



**UiT** The Arctic University of Norway

Institute of Psychology

## **Examining Predictors of Communal Occupational Aspirations in Middle Childhood**

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OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD



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OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

## Preface

This master thesis is a product of a larger project that was mainly focused on investigating the effects of the Covid-19 pandemic on parents and their children. The idea for this project came from Dr. Kjørsti Thorsteinsen, and was further developed by her and Prof. Dr. Sarah E. Martiny, Marie Kvalø, and myself. As our group were also interested in the development of gender norms in young children, we included a section related to this topic which became the basis of this thesis. Together, we developed the study and recruited participants in the midst of the pandemic.

This thesis is my original work. I have conducted all analyses and have written all sections of this thesis, with the helpful comments and suggestions from my supervisor, Prof. Dr. Sarah E. Martiny.

First, I would like to thank my supervisor, Sarah E. Martiny. Your guidance and your trust in my abilities has helped me grow confidence in myself, and I am very proud of all that I have achieved with your supervision. I look forward to our future collaboration in finalizing my PhD.

I would also like to thank the other members of the project group, namely Dr. Kjørsti Thorsteinsen and Marie Kvalø. Working together on this project has been a joy, and your support has been invaluable to me.

Finally, I would like to thank my friends and my family, for cheering me on in this work and for always believing in me.

*Marte Olsen*

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Marte Olsen

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Sarah E. Martiny

# OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

## Sammendrag

Utviklingen av karrierambisjoner starter allerede tidlig i barndommen, og kjønnsforskjeller i karriereambisjoner har blitt observert blant fireåringer. Denne studien har som mål å undersøke hvordan karrierambisjoner mot typisk kvinnedominerte yrker utvikles blant barn i barneskolealder over tid, basert på Gottfredsons (1981) utviklingsteori om karriereambisjoner. Studien bruker data fra barneskolebarn mellom seks til 13 år ( $n = 46$ ; 20 gutter, 26 jenter;  $M_{\text{alder}} = 9.56$ ,  $SD = 1.78$ ) som ble samlet inn på to tidspunkter, den første i juni 2020 (T1) og den andre i november 2020 (T2). Vi fant ingen signifikant forskjell mellom jenter og gutters karriereambisjoner mot kvinnedominerte yrker, som ikke er samsvarig med tidligere forskning eller teorien til Gottfredson (1981). Vi fant derimot at jenter som hadde sterke kjønnsstereotyper om kvinnedominerte yrker hadde mer karriereambisjoner mot kvinnedominerte yrker, som er samsvarig med tidligere funn. Vi fant ingen effekt av kjønnsstereotyper på gutters karriereambisjoner mot kvinnedominerte yrker. Vi fant også at barn som tror at man tjener mye penger i kvinnedominerte yrker hadde mer karriereambisjoner mot kvinnedominerte yrker. Mulige implikasjoner for fremtidig forskning og utvikling av intervensjoner blir diskutert.

*Nøkkelord:* karriereambisjoner, kjønnsstereotyper, status, kvinnedominerte yrker, selvoppfatning

# OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

## Abstract

The development of occupational aspirations begins in early childhood, and gender differences in occupational aspirations has been observed in children as young as age 4. The present study aims to investigate the development of communal occupational aspirations in middle childhood over time, based on the developmental theory of occupational aspirations by Gottfredson (1981). The study uses data from elementary school children between the ages of 6 to 13 years ( $n = 46$ ; 20 boys, 26 girls;  $M_{\text{age}} = 9.56$ ,  $SD = 1.78$ .) collected at two time points, one in June 2020 (T1) and one in November 2020 (T2). We found no significant gender difference in communal occupational aspirations, which is not in line with previous research and theorizing by Gottfredson (1981). However, in line with previous research, we found that girls with stronger gender stereotypes about communal occupations showed stronger aspirations towards communal occupations, whilst there was no effect of gender stereotypes on boys' aspirations towards communal occupations. We also found that children who believe you make a lot of money in communal occupations aspired more toward communal occupations. Implications for future research and development of interventions are discussed.

*Keywords:* occupational aspirations, gender stereotypes, status, communal occupations, self-perception

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

### Examining Predictors of Communal Occupational Aspirations in Middle Childhood

Despite an increase in women pursuing careers in science, technology, engineering and mathematics (STEM), there has been hardly any change in the number of men pursuing careers in health, early education and domestic roles (HEED) (Croft et al., 2015). In the US, only 4% of preschool and kindergarten teachers and only 10% of nurses are men (Bureau of Labor Statistics, 2017). Even in Norway, ranked as the second most gender egalitarian country in the world, men make up only 10% of preschool teachers and only 16% of nurses (Statistisk sentralbyrå [SSB], 2021a; SSB, 2021b; World Economic Forum, 2020). Despite this significant underrepresentation of men in HEED, most research has focused on increasing the number of women in STEM (Croft et al., 2015). More research is therefore needed to investigate men's lack of interest in these typically female-dominated occupations. It is not only important to increase men's engagement with communal roles because it is essential for women to be able to pursue agentic and typically high-status occupations (Croft et al., 2015). It is also beneficial for men to pursue communal occupations, as men who engage in communal behavior have been found to report lower levels of depression, have better relationships with their partners and their children, and generally show greater life satisfaction (Bauer & McAdams, 2010; Le et al., 2012). Increasing the number of men in communal occupations can also be beneficial for others. For example, having male nurses in a healthcare unit can provide different perspectives and inclusive groups which can lead to better treatment for patients (Mao et al., 2020). Taken together, there is a need for further research on how to promote interest in communal occupations among men.

As research suggests that occupational aspirations begin to develop in early childhood, researchers have argued that it is necessary to implement interventions in this age group in order to reduce the gender inequality in the workforce (Gottfredson, 1981; Hardie, 2015; Trice & Rush, 1995). However, most research conducted about occupational aspirations has

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

been conducted with adolescents and young adults, neglecting the phase of childhood (Hartung et al., 2005; Olsson & Martiny, 2018). We therefore know little about how occupational aspirations are developed in childhood. Therefore, the present study will investigate which factors relate to communal occupational aspirations in children over time.

### **Defining Agency and Communion**

According to the stereotype content model (SCM) by Fiske and colleagues (2002), stereotypes (i.e., beliefs and opinions about the characteristics, attributes, and behaviors of members of social groups; Hilton & von Hippel, 1996) form along two dimensions: competence and warmth. This means that stereotypes are characterized by high or low levels of competence and high or low levels of warmth. These dimensions are most often characterized by the terms communion and agency in psychological literature. Communion is associated with warmth and is a description of characteristics like being kind, friendly and caring, which are typically associated with women. Agency is associated with competence and is a description of characteristics like being assertive, competitive and confident, which are typically associated with men (Diekman & Eagly, 2000). In the following, we will use the terms communal occupations when referring to occupations that are typically associated with women (such as nurse and preschool teacher) and agentic occupations when referring to occupations that are typically associated with men (such as firefighter and engineer).

