 2012; Ritterman et al, 2009). We analysed the scale as a continuous variable. The instruction for the ladder measuring social status in society was the following:

> *"Imagine that this ladder pictures how the Danish society is set up.*
> *At the top of the ladder are the people who are the best off – they have the most money, the highest amount of schooling, and the jobs that bring the most respect.*
> *At the bottom are people who are the worst off – they have the least money, little or no education, no job or jobs that no one wants or respects.*
> *Now think about your family. Fill in the circle that best represents where your family would be on this ladder."* (Steen et al, 2020, p. 3)

Educational choice and perception of status of education. We asked the students about which educational program they would like to pursue after finishing high school. For vocational students, we asked them to write the education that they had already entered and hope to complete. The answers were then coded into categories regarding the overall length of educational program combined with the number of entry requirements so that the longer the program and the more entry requirements the higher the number: vocational programs coded as 1, short-cycle higher education programs coded as 2, medium-cycle higher education programs coded as 3, and long-cycle higher education programs coded as 4. We also asked the students to score their own perceived status of their chosen education from 1

(Very low status) to 10 (Very high status) and to score how they think others would score their chosen education when it comes to status using the same scale from 1 to 10.

Reasons for choosing educational program. We also asked the students about their reasons for wanting to pursue their selected educational program by rating 15 statements on a 5-point Likert scale with 1 (Not at all true) to 5 (Very much true) (see Table 1). 12 of the 15 statements are based on three different types of success – self-referent, other-referent, and objective success (Gallup, 2019; Heslin, 2003; Jensen & Towle, 1991). The remaining 3 statements are not related to perception of success, but are often found as reasons for choosing certain educational programs among some students (Danmarks Evalueringsinstitut, 2019).

Table 1: Reasons for choosing educational program based on perception of success

Statement	**Type of success**
I enjoy this field of interest	Subjective success
The social environment at the school	Subjective success
I want to become a more educated/knowledgeable person	Subjective success
This educational program makes me happy	Subjective success
I aim to make my family happy and proud	Other-referent success
I would like to be a role model	Other-referent success
Because the educational program is popular	Other-referent success
Because this educational program requires higher grades than others	Other-referent success
Because the educational program is prestigious	Objective success
The education gives me good chances of high earnings	Objective success
The education provides me more career opportunities	Objective success

This education allows me to enter positions that are high-status	Objective success
I wish to increase my chances of entering another education	Other
The geographical placement of the educational program	Other
The program was recommended to me	Other

Ambition. We measured ambition based on the 6 items found in two studies (Spangsdorf et al, 2023) (*I set high goals; I am highly motivated; I strive for success; I see myself as ambitious; I always aim very high; I push myself to set goals that are difficult to reach*). The ambition scale was measured using a 7-point Likert scale with 1 (Completely disagree) to 7 (Completely agree) and has a Cronbach's alpha at .90.

Results

The data analysis consisted of three steps: For H1, we performed a moderation analysis using PROCESS (v4.1, Model 1; Hayes, 2018) to examine if the relationship between ambition and educational choice is moderated by gender. The dependent variable was type of educational program (treated as continuous). Type of education was treated as a continuous variable based on a combination of length of program and the entry requirements such that vocational programs were given 1 as they have the fewest and lowest requirements for admission, short-cycle programs were given 2, medium-cycle programs were given 3, and long-cycle educational programs which typically are longer and have the most requirements for admission were given 4. The independent variable was level of ambition (continuous), gender was the moderator variable (female/male), and social status was controlled for.

For H2, we performed a partial correlation analysis to examine if girls who score higher on ambition are more likely to choose educational programs that they perceive as being high-status than girls who score lower on ambition. The two variables were own perception status of education (continuous), and educational choice (continuous). The control variable was others' perception of status. This approach was chosen because the two perceptions of status were given by the same participant. We would therefore expect that other's and own perception of status would be closely related.

Finally, for H3 we performed independent samples t-tests to examine if boys would be more likely to choose objective success reasons than girls, and if girls would be more likely to choose other-referent reasons than boys. The dependent variable was reasons for choosing educational program treated as continuous. The reasons were divided into four groups (subjective reasons, objective reasons, other-referent reasons, other reasons) and treated as four separate variables. The independent variable was gender (male/female). The analyses for H2 and H3 were carried out in SPSS (v28).

Means and standard deviations can be seen in Table 2.

Table 2: Means and standard deviations

	Mean All students	*SD* All students	*Mean* Girls	*SD* Girls	*Mean* Boys	*SD* Boys
Ambition scores	5.13	1.16	5.17	1.06	5.11	1.27
Type of education/ educational choice	2.90	1.48	3.06	1.42	2.61	1.55
Other's perception of educational status	7.00	1.83	7.20	1.71	6.62	2.00
Own perception of educational status	7.71	1.55	7.53	1.45	7.16	1.70
Subjective reasons for educational choice	3.82	.73	3.89	.71	3.69	.75
Objective reasons for educational choice	3.18	1.06	3.21	1.04	3.12	1.12

Other-referent reasons for educational choice	2.51	.87	2.54	.90	2.47	.82
Other reasons for educational choice	2.48	1.04	2.49	1.71	2.44	.98

Note: SD = standard deviation

The moderated regression analysis showed that ambition scores were not associated with the type of education, b = .25, $t(271)$ = .96, p =.33, meaning that boys and girls who choose higher level educational programs were not more ambitious than their peers choosing vocational educational programs. We also did not find an interaction effect between gender and level of ambition b = -.06, $t(271)$ = -.36, p = .72. Because status seeking is often associated with ambition, we decided to conduct two more moderation analyses to examine if we would find a relationship between educational choice and the perception of status and whether this would be moderated by gender. As with ambition, we found no association between own perception of status and educational choice, b = .28, $t(278)$ = 1.53, p =.13 and no moderation effect either, b = .-.05, $t(278)$ = -.45, p =.65. We also did not find an association between the perception of status of others and educational choice, b = .26, $t(277)$ = 1.79, p =.08, and no moderation effect of gender, b = -.03, $t(277)$ = -.34, p =.74 H1 was therefore not supported.

For H2, we wanted to examine if girls who score higher on ambition are more likely to choose educational programs that they perceive to be of high-status than girls who score lower on ambition while controlling for the influence of status perception of others. First, we divided the group of girls into two sub-groups: high ambition girls and low ambition girls. High ambition girls had an ambition score of 4.6 or higher. Descriptive statistics are presented in Table 3. Second, we conducted a partial correlational analysis to explore the relationship between own status perception and educational choice, while controlling for others' status perception. Preliminary analyses were performed to ensure no violation of the

assumptions of normality, linearity and homoscedasticity. For low ambition girls, there was no correlation between own status perception and educational choice when controlling for others' status perception, $r = .002$, $p = .98$. An inspection of zero-order correlation ($r = .09$) suggested that controlling for others' status perception had no effect on the strength of the relationship between these two variables. For high ambition girls, there was no significant correlation between educational choice and own status perception ($r = -.012$, $p = .91$) when controlling for others' status perception. If others status perception is the principal determinant of educational choice, the partial correlation should not be significant. The results suggest that own status perception is unrelated to educational choice when controlling for others' status perception in both high and low ambition girls. An inspection of zero-order correlation ($r = .19$, $p = .01$) suggested that other's status perception is the main driver of the relationship among high ambition girls. We can therefore not accept H2 as girls who score higher on ambition are not more likely to choose educational programs that they *themselves* perceive to be of high-status compared with low ambition girls, but rather that high ambition girls are more likely to choose high-status educational programs that they believe *others* see as high status.

Table 3: Means and standard deviations for high and low ambition girls

High ambition girls	Mean	Standard deviation	*N*
Own perception of educational status	7.86	1.32	102
Others' perception of educational status	7.47	1.67	102
Educational choice	3.18	1.33	102
Low ambition girls			
Own perception of educational status	7.19	1.43	75

Others' perception of educational status	6.84	1.65	75
Educational choice	3.00	1.47	75

Note: N = number of participants in each group
df for high ambition girls: 100; *df* for low ambition girls: 72

Finally, we examined if boys were more likely to have objective success reasons for choosing their educational program and if girls were more likely to have other-referent success reasons. We did not expect to find any gender differences in subjective success reasons.

Independent samples t-tests showed that boys were not more likely to have objective success reasons and girls were not more likely to have other-referent. There was no significant difference in other-referent scores for boys (M = 2.46, SD = .82) and girls (M = 2.54, SD = .90; $t(282) = -.67$, $p = .50$). There was also no significant difference in objective scores for boys (M=3.12, SD=1.12) and girls (M = 3.21, SD = 1.04; $t(282) = -.73$, $p = .46$). Finally, there was no significant difference in other reasons scores for boys (M = 2.44, SD = .96) and girls (M = 2.49, SD = 1.06; $t(282) = -.38$, $p = .70$). However, there was a significant difference in subjective reasons scores for boys (M = 3.69, SD = .75) and girls (M = 3.89, SD = .71; $t(282) = -2.14$, $p < .03$) showing that girls were more likely to have subjective success reasons for choosing an educational path than boys. Effect size for the subjective reasons scores is $\eta^2 = .02$ which indicates a small effect (Cohen, 1988).

Study 2

Methods

The questionnaire, measures, and data analysis were the same as Study 1. The students were asked about which educational program, they are attending. The answers were then

coded into a category regarding the type of educational program similar to Study 1: vocational coded as 1, short-cycle higher education coded as 2, medium-cycle higher education coded as 3, and long-cycle higher education coded as 4.

Participants

The study had 301 participants (38.5% men, 60.5% women, 1% non-binary, 0% did not report gender). Ages were between 19 to 30 (M = 23.8, SD = 2.3). The students represented different types of higher education with 1.7% from vocational educations, 20.6% from business academy educations (short-cycle), 31.2% from college educations (medium-cycle), 26.9% from university bachelor educations (long-cycle), 17.9% from university master's degrees (long-cycle), and 1.7% from other types of higher educations (e.g. police academy) (medium-cycle).

Results

Means and standard deviations of the variables are shown in Table 4.

Table 4: Means and standard deviations

	Mean All students	*SD* All students	*Mean* Women	*SD* Women	*Mean* Men	*SD* Men
Ambition scores	5.10	1.06	5.13	1.05	5.14	1.04
Type of education/ educational choice	2.93	.68	2.90	.66	2.99	.70
Other's perception of educational status	6.62	1.85	6.57	2.04	6.64	1.51
Own perception of educational status	7.04	1.57	6.99	1.69	7.08	1.37
Subjective reasons for educational choice	3.78	.67	3.74	.72	3.82	.58
Objective reasons for educational choice	3.07	1.00	2.99	.98	3.22	1.04

Other-referent reasons for educational choice	2.33	.80	2.30	.80	2.36	.81
Other reasons for educational choice	2.36	.90	2.27	.91	2.49	.84

Note: SD = standard deviation

As with the high school sample, the moderated regression analysis showed that ambition scores were not associated with type of education, b = -.02, $t(293)$ = -.12, p =.90, meaning that men and women who have chosen long-cycle (university programs) were not more ambitious than peers who have chosen vocational, short-cycle or medium-cycle educational programs. We also did not find an interaction effect between gender and level of ambition b = .06, $t(293)$ = .82, p = .41. Similar to Study 1, we also conducted two moderation analyses between status and educational choice. There was no association between educational choice and own perception of status, b = .0005, $t(293)$ = .006, p =.99 and no moderation effect of gender, b = .08, $t(293)$ = 1.53, p =.13. There was no association between status perception of others and educational choice, b = .07, $t(292)$ = .80, p =.42, and no moderation, b = .03, $t(292)$ = .70, p =.48. Level of ambition or status perception were not able to predict type of educational program and the relationship was not moderated by gender. Similar to Study 1, H1 was not supported.

Second, we wanted to examine if women in higher education who score higher on ambition were more likely to have chosen high-status educational programs than women who score lower on ambition according to their own status perception. As with the high school sample we divided the group of women into two sub-groups: high ambition women and low ambition women. High ambition women had an ambition score of 4.6 or higher. Descriptive statistics are presented in Table 5. Then, we conducted a partial correlational analysis to explore the relationship between own status perception and educational choice, while controlling for others' status perception. Preliminary analyses were performed to

ensure no violation of the assumptions of normality, linearity and homoscedasticity. For low ambition women, there was a significant correlation between own status perception and educational choice when controlling for others' status perception, $r = .28$, $p = .005$. An inspection of zero-order correlation ($r = .47$) suggested that controlling for others' status perception had an effect on the strength of the relationship between these two variables. For high ambition women, the results were similar to that of high school girls; there was no significant correlation between educational choice and own status perception ($r = .13$, $p = .24$) when controlling for others' status perception. If others status perception is the principal determinant of educational choice, the partial correlation should not be significant. The results suggest that own status perception is unrelated to educational choice when controlling for others' status perception but only for high ambition women. An inspection of zero-order correlation ($r = .37$, $p < .001$) suggested that other's status perception is the main driver of the relationship among high ambition women. We can therefore not accept H2 as women who score higher on ambition are not more likely to have chosen an educational program that they themselves perceive to be of high-status compared with low ambition women, but rather that, similar to high school girls, high ambition women are more likely to choose high-status educational programs that they believe *others* see as high status. It is, however, interesting that among low ambition women there is a significant relationship between own status perception and educational choice both with and without controlling for the status perception of others. This result is different than for high school girls. For low ambition women both the status perception of themselves and others seem to influence their educational choice.