### **Theories on Occupational Aspirations in Childhood**

In order to reduce the influence of gender stereotypes on children's occupational aspirations, it is important to understand how occupational aspirations develop in childhood. Several theories have been developed that contribute to our understanding of how occupational aspirations are shaped throughout childhood. In the following section, we will review the three most influential theories in this field, namely the developmental theory of

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

occupational aspirations (Gottfredson, 1981), role congruity theory (Eagly & Karau, 2002), and gender schema theory (Martin et al., 2002).

### **The Developmental Theory of Occupational Aspirations**

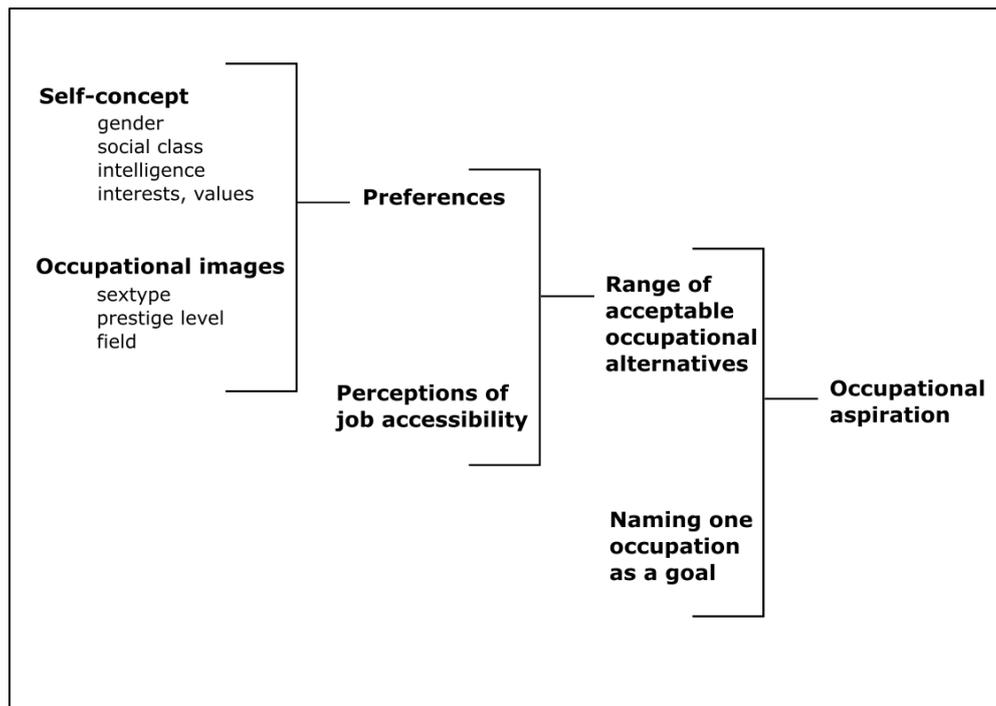
In 1981, Gottfredson introduced a theory that aimed to explain how occupational aspirations are developed throughout the lifespan. According to this theory, occupational aspirations are influenced by two main factors: self-concept and occupational images. Self-concept is the way a person views her/himself, and is comprised of factors like gender, social class, intelligence and interests and values. Occupational images are the person's beliefs about occupations, for example the beliefs about what kind of people work in the occupation and beliefs about the working conditions in the occupations. For example, an occupational image about nursing can be that mainly women work as nurses and that it is a low-paid occupation. Occupational images are often referred to as occupational stereotypes in literature.

Gottfredson (1981) posits that self-concept and occupational images will influence which occupations we prefer. However, the perceived accessibility of the preferred occupation is also taken into account. If the occupation that one would like to have seems inaccessible, for example if the needed education is too expensive or if it is necessary to move far away to pursue the occupation, there is a lower likelihood of perceiving the occupation as an acceptable occupational alternative. The result of this process of consideration is a set of occupation that is viewed a feasible, which this theory calls "social space". This is because the remaining occupations reflects the kind of person that one wants to be in the society. Then a decision is made about which occupation that is going to be pursued, which is the occupational aspiration. An overview of this process of occupational aspirations can be found in Figure 1.

### **Figure 1.**

*Overview of Theoretical Constructs in the Developmental Theory of Occupational Aspirations*

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD



The theory also proposes that the development of occupational aspirations begins in early childhood, as the different aspects of the self-concept and occupational images develops throughout childhood. Gottfredson (1981) claims that this development happens in four stages and begins in early childhood at around 3-5 years of age and culminates in adolescence.

### *Stage 1: Orientation to Size and Power*

According to Gottfredson, the first stage of development of occupational aspirations occurs at around age 3-5 years. In early childhood, children do not have a clear concept of the future or of reality. When asking a 3-year-old what they want to be when they grow up, one might often get a response which is clearly influenced by fantasy rather than reality, such as wanting to be a dog when they grow up. However, in the later part of this stage one will more often get a realistic response to this question, such as wanting to be a doctor or a veterinarian. This shows how children have started to learn what adulthood entails; adults have occupations, and they will grow up and choose an occupation in the future. However, as children still have a limited concept of time, they associate being an adult with being large and powerful rather than relating it to age, according to Gottfredson (1981). Additionally,

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

Gottfredson (1981) claims that children also show gender-congruent occupational preferences at a young age, but this gender difference in occupational preference is a sign of children's desire to model same-sex adults rather than their own gender stereotypes.

### ***Stage 2: Orientation to Sex Roles***

In the second stage of the development of occupational aspirations, coined orientation to sex roles, children begin to base their aspirations on their own gender stereotypes. This stage occurs at around age 6-8, which is when children begin to understand that there are different expectations for the different genders. Children adopt these beliefs about which activities and behaviors is appropriate for each gender and attempt to adhere to these rules. However, at this age, children's gender stereotypes are mainly based on visual factors such as which clothing or colors each gender should wear or what kind of activities are appropriate for each gender. As children grow older, these stereotypes develop to include more subtle factors, such as what kind of personality traits are expected of each gender. Children also show a strong preference for their own gender group at this age, which together with their motivation to behave according to their gender stereotypes leads them to aspire towards occupations which they believe is appropriate for their gender.