We can therefore conclude that women in higher education who score higher on ambition are not more likely to choose educational programs that they personally perceive to

be of high-status. What others think of their chosen education, however, does matter. For low ambition women both their own view as well as the view of others matters.

Table 5: Means and standard deviations for high and low ambition women

High ambition women	Mean	Standard deviation	*N*
Own perception of educational status	7.62	1.69	102
Others' perception of educational status	7.08	2.15	102
Educational choice	3.37	1.35	102
Low ambition women			
Own perception of educational status	6.53	1.51	79
Others' perception of educational status	6.19	1.86	79
Educational choice	3.11	1.43	79

Note: N = number of participants in each group
df for high ambition women: 100; *df* for low ambition women: 77

Finally, we examined if men were more likely to choose objective success reasons for choosing their educational program and if women were more likely to choose other-referent success reasons. We did not expect to find any gender differences in subjective success reasons. The results showed that there was no significant difference for any of the scores (see Table 6). This is a different result than found in the high school sample in which we found that girls were more likely than boys to have subjective success reasons for their choice. This gender difference seems to disappear between men and women once they have entered their higher educational program.

Table 6: Results of independent samples t-tests for reasons for choosing an educational program

	Mean Women	*SD* Women	*Mean* Men	*SD* Men	*t-test*
Other-referent success reasons	2.30	.80	2.36	.81	$t(296) = .61$, $p = .86$
Objective success reasons	2.98	.84	3.22	1.04	$t(296) = 1.96$, $p = .88$
Subjective success reasons	3.74	.72	3.82	.58	$t(296) = 1.08$, $p = .06$
Other reasons	2.27	.91	2.49	.84	$t(296) = 2.17$, $p = .18$

General Discussion

The present findings extend current theoretical perspectives on the relationship between ambition and educational choice in several important ways. First, we explored if ambition scores are associated with type of educational program and whether this might be moderated by gender. Our results showed that there is no relationship between ambition scores and type of education and that this relationship is not moderated by gender and that this is true for both high school students and for students already enrolled in higher education. These findings are supported by previous research among adults in the workplace where ambition was found to be more about a general personal disposition rather than being about specific end-goals (Hirschi & Spurk, 2021), and a study among high school students in which findings showed that ambition is not related to specific end-goals (Spangsdorf et al, 2023). Unlike previous studies concluding that students with high grade levels are more ambitious and thus seek high-status educational programs (Uddannelses- og Forskningsministeriet, 2020), we found no relationship between educational choice and

ambition. Our findings instead suggest that educational choice is not a good indicator of ambition levels. Even if ambition is defined to be about seeking high-status, we could not confirm any relationship between status of education and educational choice.

Second, we found that girls who score higher on ambition are more likely to choose educational programs that they believe others see as high status than girls who score lower on ambition. For women, the results were the same for high ambition women as in the high school sample, but not for low ambition women. Women who score lower on ambition are more likely to choose educational programs that they see as high status *and* that they believe others see as high status. This finding extends the results found in the studies conducted by the Danish Ministry of Education and Research (Uddannelses- og Forskningsministeriet, 2020). The ministerial studies found that the general status perception would lead students to select high-status educational programs regardless of interest meaning that the status perception of others is a strong driver for educational choice. The studies did not look at gender, but our study confirms that for girls and women who score higher on ambition, the status perception of others influences their educational choice. Interestingly, for women who score lower on ambition both their own status perception and the status perception of others have a strong influence on their educational choice (though this was not so for high school girls). We are not able to say *when* this influence takes place; it may be in the actual moment of decision or it may be an influence that is perpetuated *after* entering the educational program where the context of higher education may affect how women perceive their educational choice (Abouzahr et al., 2017; Pisinger et al., 2019; Spangsdorf et al, 2023a).

Finally, we found that boys are not more likely to report objective success reasons for their educational program than girls, and girls are not more likely to report other-referent

success reasons. However, we did find a gender difference in subjective success reasons in that girls are more likely to report subjective success reasons than boys. It may be tied to the gender stereotypes of education: that girls are expected to do well in an educational context and therefore have adopted success reasons within all three types of success when choosing an education (Miller, 2017; Wolter et al, 2015). Boys, on the other hand, are not met by the same expectations when it comes to education and, as pointed out by Eagly (1983), the breadwinner stereotype may still be very much alive pushing boys to primarily choose objective and other-referent success reasons when choosing an education. Or it may be that it is not accepted for women to only choose educations based on purely objective and other-referent reasons as these can be seen as selfish, but are acculturated into also having subjective reasons focusing on mastery and personal development in line with the findings of Fels (2004; 2005), Sools et al. (2007), and Verstreaten (2017). For adult students there are no gender differences in either other-referent, objective or subjective reasons. Subjective reasons for the educational choice become just as important for adult male students. This is different than high school boys to whom subjective reasons were not relevant in their educational choice. This change may be due to age and maturity making adult male students focusing more on what they want to achieve from an education. Or it may be that once their educational choice have been made, other elements than objective success become important.

Limitations and future studies

Although the study employed correlational data across all types of high schools and higher education levels, several limitations should be considered. The sample was Danish potentially limiting the generalizability of findings to other cultural populations, especially

concerning the possible influence of gender stereotypes and how different educational programs are perceived in terms of status. Gender stereotypes and gender roles are not universal but moderated by cultural values. In individualistic cultures, such as the Danish, individualistic traits are predominately viewed as masculine, however, in collectivist cultures, communal behaviour is more often viewed as masculine whereas individualistic behaviour is viewed as feminine (Cuddy et al, 2015). This in turn affects how educational programs are viewed and, in the end, influences young people's educational choices (Nielsen & Sørensen, 2004) In future studies it would be desirable to replicate these findings in more culturally diverse samples. Further, although we found a change in subjective success reasons between high school boys and older male students, we are not able to say when or in which ways these changes occur. Future research should explore if the changes occur gradually with age or in the decision-making moment of educational choice, or whether the change happens after enrolment in higher education. Finally, although we did not find a direct correlational relationship between ambition and educational choice, it does not rule out that other factors may act as moderators between ambition and educational choice. Future studies could benefit from exploring possible moderators such as gendered perceptions of educational programs (Epinion, 2022) and how these may affect educational choices.

In sum, educational choice is not a good indicator of ambition levels in young students. By equating educational choice and ambition, schools can end up sending a negative message to students who desire vocational or short-cycle educational programs that they are not viewed as ambitious which in turn may influence the students' motivation negatively. In research, equating ambition with educational choice can lead to inaccurate

results as our study shows that there are many reasons driving the educational choice, rather than how ambitious you are or whether you are seeking high-status educations or not.

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CHAPTER 6.
SUMMARY OF FINDINGS AND CONCLUSION

We began this thesis with the aim of providing a better understanding of how adolescents define ambition and to examine possible gender differences in adolescent ambition. More specifically, we aimed to investigate the way adolescents define ambition and use their definitions of ambition to explore (a) the influence of context on ambition, (b) the relationship between ambition and educational choices, and (c) any gender differences that may exist. In this final chapter, we will summarise, integrate, and discuss our findings, their theoretical and practical implications, and their limitations. We will start by summarising the findings and discussing the contributions they have made to our aims of furthering our understanding of adolescent ambition. Next, we will highlight the theoretical contributions this thesis has made, followed by a discussion of the practical implications of our work. Finally, we will outline the limitations of this thesis and how they can be addressed in future research.

Summary of the findings

In Study 1 (Chapter 2) we sought to answer the first research question of this thesis: how do adolescents define ambition? In previous research, ambition is typically directed towards predefined contexts of work (e.g. Ashby & Schoon, 2010; Hakim, 2000; Dick & Hyde, 2006) or education (e.g. (Duckworth & Seligman, 2006; Jerrim et al, 2020) and specific end-goals are used as indicators for ambition (e.g. Bygren & Rosenqvist, 2020; Elchardus & Smits, 2008; Johnson et al, 2017; Støren, 2011; Van Vianen & Keizer, 1996). This approach tends to be based on more traditional, masculine versions of power, money,

and success which have grown out of a historical development of ambition from a time when work and education were solely for men (King, 2013).

In our first study, we deliberately did not ask about particular contexts or particular goals, nor did we use any specific framing. Instead, we were interested in obtaining completely open responses to our question. We found that, in general, adolescents did not associate ambition with specific end goals nor did they associate ambition solely with money, power, or prestige. Rather, they had a more non-domain-specific perception of ambition where having one or more long-term goals was at the core, but that goal could be anything.

Our findings suggest that adolescents view ambition differently from the way ambition is traditionally measured in research. This could be due to their age making them different from older participants, or it could reflect a change over time in how ambition is seen. Indeed, Ulrich et al (2022) found that gender stereotypes are more fluid in adolescence and boys and girls have more egalitarian views of gender roles than older age groups.

However, it could also be an indicator of a societal change in the way people define ambition. In 2007, Sools and colleagues (2007) found evidence among adult men and women that ambition is not only associated with power, status, and wealth but that both men and women prefer a more nuanced approach to ambition than the stereotypical masculine version. In 2017, Harman and Sealy (2017) found evidence among adult women that ambition is not about specific end-goals and needs to be redefined to an individual perception of success. Both studies were qualitative and conducted among adults from the age of 25 and up. Combined with our results, this could indicate that a change in perception is taking place over time.

This temporal change is also supported by studies focusing on generational changes in people's career choices. There is a growing trend of young people between 24 to 35 opting out of the 'rat race', wanting more from life than just recognition, money, and status which are the traditional triad of ambition (Lamhauge, 2022, July 4). This trend is seen in many Western societies, and has been underway over the past ten years and has been exacerbated by the Covid pandemic (Wills, 2022, January 10).

This raises a number of empirical questions, such as whether the view of ambition is part of a broader change that has been underway for the past 10 years. Or whether the changes in adolescent ambition we have found are a result of the impact of the Covid pandemic leaving adolescents wanting other things in life. Or perhaps adolescents in Denmark have always viewed ambition this way, but as no studies have explored this before we have no way of comparison. Future studies could benefit from addressing these questions to establish whether this is a broader societal change or whether it is related to specific events in time.

Previous studies have shown that gender stereotypes develop in early childhood (Kuhn et al, 1978; Signorella et al, 1993) and are mostly focused on physical appearance, clothing, and toy preferences from preschool age to about 5th grade (Miller et al, 2009). A recent study has found that both boys and girls develop more egalitarian gender role attitudes during adolescence and gender stereotypes become more fluid, possibly as a result of young students questioning established beliefs (Ulrich et al, 2022). This may explain why we did not find gender differences in the definition of ambition in adolescents in Studies 1 and 2.

With this definitional move away from predefined goals centred around money, prestige, or upward mobility, we found the key elements in adolescent ambition to be about

having a certain distance from your starting point to your goal, being motivated to pursue your goal, and striving for successfully achieving your goal. All of these aspects of ambition are to be defined by the individual, rather than by others or by society. These findings are in line with the qualitative work of Harman and Sealy (2017) who found that ambition for adult women was not about specific end-goals or only wealth and prestige, and with Sools et al (2007) who found that men and women talk about different aspects of ambition that is not only tied to certain goals or to status.

In Study 1 (Chapter 2), although we found no gender differences in the overall definition of ambition, we did find that girls were much more likely to describe themselves as ambitious than boys. In Study 2 (Chapter 2) we used the students' definition of ambition from Study 1 to explore possible gender differences in a large sample of high school students. We expected to see the same gender difference in ambition levels as indicated in the interviews in Study 1. However, interestingly, we did not find any gender differences in ambition in our second study. This suggests that the definition of ambition developed from Study 1 may not yield gender differences because it is not concerned with specific goals. Indeed, although we did not set out to create a validated ambition scale, our items show a striking resemblance to the items found in a validated ambition scale by Hirschi and Spurk (2021) conducted with adults. Hirschi and Spurk (2021) concluded that a non-domain and non-goal-specific measure of ambition is a better approach than using specific goals as it is less likely to be subject to gender bias and can be used across contexts. Our findings, therefore, not only add to the understanding of adolescent ambition, but to a more general conceptualisation of ambition which we will further discuss in the section on theoretical implications.