### ***Stage 3: Orientation to Social Valuation***

At age 9-13, children enter the third stage of the development of occupational aspirations. In this stage, children begin to consider their own social class and abilities when thinking of occupations that might be appropriate for them in the future. The awareness of different social classes and their own place in society is becoming more pronounced in this stage and children begin to understand that there are different levels of prestige associated with different occupations. Children's awareness of their own social class and their own abilities leads them to exclude certain occupations as potential future careers, whilst viewing other occupations as more suitable. For example, a child from a high-status family will be

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

more likely to consider being a doctor or a lawyer as a potential future occupation than a child that is from a poor family. In addition, children's interest in more prestigious occupations increases in this stage, as children's preferences shift from occupations within manual and unskilled labor to high-status occupations. This is the case for both boys and girls. However, according to this theory, girls generally aspire less towards prestigious occupations than boys as occupations that are typically "feminine" often have lower prestige than typically "masculine" occupations.

### ***Stage 4: Orientation to the Internal Unique Self***

During the third stage for the development of occupational aspirations, children develop a range of appropriate occupational choices based on the occupations they deem appropriate for their gender, their social class and their abilities. However, this range of appropriate occupations are based on external factors such as gender stereotypes and perceived status of occupations, not internal factors such as the children's personal interests or values. Therefore, in the fourth and final stage, the children's personal identity is developing which leads children to base their occupational choices on internal factors such as interest and values. The development of children's interest and values will be based on children's previously acquired gender stereotypes and notions of their social status, meaning that the factors presented in the previous three stages will be internalized during this stage. This stage occurs from around age 14 and throughout the adolescent years. According to this theory, children begin to differentiate themselves from others by focusing on personal traits rather than traits related to appearance or behaviors at this age. Children also begins to develop more independent thoughts and ideas, which also helps shape their personal identities. When it comes to their occupational aspirations, children in this stage often show a lot of uncertainty regarding their occupational choices in the future. Their personality, interests and values are developing and children in this stage with who are unsure of their own identity may struggle

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

to figure out which occupations may be suitable for them. In addition, children become more concerned with whether or not they want to pursue family life and marriage or pursue a career, which influences their perception of appropriate occupations.

Eventually, the children will make a choice about the occupation they aspire towards. This usually occurs at the end of adolescence when they have to make decisions about their further education. At this point, they have to come to a compromise regarding the occupation they aspire towards. This aspiration will now guide their occupational choices going forward. This theory therefore shows how different aspects shape children's occupational aspirations throughout their childhood. The theory illustrates how children's understanding of gender norms and their early self-view can have a crucial impact on the occupational aspiration they choose in early adulthood.

### **Gender Schema Theory and Role Congruity Theory**

The developmental theory of occupational aspirations has provided important perspectives to research on occupational aspirations in childhood (Gottfredson, 1981; Hartung et al., 2005). However, other theories also contribute to explaining how occupational aspirations develop throughout childhood. One of these theories is gender schema theory (Martin et al., 2002). This theory was developed in the early 1980's as a way to explain how gender develops in children (Bem, 1981; Liben & Signorella, 1993; Martin & Halverson, 1981). The theory posits that children form gender schemas (i.e., cognitive network of information) which contains the information they collect relating to gender. For example, if a child is told that girls are kinder than boys, then this information about girls will be stored in their gender schema for girls. Once children become aware of their own gender, they will be motivated to seek out information related to their own gender and become more aware of the difference between boys and girls. Children are also more likely to remember information that is consistent with the information that is stored in their gender schemas. For example, a child

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

will be more likely to remember the girls that wore pink rather than the girls that wore blue, if part of the information in their gender schema is that girls wear pink and boys wear blue.

Alternatively, if they encounter someone who does not fit with their gender schemas, they might make create a subtype within their gender schema to fit with this new individual. This means that a girl who dresses like a boy might be subtyped as a “tomboy”. Children are also motivated to behave in accordance with the contents of their gender schemas. This means that if the content of a child’s gender schema is highly stereotyped, children will be motivated to behave in a stereotype manner. This is to make sure that they are able to define themselves in accordance with their gender schemas and to avoid cognitive dissonance.

Another important theory that has been developed to explain how gender develops in children is role congruity theory (Eagly & Karau, 2002). This theory is similar to gender schema theory in that this theory also claims that children seek out information about gender and then they are motivated to behave in accordance with this information about their gender. However, the reason for the motivation for acting in accordance with gender norms is different between gender schema theory and role congruity theory. As mentioned above, gender schema theory states that children are motivated to behave in accordance with their gender schemas to attain cognitive consistency. Role congruity theory, however, states that children are motivated to behave in a gender congruent manner to avoid negative feedback and consequences from their environment. Therefore, the focus of role congruity theory is that the goal is to avoid social sanctions, which can be labelled as an external motivation. Since the focus of gender schema theory is that the goal is to attain cognitive consistency, this can be labelled as an internal motivation to behave in accordance with the expectations for your gender. What both theories have in common is that children will seek out information about gender from their environment, be it from their parents, their teachers, media, or simply by observing people on the street. This means that the flexibility of children’s gender roles is

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

largely influenced by their social environment and the media they are exposed to. These theories therefore highlight the importance of non-stereotypical role models in children's environment, as well as the importance of explicitly teaching children that their gender should not determine which career to pursue when they grow up.

The three presented theories, namely the developmental theory of occupational aspirations (Gottfredson, 1981), gender schema theory (Bem, 1981; Liben & Signorella, 1993; Martin & Halverson, 1981) and role congruity theory (Eagly & Karau, 2002), all provides important insight into the gendered development of occupational aspirations in children. These theories share several similarities, as all theories claim that the exposure to external gender norms shape children's behavior and thus influences children's occupational aspirations. However, Gottfredson's developmental theory of occupational aspirations goes beyond the effect of gender stereotypes, and also provides insight into how factors such as occupational status or personal values can influence children's occupational aspirations.

### **Empirical Evidence for the Factors Proposed by Gottfredson (1981)**

Based on the theories presented above, we identified four factors that influence occupational aspirations in childhood: gender, gender stereotypes, self-perceptions and status. We will now review the existing empirical works that have investigated these predictors.

#### **Gender and Gender Stereotypes**

As previously mentioned, children begin to show gender-congruent occupational aspirations in the first stage of the developmental theory of occupational aspirations (Gottfredson, 1981) from around age 3-5. The theory claims that the gender difference in occupational aspirations that can be observed in the younger children is due to children's motivation to model the behaviors of adults in their lives. Children's understanding of differences between men and women is developed at an early age, as children are able to

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

distinguish between men and women already in infancy (Kelly et al., 2005; Liu et al., 2015; Quinn et al., 2002; Quinn et al., 2008). Research has also shown that children use information about gender to shape their behavior and their reasoning at an early age. For example, a study conducted in the US found that children with higher gender labelling skills were shown to behave in a more sex-typed manner than children with lower gender labelling skills (Fagot et al., 1986). In a subsequent longitudinal study, it was found that when children's gender labelling skills increased, the amount of sex-typed behavior they exhibited also increased (Fagot & Leinbach, 1989). This is consistent with both role congruity theory (Eagly & Karau, 2002; Diekmann et al., 2017) and gender schema theory (Martin et al., 2002) as both of these theories state that children are motivated to behave in accordance with the information they have about gender. Therefore, as children increase their gender labelling skills, they will also be more motivated to behave in accordance with the information they have acquired about their gender. This is also the case when it comes to children's occupational aspirations, as a study by Trice and Rush (1995) found that at age 4, boys aspired more towards agentic occupations whilst girls aspired more towards communal occupations. Levy and colleagues (2000) conducted a study among children between the ages of 4 to 6 years and found that children showed a preference for having a gender-congruent occupation when they grow up, compared with having a gender-incongruent occupation when they grow up. Taken together, these findings indicate that children are aware of gender norms from an early age and that children use these gender norms to shape their own behavior.