However, we still have the question as to why girls were more likely to describe themselves as highly ambitious compared to boys in Study 1. Fels (2004; 2005) suggests that because women are not perceived as ambitious in the same way as men, women have to assert their ambitiousness much more directly. Even though the interviews were conducted individually, girls were sitting in a classroom with boys which could have prompted their awareness of this kind of gender expectations. On the other hand, rather than affecting the girls, the context of school could have affected the boys in a negative way. According to Zimmerman (2018), boys are less likely to view themselves as ambitious in an educational setting, either due to gender stereotypes from teachers and parents that do not expect boys to do well in school, or due to normative class culture in which 'a real boy' is not supposed to express educational ambitions and thus downplays their level of ambition. In either case, gender norms and context seem to have an impact on ambition which we decided to further explore in Study 3 (Chapter 4).

Another notable finding in Study 1 is the students' viewpoint on the desire to succeed. The students viewed the desire to succeed to be a vital part of ambition. This may reflect the more traditional approaches in which ambition is equalled to the level of desire for success (Judge & Kammeyer-Mueller, 2012). However, together the students expressed views that there is no one definition of success. Instead, they talked about three different types of success: subjective success defined by the individual, other-referent success in which success is compared with others, and objective success which consists of objective measures.

Girls more often expressed an 'other' approach to success – relating success to family and friends *in combination with* education and work and comparing success with that of

others. Boys were more likely to express a 'self' approach – more often relating success to wealth and prestige and focusing more on their own desires. The reason for this gender difference may be related to gender roles. Gender roles for women have changed over the past 45 years (Fels, 2005; van der Vleuten et al., 2016; Zimmerman, 2018). While women are still expected to have the primary care for children and housework, their roles have extended to also include education and career. The male gender role is still primarily focused on being the breadwinner. These norms may require women to define success in relation to separate aspects of life such as family, work, leisure time, and education, whereas men only see the divide between work and self (see Eagly et al, 2019; Greene & DeBacker, 2004). However, in society, we tend only to celebrate those goals that are in line with the public definition of success, which often reflects a more stereotypically masculine definition.

In Study 1, we also found that while behavioural traits such as self-esteem, grit, goal-setting, and self-efficacy are seen as important behaviours needed for the expression of ambition, but are not considered to be the same as ambition per se. These findings are supported by previous research that shows that self-efficacy enables ambition (Harman & Sealy, 2017; van Vianen & Keizer, 1996), self-esteem has a strong impact on ambition (Johnson & Patching, 2013), and grit is associated with ambition in many aspects (Duckworth & Seligman, 2006; Duckworth et al, 2007). Goal-setting has not previously been specifically examined in relation to ambition, but as goal-setting defines the approach people use when selecting a goal and the characteristics of that goal (Gaumer Erickson & Noonan, 1996; Locke & Latham, 2002), it is not surprising that it has a positive relationship with ambition.

Apart from testing gender differences in ambition in Study 2, we also decided to examine the relationship between ambition and these four behavioural traits and explore whether there would be any gender differences in these relationships. Ambition was seen as distinct from these behavioural traits, but at the same time, these traits were important for the expression of ambition. We, therefore, proposed a model in which grit, self-esteem, goal-setting, and self-efficacy had a positive relationship with ambition while being distinct factors. We also examined whether the behavioural traits were truly distinct from ambition as indicated in Study 1 and whether they would be correlated. We found that self-esteem, grit, goal-setting, and self-efficacy combined act as supporting behavioural traits necessary for the expression of ambition, though distinct from ambition.

We found no gender differences in the combined model nor in the relationship between the four behavioural traits and ambition. We also found no gender differences in ambition and goal-setting when examining them as individual factors. However, we did find small gender differences in levels of self-esteem, grit, and self-efficacy. The difference in self-esteem showed a moderate effect. Guimond et al (2007) found that Western cultures seem to ascribe more positive traits to men than to women and that this cultural approach attributes to the lower levels of self-esteem in women. Our study indicates similar findings between boys and girls in a Danish context, although this gender difference did not significantly impact the relationship with ambition. This suggests that some level of self-esteem is needed for ambition for both boys and girls, but very high levels of self-esteem may not be necessary.

The gender differences in grit and self-efficacy showed very small effects. According to Hyde (2005), such small gender differences may not have any real-life impact. Hyde (2005) argues that although we are able to find gender differences in studies, if we divided

the group of boys and girls into smaller groups, for example, according to social status, we would very likely find similar results that are not explained by gender. We did not divide our participants into smaller groups in our studies. We are therefore not able to state whether the same differences would arise due to other types of categorisations. However, the fact that we found differences within the group of boys in Study 3, supports Hyde's gender similarity hypothesis (Fuller, 2009; Hyde, 2005). This may also explain why, despite finding gender differences in three of the factors, they did not significantly have an impact on the relationship with ambition in the combined model.

Chapter 3 provides an analysis of the use of Google Docs as a method in the interviews in Study 1 and the benefits and limitations of the method. This method proved to be valuable as we were able to conduce 30 interviews with detailed information from all participants. We were concerned that if we conducted the interviews as traditional group interviews, we would not get insight from all students as some are more reluctant to speak up in groups or that we would risk the students influencing each other in their definition of ambition. Especially, we worried that gender stereotypes would affect their views if the interviews were carried out in groups. We could have chosen to conduct the interviews face-to-face rather than using Google Docs, however, we found that the interaction through a screen reduced the influence of the interviewer-interviewee relationship allowing the students to be more open about their thoughts and answers as they were not physically faced with the researcher. It also allowed the students to answer the questions in their own time as some students needed time to reflect more on some questions than others.

In Study 3 (Chapter 4) we expanded on the curious difference we discovered between Study 1 and Study 2. In Study 1 a majority of the girls saw themselves as highly ambitious,

but less than half of the boys said the same. In Study 2, we did not find any gender differences in ambition levels between boys and girls. Hyde (2005) argues that gender differences in studies are often caused by the context in which the study takes place and that men and women are more alike than different. In Study 1 we conducted the interviews at the schools whereas the second study was an online questionnaire where the students could undertake in any context. We thus suspected that the choice of context might be one of the reasons behind the gender difference in ambition in Study 1. However, Fuller (2009) suggests that context itself is not a main driver of gender differences in studies, rather it is how much people conform to perceived gender roles in any given context that creates differences in behaviour. We, therefore, decided to include conformity to gender roles as a factor in our third study.

As the second aim of this thesis was to understand if work and educational contexts can influence ambition levels in adolescents, we designed an experiment in Study 3 to test our hypothesis that the observed gender difference between Studies 1 and 2 might be caused by context and that conformity to gender roles could possibly moderate gender differences. Surprisingly, we could not confirm that context was the driver of this gender difference, although we could not rule it out completely as we found significant differences *within* the group of boys. Boys presented with an educational context scored significantly lower on ambition compared to boys in the control group, especially the more they confirmed to traditional gender role ideals. This supports the findings of Yu et al (2020) who found that boys who adhere to traditional masculine values often perform poorly in education and are more likely to see an educational context as being feminine and not for them. Thus, the gender differences that we noticed in Study 1 may have been driven by sub-groups of boys rather than absolute differences in ambition between boys and girls. Our findings also

support Fuller's (2009) results that gender role conformity has a stronger influence on people's behaviour than context even when in the same educational context. It shows that gender stereotypes play an important part in how ambition is expressed which underlines that specific end-goals within educational attainments may not be a reliable indicator of ambition leading us to our final two studies: Studies 4 and 5 (Chapter 5).

Ambition is most often examined among adults in the workplace where career plans (Elchardus & Smits, 2008), promotion desire (Gray & O'Brien, 2007; Van Vianen & Keizer, 1996), and income levels (Heslin, 2003) are often used as indicators of ambition. However, this approach is not suitable for young students who have not yet entered the labour market. Instead, educational attainments are used as indicators (Bygren & Rosenqvist, 2020; Jerrim et al, 2020; Støren, 2011). However, our Study 1 showed that specific end-goals are not part of the way adolescents define ambition, and Study 3 indicated that gender stereotypes influence ambition levels in some contexts. As goals within different contexts are highly influenced by gender stereotypes (Nielsen & Sørensen, 2004), using educational attainment as an indicator of ambition in adolescents can result in a gender-biased outcome. Rather than measuring ambition, you are more likely to be measuring gendered choices. A study among Danish high school students (Epinion, 2022) demonstrated that many educational programs are seen as gendered, that is, as either feminine or masculine. Students are less likely to choose educational programs that do not fit their gender as they worry, they will not be able to live up to the expected gender role in a future work environment. Thus, using educational choice as a way of measuring ambition levels risks reproducing gender stereotypes in education. At the same time, the correlation between ambition and educational choices has always been assumed but, to our knowledge, never confirmed. We, therefore, designed two

studies that explore the final aim of this thesis: the relationship between ambition and educational choice.

We found no correlation between educational choice and level of ambition in either Study 4 with a high school student sample or in Study 5 with older students who had already enrolled in higher education. We found that girls and adult women who score higher on ambition were more likely to pursue high-status educational programs than their less ambitious peers but only when they believed that *others* view the educational program to be of high status. For women who scored lower on ambition both their own status perception as well as how others view their education was important for their educational choice. This was not the case for high school girls who scored lower on ambition.

In Study 1, the students talked about three types of success. It was clear that boys more often referred to objective success and girls more often referred to other-referent success. We, therefore, decided to include the perceptions of success in Studies 4 and 5 as the reasons for choosing their educational program. Unlike our findings in Study 1, we could not confirm that boys are more likely to rely on objective success reasons or that girls are more likely to have other-referent success reasons. In the large sample of both high school students (Study 4) and older students (Study 5), we found no gender differences for these two types of success.

However, contrary to what we expected, we found a gender difference in subjective success reasons between the two groups of students: high school girls were more likely to have subjective success reasons for their choice of education than high school boys. This was different for the older students where subjective success reasons were equally important for both men and women. The difference found among high school students may be tied to

the gender expectation in education. Studies show that girls are expected to do well in education and to have both mastery and performance goals, whereas the same expectations are not extended to boys (Miller, 2017; Wolter et al, 2015; Zimmermann, 2018). This may prompt adolescent girls to embrace both subjective and objective success reasons. Boys, on the other hand, are more likely to be met by expectations of being a future breadwinner and thus are more likely to adopt mostly objective success reasons (Eagly, 1983; Zimmermann, 2018).

Equally, we could ask why older male students have both subjective and objective success reasons similar to that of female students; surely, we would expect the gender role of the breadwinner to continue into young adulthood? One answer could be that once older male students have started their higher education, they develop a greater focus on what they personally can achieve from their education, thus adopting subjective success reasons. Another answer could be that in higher education male students are more likely to be seen as academically adept and talented by their teachers (Holmegaard & Johannsen, 2023) compared to how boys are viewed in primary school and high school (Zimmerman, 2018) leading to an interest in a broader approach to success reasons.

In sum, rather than specific end-goals or behavioural traits, adolescent ambition can be classified as a motivational process in which you strive for any kind of high goal that you are highly motivated to achieve and that is achieved through an individually defined type of success. This motivational process is aided by behavioural traits such as self-esteem, self-efficacy, grit, and the ability to set high goals. The motivational process is not gendered but can be influenced by gender norms and gender role conformity in certain contexts.

Theoretical contributions

This thesis makes strong contributions to the ambition literature by addressing the key gaps outlined in Chapter 1. First, we identified that the ambition literature lacks a clear definitional consensus on what constitutes ambition and, second, that we have little knowledge of how adolescents view ambition. As presented in Chapter 1, the concept of ambition has undergone great changes over time from vice to virtue (King, 2013), from including only men to also be about women, from seeing boys as the ambitious frontrunners of school to believing that school is not for boys (Miller, 2017; Wolter et al, 2015). The conceptualisation of ambition is thus not set in stone. The way ambition is traditionally defined in research is focused on money, power, prestige, and upward mobility illustrating highly masculine values and perceptions of success (Fels, 2004; 2005). However, this definition was proposed more than 200 years ago and may not reflect the definition of today's young generations.

We addressed these issues by providing a new definition of adolescent ambition. This definition is unique in that it encompasses the various ways ambition is defined but rarely addressed in previous research. The definition is furthermore provided by the participants in our first study, an approach that is rarely used in ambition research, where instead researchers base their results on their own definition of ambition. We found that adolescents define ambition to be about having a high goal that is difficult to reach, but that the goal can be anything, not just certain positions, high income, or length of education – as used as the default definition in earlier studies on ambition. We also found that desire for success is an integral aspect of ambition, but rather than relating to societal standards of success, the desire for success is about the person's subjective drive to succeed and how a person defines when a goal has been successfully achieved.