According to Gottfredson (1981), it is not until the second stage of the developmental theory of occupational aspirations (age 6-8) that children begin to base their occupational aspirations on their own gender stereotypes. According to Gottfredson (1981), the gender difference in occupational aspirations that can be observed before the age of 6 is caused by children modelling the behavior of adults. However, there is some evidence that gender

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

stereotypes influence occupational aspirations at an earlier age, as a study among preschool children (ages 4-6) found that girls with stronger gender stereotypes showed higher aspirations towards communal occupations, whilst boys with stronger gender stereotypes showed weaker aspirations towards communal occupations (Olsen et al., 2022). Despite this, there is some empirical evidence that supports Gottfredson's (1981) theorizing. For example, children between the ages of 5-12 were shown to have sex-typed occupational preferences, where children who did not show flexible gender stereotyping had stronger sex-typed occupational preferences than children with flexible gender stereotypes (Serbin et al., 1993). Also, Weisgram and colleagues (2010) found that in a sample of children between the ages of 5 and 10 years, girls showed a stronger interest in communal occupations than boys did, and that children were more interested in occupations that were presented with an image of a worker with the same gender as them. These findings indicate that occupational gender stereotypes influence the occupational aspirations of children in middle childhood, in line with Gottfredson (1981). However, due to the scarcity of studies that has focused on this effect, more research is needed on the effect of gender stereotypes on occupational aspirations in childhood.

Gender stereotypes regarding task performance and occupations can have a detrimental long-term effect on children's occupational aspirations. The mere awareness of such gender stereotypes can lead to reduced performance in children, even if the children don't believe in the stereotype themselves. This effect is called stereotype threat, and it occurs when someone becomes aware that their social group (in this case their gender) stereotypically performs worse than another social group at the task at hand. This awareness causes the individual to allocate mental resources on worrying about living up to this negative stereotype, which leads to worse performance at the task. For example, research has found that girls who are made aware of the gender stereotype that girls are worse at mathematics

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

than boys will perform worse at a mathematical task (Galdi et al., 2014; Franceschini et al., 2014). Similarly, it has been found that boys who are made aware of the gender stereotypes about boys' underachievement at school will perform worse on tests (Hartley & Sutton, 2013). Being exposed to this effect can lead to a chronic disidentification with the area in which your social group is perceived to be "bad" at and has been shown to cause women to decide to not pursue an education in science, technology, math and engineering (Woodcock et al., 2012). Therefore, the development of gender stereotypes in children can have a lasting effect on their occupational aspirations, even if their gender stereotypes are reduced over time. This again illustrates the need of investigating the effect of occupational gender stereotypes on children's occupational aspirations.

### **Occupational Status**

During the third stage of Gottfredson's developmental theory of occupational aspirations (1981), which occurs from children are 9 to 13 years, the status of occupations becomes important for children's occupational aspirations. There are several aspects to occupational status, such as prestige level, salary and power associated with the occupation. Importantly, agentic occupations (e.g., lawyer, stockbroker) are more often associated with high status, whilst communal occupations (e.g., nurse, preschool teacher) are more often associated with low status. Children in this age group seem to have an understanding of the relationship between gender and occupational status, as a study by Liben and colleagues (2001) found that children between 11-12 years old thought that occupations associated with men had higher status than occupations associated with women. A study also found that 13-year-old boys had stronger expectations of having a prestigious occupation in the future than girls did (Lapan & Jingeleski, 1992). Adolescent boys have also been shown to have reduced aspirations towards communal occupations if the occupation had a low median income,

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

indicating that children's occupational aspirations are influenced by the status of occupations (Hardie et al., 2015).

However, there is some evidence that children are aware of status differences in communal and agentic occupations at an earlier age than proposed by Gottfredson (1981) and that young children's occupational aspirations might also be influenced by occupational status. One study found that children between 3-6 years of age believed that men generally earned more money than women, but they also believed that men earned more money in agentic occupations and that women earned more money in communal occupations (Levy et al., 2000). This indicates that very young children understand that there are gender differences in salary. In addition, children between 5 to 10 years old who valued power was more interested in agentic occupations, indication that young children also understand that agentic occupations are associated with power more so than communal occupations (Weisgram et al., 2010). Boys between the ages of 6 to 11 years have also been shown to have more interest in novel jobs associated with money than girls (Hayes et al., 2018). These findings show that children younger than the age group of 9-13 years proposed by Gottfredson (1981) are influenced by some aspects of status, where it seems like especially young boys' occupational aspirations are influenced by salary and power levels associated with occupations.

### **Self-Perceptions**

In the fourth and final stage of Gottfredson's developmental theory of occupational aspirations (1981), which occurs from age 13 and through adolescence, internal factors such as children's values, goals and self-perceptions (i.e., viewing oneself in line with agentic or communal traits and behaviors) become an important influence on children's occupational aspirations. Several studies have found support for the effect of these internal factors from adolescence and onwards. For example, Costa and colleagues (2001) conducted an analysis of personality test results from 26 cultures found that women reported being higher in communal

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

traits than men, whilst men reported being higher in agentic traits than women. Interestingly, the gender differences in personality traits between men and women differed between cultures, indicating that this gender difference is influenced by cultural differences which supports the idea that this gender difference is not only due to biological differences between men and women (Costa et al., 2001). Communal self-perceptions have also been found to influence occupational aspirations, as Weisgram and colleagues (2010) found that communal goals, such as family goals and altruistic goals, predicted communal occupational aspirations in adults. It has also been found that STEM-careers (i.e., science, technology, engineering and mathematics) were thought of as impeding with communal goals among psychology students and that students who endorsed communal goals has lower interest in STEM-careers, even when controlling for their perceived ability in science and mathematics (Diekman et al., 2010). These findings support Gottfredson's (1981) theorizing that self-perceptions influence occupational aspirations from adolescence and onward.

Despite a lack of research on self-perceptions in childhood, some studies have found that self-perceptions influence communal occupational aspirations at an earlier age than proposed by Gottfredson (1981). For example, Ojanen and colleagues (2005) found that among children between 11-12 years old, boys endorsed more agentic goals than girls, whilst girls endorsed more communal goals than boys. This early gender difference in self-perceptions seems to influence children's aspirations for their future. In addition, one study found that in a sample of children between 6 to 14 years, boys endorsed less communal values and more agentic values than girls (Block et al., 2018). This gender difference in values could partially explain the boys' lower interest in having a family in the future versus having a career in the future, meaning that boys with more communal values had a stronger interest in family whilst boys with more agentic values had a stronger interest in a career. Another study conducted among 11–14-year-old children found that communal self-perceptions increased

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

boys', but not girls', aspirations towards communal occupations, as well as that agentic self-perceptions increased girls', but not boys', aspirations towards agentic occupations (Mendez & Crawford, 2002). In general, the study found that girls aspired more towards communal occupations than boys and that boys aspired more towards agentic occupations than boys. Additionally, a study among preschool children (ages 4-6) found that having communal self-perceptions was related to higher communal occupational aspirations, and that communal self-perceptions mediated the relationship between children's gender and their aspirations towards communal occupations (Olsen et al., 2022). Therefore, it seems like those who have self-perceptions that are typically associated with the other sex, such as a girl having agentic self-perceptions, have occupational aspirations that follow their self-perceptions to a greater extent than those with self-perceptions that are typically associated with their own sex. To sum up, it appears that self-perceptions might be an important predictor of occupational aspirations at an earlier age than proposed by Gottfredson (1981).

### **The Present Study**

The present study is conducted as a follow up from a previously conducted study which investigated the effects of gender, gender stereotypes, self-perceptions and status on children's communal occupational aspirations (Olsen et al., 2022). The present study uses data from two time points, whilst this previous study only uses the data from the first of these time points, as well as data collected in childcare centers among preschool children. The aim of the study was to investigate how the different factors outlined by Gottfredson (1981) influenced children's occupational aspirations in early- to middle childhood (ages 4-13). In this study, we found a gender difference in communal occupational aspirations among the elementary school children (ages 6-13), but not among the preschool children (ages 4-6) and not when we combined the data from these two age groups. However, we found that a significant interaction effect between children's gender and their gender stereotypes on their communal

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

occupational aspirations in all samples. This means that girls with higher gender stereotypes towards communal occupations (i.e., nurse and preschool teacher) had high communal occupational aspirations, whilst boys with higher gender stereotypes towards communal occupational aspirations had low communal occupational aspirations. Additionally, we found a strong effect of perceived salary on children's communal occupational aspirations, meaning that children who believed that you make a lot of money in communal occupations also aspired more towards communal occupations. Lastly, we did not find a significant effect of communal self-perceptions on children's communal occupational aspirations in the sample of elementary school children, which is the same sample that we use in the analyses of this thesis. However, our results approached significance and pointed in the predicted direction, namely that children with higher communal self-perceptions had higher communal occupational aspirations.

Whereas the earlier study only focused on the data from T1, in the present project, we also included the data from T2 in order to investigate the relationship between the crucial variables over time. This means that we have the same data from two time points. To investigate the relationship of the variables over time, we will conduct analyses where we test if our predictors at timepoint 1 (gender stereotypes, self-perceptions, perceived salary) are related to the outcome variable (communal occupational aspirations) at timepoint 2.

We formulated the hypotheses based on results from Olsen and colleagues (2022) but use data from two time points in our analyses (T1 and T2). We predict, first, that girls will aspire more towards communal occupations than boys at both time points (H1). Second, children reporting higher salary associated with the occupations at time 1 will aspire more towards communal occupations at time 2 than children reporting lower salary associated with the occupations (H2). Also, children reporting higher levels of communal self-perceptions at time 1 will aspire more towards communal occupations at time 2 than children with low levels

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

of communal self-perceptions (H3). Lastly, girls with stronger occupational gender stereotypes at time 2 will aspire more towards communal occupations at time 2 (H4a) and boys with stronger occupational gender stereotypes at time 1 will aspire less towards communal occupations at time 2 (H4b). All hypotheses were preregistered on the Open Science Framework: [https://osf.io/3aph8/?view\\_only=236f392d596649c0afccd3de349a12c4](https://osf.io/3aph8/?view_only=236f392d596649c0afccd3de349a12c4).

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### **Method**

#### **Ethics**

Ethical approval for the planned data collection was obtained from the internal board of ethics and the Institute of Psychology at UiT The Arctic University of Norway. The study was also registered at the Norwegian Center for Research Data (NSD), which approved of the planned data collection.

#### **Recruitment and Procedure**

The data used in this master thesis was collected in a larger data collection that was mainly focused on how the Covid-19 related restrictions influenced the well-being of elementary school children and their parents. Several other papers have been published that also uses this data set (Kvalø et al., 2021; Martiny et al., 2021; Thorsteinsen et al., 2021; Thorsteinsen et al., 2022). All these papers investigate different research questions than the present study. The data consists of measures from three time points, one in June 2020 (T1), one in November 2020 (T2), and one in May 2021 (T3). However, this study will only focus on data from the first two time points (T1 and T2), due to low participation in T3 ( $N = 26$ ). The participants were recruited before the summer break in 2020. A team of research assistants were responsible for contacting the administration at elementary schools from all over Norway, asking them to forward the study to the parents at their school. The parents then received a link to a questionnaire that they were asked to answer. The parents first gave

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

informed consent to their participation in the study. Afterwards, the parents were asked to give consent to their children participating in the study. If they gave consent, they were forwarded to a questionnaire for their children. The parents were also asked to create a code which we could use to connect their questionnaire with their children's questionnaire. We also asked the parents to give their e-mail, as we had planned to conduct further data collections with the same sample, to investigate how Covid-19 influenced them over time. The parents gave their e-mail in a separate questionnaire that they were forwarded to at the end of the main questionnaire, to ensure that the participants responses to the survey would remain anonymous. We forwarded the questionnaire to the parents again in November 2020 (T2), asking them to enter the code they made for the first data collection at the beginning of their own and their children's questionnaire.

### **Questionnaire Design**

This master thesis will only use the data collected in the children's questionnaires. The study was conducted in Norwegian among Norwegian elementary school children. Since some of the children in our targeted age group were very young (6-13 years), we made sure to design the questionnaire in a child friendly way. We used large fonts and colors that are easy to read and made sure to not use any difficult words in the questions or instructions, as can be seen in the screenshot of the questionnaire in Figure 1. We also included audio recordings of all questions, instructions and scale points in the questionnaire, so that children with poor reading skills would be able to answer the questionnaire. In addition, we asked the parents to assist the children with answering the questionnaire if needed. The questionnaire was tested on children in the age group before the data collection, to ensure that the length was acceptable and that children were able to understand the questionnaire.