Second, we took a critical approach to the use of specific end-goals as indicators of ambition as goals are not chosen freely but are the result of social norms and gender expectations (Mello, 2008; Nielsen & Sørensen, 2004; Rhode, 2021). In response, we found that when no framework is given, adolescents have a very broad definition of ambition that is not tied to specific goals or domains. This we further proved by examining the relationship between ambition and educational choices of which we could not establish any kind of relationship for adolescents or for young adults. Previous research has uncritically used educational attainment or desires as indicators of ambition without questioning the assumed correlation.

Our findings show that adolescent ambition is about having high goals, but the driving force is motivation for that goal and the drive to succeed. Our results advocate for an integration of goal-setting theory and goal orientation theory when examining ambition in adolescents. Our results support the recommendation of Seijts et al (2004) that a combination of the two theoretical approaches can lead to better and more precise results. Goal-setting theory is often used directly or indirectly to analyse ambition as most studies use a predefined specific goal that the researchers believe to be an ambitious goal. The goal is often a challenging goal that requires skills, experience, and self-confidence to achieve. But using this approach does not necessarily examine peoples' level of ambition but rather their motivation for that particular goal. If specific goals are used in ambition research it is thus crucial to include whether people are motivated to pursue that particular goal – if there is no motivation, the goal is not of interest, but just because you are not motivated to pursue that goal does not mean you are not ambitious. Future studies could also apply expectancy-value theory for this purpose when examining the value placed on a specific goal in comparison with related goals.

As gender expectations become more pronounced with age (Koenig, 2018; Myklebust, 2019), ambition research should not only address goal orientation and goal setting but also include the importance of social roles and gender stereotypes to achieve a better understanding of how ambition might change depending on age, context, or experiences. For example, a study has shown strong gender differences in educational achievement between boys and girls in Danish high schools that are directly related to gender stereotypes (Larsen & Larsen, 2021; Kjeldsen & Larsen, 2021). The study found that grades given in high schools in written exams where gender is unknown are much more equal between boys and girls, whereas final grades given in subjects not part of exams and thus given by the class teacher show strong gender differences favouring girls. Future studies could benefit from exploring gender stereotypes and gender expectations as a moderator or mediator and their effect on ambition to learn more about the extent to which such gender stereotypes stemming from others, in this case teachers, can affect the ambition level in adolescents.

Third, we highlighted that ambition research often conflates ambition with other attitudes and behaviours. We addressed this point by exploring how ambition is linked to concepts such as perseverance, self-efficacy, and competition. The literature shows extensive support for the link between grit and self-efficacy and ambition in both adults and adolescents (e.g. Hackett & Lent, 1992; Harman & Sealy, 2017; Lent et al, 1986; Pajares & Urdan, 2006; Solberg et al, 1995; van Vianen, 1999). Our findings expand on this knowledge by showing that self-esteem and goal-setting are equally important factors. Our proposed model accentuates that self-esteem, self-efficacy, goal-setting, and grit operate as supporting components of ambition in a combined manner in adolescents.

Finally, integrating goal theories with social role theory and the gender similarity hypothesis has provided a deeper understanding of ambition in adolescents. The fact that we

found no gender differences in the definition of ambition, in ambition levels (in Study 2), in the proposed model for ambition, in the influence of context, or in the correlation between ambition and educational choice, overall supports the gender similarity hypothesis; that boys and girls are much more alike than different when it comes to ambition. Despite creating a context with onlookers in our third study to accentuate the influence of social roles and to simulate the findings of Eagly and Crowley (1986) we still did not achieve gender differences.

The explanation for this result can be that adolescent ambition is either not affected by the context in the same way as other constructs or because we have managed to locate a definition that is not context specific. This is in line with the findings of Zell et al (2015) who tested the gender similarity hypothesis using a meta-synthesis approach. They found that when it comes to social behaviour and personality variables gender differences hardly exist. Even though we found gender differences in the individual factors of grit, self-efficacy, and self-esteem, the effects of these were rather small and did not have any impact on ambition when combined. Zell et al (2015) found that the differences in behaviours are most often greater within one gender than across genders which our results in Study 3 also indicate. By incorporating social role theory, we can see that gender conformity influences boys' level of ambition in an educational setting. Thus, gender stereotypes do play an important role in ambition *in combination with* context whereas context alone does not influence ambition. This is important knowledge when studying ambition, not only in adolescents but in all people as it may explain why previous studies on ambition show many contradicting results.

Practical implications

In addition to furthering the theoretical understanding of adolescent ambition, the work presented in this thesis also has practical implications. First, it is time to abandon the idea that ambition is purely about money, upward career mobility, status, and titles. While these goals are desired by some people, other people desire other goals that, considering the effort needed, are just as ambitious. Using specific end-goals as indicators of ambition is not a reliable way of measuring ambition in adolescents. Specific end-goals are more likely an indicator of how motivated a person is to pursue that specific goal, not an indicator of ambition levels. Our findings, showing no link between ambition and educational choice, further strengthens this result. This has implications for how adolescent ambition is defined and conceptualised in future research. Our aim was not to create a validated measure of ambition, nevertheless, our items can be tested in future studies to create a validated ambition measure to be used on adolescents; a measure that goes above specific end-goals and instead addresses having a high goal that is difficult to reach and to which the drive for success can be of either subjective, other-referent, or objective nature.

Second, we found few gender differences in ambition indicating that adolescent boys and girls are highly similar when it comes to ambition supporting the gender similarity hypothesis. Schools often talk about boys as being less ambitious than girls, primarily based on boys' lower grades or lack of interest in school and education, but our research shows that this is not necessarily true. Boys and girls have the same perception of ambition, but their goals can be different. Where girls are more likely to adhere to social expectations of aiming high in education, boys are more likely to be met by negative stereotypes that imply that they lack ambition for education due to their gender, not due to their effort, which dampens boys' ambitions levels in school. When boys from an early age are expected to act wild and parents never require them to sit quietly, read a book, or have long conversations,

then we cannot expect boys to be able to do so when they enter school. Combined with studies showing that boys in primary schools and high schools do not get acceptance or status at school for being a good student (Zimmerman, 2018), boys have even less inclination to be ambitious in an educational setting.

If schools and teachers want to support and increase ambition levels in boys, they need to focus on how gender stereotypes are expressed at school and in the classroom as well as pay attention to biased behaviours from teachers that inadvertently can drive gender stereotypes. Ambition is about setting a goal and this process can be helped by training self-efficacy, grit, and goal-setting. Training these behavioural traits in adolescents can benefit not only the students but also schools and teachers in order to raise ambition levels in all students.