### **Figure 2.**

*Screenshot of the Children's Questionnaire*

## HVA VIL DU BLI NÅR DU BLIR STOR?

▶ 0:00 / 0:14 — ◀ ⋮

**Hvor mye har du lyst til å bli en barnehagelærer når du blir stor?**

---



Ikke i det hele tatt



Litt



Noe



Ganske



Veldig mye

### *Sample*

We collected data from 98 children in the first data collection (T1), and 48 children answered the questionnaire at both time points (T1 and T2). In the present work, we used the data from the 48 children who answered the questionnaire at both times (T1 and T2). We excluded children who stated that they did not understand the questions in the questionnaire ( $n = 1$ ). We also excluded children who did not want to state their gender ( $n = 1$ ), as our hypotheses are related to binary gender. The final sample consisted of 46 children (20 boys, 26 girls) between the ages of 6 to 13 years at T1 (T1:  $M = 9.56$ ,  $SD = 1.78$ , age missing for 3 children; T2:  $M = 9.82$ ,  $SD = 1.68$ , age missing for 1 child). Almost all of the children reported being born in Norway (44 born in Norway, 2 not born in Norway) and 38 of the children reported speaking only Norwegian at home, whilst the remaining 8 children reported speaking another language than Norwegian at home.

In order to determine the size of effects that are detectable with the sample size, we conducted a sensitivity analysis using G\*power. This analysis indicated that for a linear regression with five predictors (gender, gender stereotypes, self-perceptions, perceived salary interaction between gender stereotypes and gender) conducted for a sample of 46, a large effect of  $f^2 = .49$  at a power of .95 can be detected. This means that our sample is too small to detect small effects in our analyses.

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

### **Measures**

All original material from the questionnaire can be found in Appendix 1. As previously mentioned, the study was conducted as an online questionnaire. Due to the young age of some of the participants, we decided to include illustrations of all scale points and audio files of all questions, instructions and scale points. The illustrations and scale points used in the questionnaire can be found in Table 1, Table 2 and Table 3. The order in which the scales are presented below is the same order that the scales were presented in the questionnaire. In addition to the measures presented below, the questionnaire also included measures of children's well-being, emotions, general attitude towards school, attitudes about the Covid-19 restrictions, perceived performance at school, agentic occupational aspirations, agentic self-perceptions, gender stereotyped about agentic occupations and perceived salary for agentic occupations. These measures are not used in the present study.

### ***Communal Occupational Aspirations***

We measured the children's communal occupational aspirations towards stay-at-home parent, nurse and preschool teacher. We chose to include these occupations because they had been used in an earlier study which we based our measures on (Olsen et al., 2022). The question was phrased as such: "How much would you like to be a ... when you grow up?". The children answered using a 5-point scale ranging from 1 (not at all) to 5 (very much) and was illustrated by smileys, as can be seen in Table 1. The scale showed low reliability ( $\alpha = .53$ ), which was caused by the item stay-at-home parent. When excluding this item, the scale showed a satisfactory correlation,  $r(95) = .50, p < .001$ . We therefore formed a scale consisting of the items nurse and preschool teacher.

### **Table 1.**

#### *Scale Points and Illustrations Using Smileys*

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

	Scale points				
Scale visualizations					
Text in English	Not at all	A little	Some	Quite much	Very much
Text in Norwegian	Ikke i det hele tatt	Litt	Noe	Ganske	Veldig mye

### *Communal Self-perceptions*

We measured the children's communal self-perceptions by asking the children how much they liked to engage in three communal behaviors: helping children when they are in pain, comfort children when they are sad, being with other children. The questions were phrased as such: "Do you like to...?". The children answered on a 5-point scale ranging from 1 (not at all) to 5 (very much) and was illustrated by smileys, as can be seen in Table 1. The scale showed satisfactory reliability ( $\alpha = .83$ ).

### *Communal Occupational Gender Stereotypes*

We measured the children's gender stereotypes towards three communal occupations: stay-at-home parent, nurse and preschool teacher. The questions were phrased as such: "Who can be a...?". The children answered on a 5-point scale ranging from 1 (only men) to 5 (only women) and was illustrated by images of differing gender distributions, as can be seen in Table 2. The scale showed low reliability ( $\alpha = .52$ ), which was again caused by the item stay-at-home parent. When excluding this item, the scale showed a satisfactory correlation,  $r(95) = .54, p < .001$ . We therefore formed a scale consisting of the items nurse and preschool teacher.

### **Table 2.**

#### *Scale Points and Illustrations Using Gender Distributions*

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

	Scale points				
Scale visualization					
Text in English	Only men	Mostly men	Both women and men	Mostly women	Only women
Text in Norwegian	Bare menn	Flest menn	Både kvinner og menn	Flest kvinner	Bare kvinner

### *Perceived Salary for Communal Occupations*

We measured the children's perceptions of salary for three communal occupations, namely stay-at-home parent, nurse and preschool teacher. The questions were phrased as such: "How much do you think a ... earns?". The children answered on a 5-point scale ranging from 1 (very little) to 5 (very much) and was illustrated by piles of more or less money, as can be seen in Table 3. The scale showed poor reliability ( $\alpha = .53$ ), again due to stay-at-home parent. When excluding this item, the scale showed a satisfactory correlation,  $r(95) = .52, p < .001$ . We therefore formed a scale consisting of the items nurse and preschool teacher.

**Table 3.**

*Scale Points and Illustrations Using Amounts of Money*

	Scale points				
Scale visualization					
Text in English	Very little	Little	Average	Much	Very much

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

Text in Norwegian	Veldig lite	Lite	Sånn passe	Mye	Veldig mye
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### *Demographic Variables*

In addition to the scales presented above, we asked the children about their age, their sex, and their nationality, to be used as potential control variables in the analyses. We decided to always include gender in the analyses, as we wanted to control for the gender difference in communal occupational aspirations in all analyses. We also include age as a covariate in all analyses, as our sample has quite a large age range (ages 6-13)<sup>2</sup>.

### **Results**

All descriptive statistics and correlations for the variables used in the following analyses can be found in Table 3.

**Table 3.**

#### *Descriptive Statistics and Correlations between Measures for Girls and Boys*

	<i>N</i>	<i>M</i>	<i>SD</i>	1.	2.	3.	4.	5.
1. Age (in years)	20/23	9.75/9.39	1.74/1.83	1				
2. GST occupations	20/26	3.15/3.15	.33/.37	-.02/.11	1			
3. Perceived salary	20/26	3.13/3.62	.60/.67	-.19/.05	-.37/.58**	1		
4. Communal self-perceptions	20/26	3.97/4.32	.60/.67	.17/-.38	-.50*/-.02	.41/.31	1	
5. Communal occupational aspirations	20/26	1.75/2.02	.80/1.04	.20/-.16	-.10/.64**	.45*/.48*	.22/.24	1

Note. Statistics before / is for boys, after / is for girls; \* $p < .05$ . \*\* $p < .01$ . GST = Gender stereotypes; gender coding: boys = 1, girls = 2.