Third, in Denmark, there are great difficulties in attracting young students to vocational educations and social welfare educational programs such as teaching and nursing (EVA, 2019; EVA, 2023). Promoting a narrative that ambition is multi-directional and where ambition can be a sideways move, a change of direction, or a great step from your own starting point within any type of goal, not just in money, power, and prestige or concerns certain types of educational programs, can help alleviate the negative stereotypes surrounding these types of educations.

Finally, our findings on adolescent ambition may give clues to what employers and workplaces can expect to see in a few years. If both boys and girls have a different approach to ambition than the traditional masculine versions of status and prestige, they might be less attracted to organisations that define ambition in such ways instead of allowing a broader definition of ambition where people have different goals but are still highly ambitious. In

Denmark, we are seeing an increasing Opt-Out Revolution among adult men and women over 50 with people exchanging high-paid prestigious jobs for lower-level jobs that allow them to focus on ambitious projects in their free time or with their families instead (Kjær, 2023, 23 April). We are also seeing an increase in the Great Resignation Revolution among 24–35-year-olds with people quitting their job without having a new job to spend time finding a deeper meaning in their work life (Mosbech, 2022, 22 January). These trends are likely to amplify what young generations will be looking for in a job. Combined with our results it highlights that companies need to readdress their approach to what it means to be ambitious to attract younger generations and retain existing generations.

Limitations and Future Research Directions

While this thesis has contributed to the ambition literature in substantial ways, it does have a number of limitations and leaves certain questions unanswered. Future research should address these questions to maximise the understanding of adolescent ambition. This includes further validation of an ambition measure and potentially revising it in light of new findings.

First, our aim was not to create a validated ambition scale, rather we used the definition provided by the students in Chapter 2 as a basis for our approach to study the concept of adolescent ambition. Even though our structural equation modelling analysis in Chapter 2 showed that ambition is empirically distinct from related concepts such as grit, self-efficacy, self-esteem, and goal-setting approach, we are not able to conclude that our measure is truly validated. On the other hand, our items are very similar to the validated scale created by Hirschi and Spurk (2021) based on adults indicating that the differences in

items between adolescents and adults may not be that large. Taken together, more research is needed to evaluate the items and create a validated scale.

Second, while we did find support for the relationships proposed in the structural equation model in Chapter 2, it should be noted that we did not perform any large-scale competitive model testing. So, while we did, for example, find evidence that the behavioural factors self-efficacy, grit, self-esteem and goal-setting are very influential in shaping adolescent ambition and that these have a positive, and possibly a causal relationship, we do not know the direction of the causal effect – do ambition levels cause high levels in the behavioural factors or do the behavioural factors lead to high levels of ambition? These findings need to be replicated in experimental research to ascertain true causality.

Throughout our studies, our findings indicated that gender stereotypes and gender expectations play a role in adolescent ambition, especially for boys and men. This needs to be explored in further detail as to how these factors may act as moderators or mediators between ambition and context, educational choice, and behavioural traits. In our experiment in Chapter 4, we applied a similar approach as suggested by Hyde (2005) and Eagly and Crowley (1986) by observing the students while they performed the task and answered the questionnaire as research shows that behaviour in men and women are more likely to adhere to gender expectations when they believe they are being observed than when alone. However, this did not lead to differences between boys and girls. Instead, we found differences within the group of boys.

We have provided initial experimental evidence supporting the causal chain in relation to context and ambition in Chapter 4, but these findings need to be replicated and extended, particularly to sub-groups within each gender. Our study showed that gender role conformity plays an important role between context and ambition. By using the sub-groups based on

gender role conformity by Yu et al (2020), future studies could use this as a foundation for exploring how ambition unfolds in sub-groups providing a more nuanced picture of adolescent ambition. This could benefit schools and teachers who often experience sub-groups within the classroom that seems to lack ambition or have no clear goals.

Third, we did not find any relationship between ambition and educational choice. A study by Epinion (2022) established that adolescents generally hold gendered perceptions of educational programs and that this can deter men and women from entering certain educational programs believing that the educational program is "not for them". This could indicate that gender perceptions of educational programs might be of greater influence on educational choice than ambition. It would therefore be beneficial for the understanding of ambition to examine how gendered perceptions of educational programs are linked to ambition levels and whether ambition acts as a mediator or moderator rather than the primary influencing factor in educational choice.

Fourth, we have focussed exclusively on Danish students throughout our studies. This is primarily due to the lack of knowledge about ambition in a Danish sample as no previous studies, to our knowledge, have included participants of any age from Denmark. However, as our findings indicate, gender stereotypes, gendered perceptions of educational programs, and gender roles are strong influences between ambition and contexts, educational choice and behaviour. Gender roles are not universal and are expressed differently in different cultures. For example, computer science is seen as a very masculine subject in most Western countries, including Denmark, leading to a low percentage of women choosing this type of educational program. However, in Malaysia, computer science is seen as highly appropriate for women and thus more than 60% of students studying computer science in Malaysia are

women (Lagesen, 2008). More research is needed to fully understand how adolescent ambition is expressed and formed among different cultural groups.

Lastly, we provided a critique of the ambition literature for not focusing enough on how ambition is perceived by the samples investigated. Our study is a way to address this lacuna. Yet, we did not test different definitions of ambition against each other. We did, however, conduct a pilot test examining the definition found in Chapter 2 with the definition of ambition devised by Duckworth et al (2007), and often used to measure adolescent ambition, to ensure that we were able to proceed with the definition found in our initial study. Though, it would be interesting to learn more about how different definitions of adolescent ambition are perceived and how much they might differ including whether some definitions are more pertinent for some contexts versus others.

Taken together, the limitations above highlight that the understanding of adolescent ambition is far from complete. Our findings provide a first step of the puzzle and can also provide a baseline for the study of ambition from adolescence to adulthood.

Concluding Comment

In this thesis, we have provided a new theoretical approach drawing together goal theories and social role theories to gain a better understanding of adolescent ambition and possible gender differences. By taking the perspectives of adolescent students, our findings show that boys and girls share the same perception of ambition that it is not tied to specific end goals or only power, prestige, and wealth. Ambition is seen as having a long-term goal and the distance from your starting point to your goal is essential – the wider the distance, the more ambitious. But ambition is not just about upward progression. As such, we found no link between ambition levels and educational choice; though, an educational context can

have a negative influence on boys' ambition levels primarily due to gender role conformity. But most importantly, we found few gender differences in adolescent ambition indicating that we as researchers need to pay close attention when examining ambition among different groups and not let our own understanding of ambition be the guiding light as it may not reflect the cultural or societal changes of the concept.

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