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

### **Does Gender Influence Children’s Communal Occupational Aspirations?**

We conducted a repeated measures ANOVA to investigate if there was a gender difference in communal occupational aspirations at both T1 and T2 (H1). Child age was included as a covariate in the analysis. The analysis was set up with communal occupational aspirations at the two time points as the within-subject effects and with gender as the between-subjects effect. There was no significant effect of time, indicating that there was no difference in communal occupational aspirations between T1 and T2. There was also no significant gender difference in communal occupational aspirations,  $F(1, 40) = .92, p = .344$ . However, as can be seen in Table 4, descriptively we see that girls have a higher mean level of communal occupational aspirations than boys.

**Table 4.**

*Descriptive Statistics from Repeated Measures ANOVA*

		<i>M</i>	<i>SD</i>	<i>N</i>
Communal occupational aspirations – T1	Boys	1.45	.72	20
	Girls	1.89	1.22	23
	Both	1.69	1.04	43
Communal occupational aspirations – T2	Boys	1.75	.80	20
	Girls	1.85	.93	23
	Both	1.80	.87	43

Note. T1 = Timepoint 1, T2 = Timepoint 2.

### **Does Gender Stereotypes Influence Children’s Communal Occupational Aspirations?**

To investigate whether gender stereotypes at T1 predicted communal occupational aspirations at T2 (H4a & H4b), we conducted a regression analysis where communal occupational gender stereotypes and the interaction between gender and communal

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

occupational gender stereotypes at T1 was included as predictors (X), and communal occupational aspirations was included as the outcome (Y). Age was included as a covariate in the analysis. We found a significant negative interaction effect of gender and occupational gender stereotypes on communal occupational aspirations,  $B = -1.83$ ,  $t(42) = -2.37$ ,  $p = .023$ . Simple slopes revealed that this effect was driven by girls: girls with stronger occupational gender stereotypes reported stronger communal occupational aspirations,  $B = 1.64$ ,  $t(20) = 3.29$ ,  $p = .004$ . The effect of occupational gender stereotypes on communal occupational aspirations was not significant among the boys,  $B = -.23$ ,  $t(17) = -.40$ ,  $p = .692$ . There was no significant main effect of age or gender in the analyses.

### **Does Perceived Salary Influence Children's Communal Occupational Aspirations?**

Next, we conducted another regression analysis to investigate if perceived salary at T1 predicted communal occupational aspirations at T2 (H2). Perceived salary at T1 was the predictor (X) and communal occupational aspirations at T2 was the outcome (Y). Child age and child gender were included as covariates. We found a significant effect of perceived salary at T1 on communal occupational aspirations at T2,  $B = .65$ ,  $t(39) = 3.23$ ,  $p = .003$ . This indicates that children with high perceived salary for communal occupations aspired more towards communal occupations. There was no significant effect of age or gender in the analysis.

### **Does Communal Self-Perceptions Influence Children's Communal Occupational Aspirations?**

Next, to investigate whether communal self-perceptions predicted children's communal occupational aspirations (H3), we conducted another regression analysis where communal self-perceptions at T1 was included as the predictor (X) and communal occupational aspirations at T2 was included as the outcome (Y). Gender and age were included as covariates in the analysis. The effect of communal self-perceptions on communal

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

occupational aspirations was not significant,  $B = .28$ ,  $t(42) = 1.81$ ,  $p = .078$ , but the effect approached significance. This would indicate that increased communal self-perception is related to increased communal occupational aspirations. There was no significant main effect of age or gender in the analysis.

### Multiple Regression Analysis Including all Predictors

To further investigate which predictors at T1, namely gender, gender stereotypes, communal self-perceptions, perceived salary, and the interaction between gender stereotypes and child gender hold to predict communal occupational aspirations at T2, we conducted a multiple regression analysis where all of the named factors were included as predictors and communal occupational aspirations was included as the outcome. Age was included as a covariate in the analysis. As can be seen in Table 5, we found a significant effect of occupational gender stereotypes on children's aspirations towards communal occupations,  $B = 1.20$ ,  $t(36) = 2.14$ ,  $p = .040$ . This would indicate that children with high communal occupational gender stereotypes show higher communal occupational aspirations, regardless of their gender. This is not in line with our hypotheses (H4a & H4b), as we predicted that boys with higher communal occupational gender stereotypes would report less aspirations towards communal occupations, whilst girls with higher communal occupational gender stereotypes would report more aspirations towards communal occupations. None of the other predictors were significant in this analysis.

**Table 5.**

*Multiple Regression Analyses of All Predictors at T1 on Communal Occupational Aspirations at T2*

	$B$	$SE B$	$\beta$	$t$	$p$
Intercept	-3.88	1.86		-2.09	.044

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

Age	-.00	.07	-.00	-.02	.988
Gender	-.07	.26	-.04	-.29	.777
Perceived salary	.35	.25	.26	1.43	.163
Self-perceptions	.21	.16	.22	1.33	.192
Occupational GST	1.20	.56	.46	2.14	.040
Gender x Occupational GST	-.92	.84	-.23	-1.10	.281

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Note. GST = Gender stereotypes; DV = communal occupational aspirations

### Discussion

#### The Effect of Gender and Gender Stereotypes

In the present study, we did not find an effect of gender on children's communal occupational aspirations (H1). This finding is not in line with the developmental theory of occupational aspirations by Gottfredson (1981), which states that gender differences in occupational aspirations should be present by the time children are five years old. In addition, a gender difference in communal occupational aspirations was found in our previous study using only data from T1. This means that a gender difference in communal occupational aspirations was found in this sample during the summer of 2020, but that this effect could not be found five months later. However, we did not find a gender difference in communal occupational aspirations among preschool children in our previous study, or when combining the data from the preschool children (ages 4-6) and elementary school children (data from T1; ages 6-13). However, when looking at the mean communal occupational aspirations for the boys and girls, we see a descriptive difference between the groups where girls showed higher communal occupational aspirations than the boys. According to both theory (Eagly & Karau, 2002; Gottfredson, 1981; Martin et al., 2002) and empirical findings (Levy et al., 2000; Trice & Rush, 1995), a gender difference in children's occupational aspirations can be found from children are about four years old and throughout childhood. Our failure to find a significant

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

gender difference in T2 is therefore likely due to a lack of power in our analyses when focusing on the reduced sample ( $N = 48$ ) of children who filled in the questionnaire at T1 and T2.

In addition, when conducting separate regression for each predictor, we found the predicted interaction of gender stereotypes and child gender on children's communal occupational aspirations. More precisely, we found that girls with stronger occupational gender stereotypes reported stronger communal occupational gender stereotypes, in line with H4a. Among the boys, there was no effect of gender stereotypes on their communal occupational aspirations, which is not in line with H4b. This suggests that girls' occupational aspirations are more affected by their gender stereotypes than boys' occupational aspirations. We found the same effect in our previous study when only using the data of T1 (Olsen et al., 2022). According to Gottfredson (1981), children's gender stereotypes influence their occupational aspirations from around age 6, meaning that our findings only partially support this theorizing. Concerning previous empirical evidence for the effect of gender stereotypes on occupational aspirations, the findings reviewed in the earlier sections of this thesis found evidence to support Gottfredson (1981) in that children's occupational aspirations are influenced by their gender stereotypes from around age 6 and onwards (Serbin et al., 1993; Weisgram et al., 2010).

There are several implications that can be drawn from these findings. First of all, it is very interesting that we find effects of occupational gender stereotypes in our present study. This is because our study was conducted in Norway, which is ranked as the second most gender egalitarian country in the world. Therefore, we can assume that gender norms are not as rigid in Norway compared to other countries. We therefore argue that our findings will likely be generalizable to the rest of the world, as we would expect even stronger effects of gender stereotypes in less gender egalitarian societies.

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

Also, our findings indicate that the presence of gender stereotypes caused girls to be more interested in communal occupations, whilst this perception that communal roles are for women does not seem to influence boys' interest in communal occupations. Based on this finding, we need to reflect about the types of interventions that are currently used to encourage boys to pursue a career in communal occupations. These interventions often highlight men that work in communal occupations such as in healthcare and early education, to show boys that not only women work in these occupations (Aubeeluck et al., 2017; University of Dundee, 2018; Wood & Souter, 2018). The idea is that providing male role models in these occupations might lead to reduced stereotypes about the occupations. Several programs have used this type of intervention to increase girls' interest in agentic occupations, which appears to have been successful as we have seen an increase in the number of women than pursue careers in agentic occupations (Croft et al., 2015). However, our findings indicate that these interventions might not have such a strong impact on boys' communal occupational aspirations. It is, however, important to note that our results are likely underpowered, and we therefore have to be cautious when interpreting these results.

### **The Effect of Perceived Salary**

In line with H2, we found that children who believed that you make a lot of money in communal occupations also aspired more towards communal occupations. This was also found in our previous study using the data from T1 (Olsen et al., 2022). This finding indicates that children in the ages of 6 to 13 have an understanding that salary varies between occupations. It also indicates that children in this age group place value on having an occupation with a good salary, which is consistent with Gottfredson's developmental theory of occupational aspirations (1981). This is also consistent with empirical findings that show that children are aware of differences in status between occupations from a young age and that children use this awareness in their appraisal of possible future occupations (Hardie et al.,

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

2015; Hayes et al., 2018; Lapan & Jingeleski, 1992; Liben et al., 2001; Weisgram et al., 2010).

Our results indicates that children who believe that you make a lot of money in communal occupations also aspire more towards communal occupations. This was the case for both the boys and girls in our sample. This finding indicates that the status of occupations seems to influence occupational aspirations even from a young age. Therefore, raising the status of communal occupations by providing a competitive salary might be an important step in increasing the number of men than choose to pursue a career in a communal occupation. There are several ways this could be implemented, firstly by increasing the salary of communal occupations to be competitive with agentic occupations. The salary for the communal occupations that was used in this study, namely nurses and preschool teachers, is below the average salary in Norway (SSB, 2021c). According to statistics from 2021, nurses in Norway made on average 49 440 NOK per month, whilst preschool teachers made on average 43 680 NOK per month. The average salary per month in Norway is 50 749 NOK per month. This illustrates that the salary for communal occupations is not competitive enough, even in a gender egalitarian country such as Norway. A different example of providing a monetary benefit for pursuing a communal career comes from Coventry University in the United Kingdom, which provides ten scholarships of £30.000 to men who study nursing (Coventry University, 2017). This could be a way to encourage men into pursuing a communal education, as the monetary benefit might outweigh the psychological stress of going against the gender stereotype that communal work is for women. The effect of such interventions remains to be seen, but our findings highlight the importance of acknowledging that the gender gap in communal occupations is not only due to gender roles but that the vast undervaluation of communal occupations such as nursing also seems to be responsible.

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

Additionally, promoting equal status of occupations on a societal level can be an important factor in increasing interest in currently low-status occupations. It is particularly important to educate children that communal occupations such as nursing are important occupations, instead of promoting attitudes such as “smart people become doctors instead of nurses”. To sum up, increasing the salary or providing monetary benefits in communal occupations can potentially be an effective way to increase interest in communal occupations, but status of occupations must also be increased by highlighting the important work that is done in communal occupations and giving these occupations the respect they deserve.

### **The Effect of Communal Self-Perceptions**

Lastly, we did not find that increased levels of communal self-perceptions were related to more communal occupational aspirations, which was not in line with H3. Despite this, the effect was close to statistically significance and pointed in the predicted direction. We found similar effects in the same sample in our previous study using the data from T1 (Olsen et al., 2022). This could indicate self-perceptions does have a small impact on children’s occupational aspirations, but that this effect is not strong enough to reach the criterion for statistical significance. Also, according to Gottfredson’s theory (1981) we would not expect to observe an effect of self-perceptions on occupational aspirations until adolescence. However, we found an effect of self-perceptions on children’s communal occupational aspirations in the sample of preschool children in our previous study, which is not in line with Gottfredson’s theory (Olsen et al., 2022). Furthermore, several of the studies reported earlier in this thesis also found indications that children’s occupational aspirations might be influenced by their self-perceptions and values at an earlier age than proposed by Gottfredson (Block et al., 2018; Mendez & Crawford, 2002; Ojanen et al., 2005). This illustrates the need for further research that investigates the effect of self-perceptions on occupational aspirations throughout childhood. Children’s self-perceptions are developed partially based on their gender and their

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

gender stereotypes, as the information about their gender is internalized and becomes part of their identity and how they view themselves. Therefore, interventions to reduce the effect of gender stereotypes on children's behavior, including their occupational aspirations, might be effective in reducing gender normative self-perceptions in children.

### **Limitations**

Although this thesis provides important contribution to the research about occupational aspirations in childhood, there are several limitations that need to be addressed. Firstly, the sample in this study is rather small, with only 46 participants in the analyses. We had more than twice as many participants in T1, which means that about half of the sample dropped out. As mentioned previously, we conducted a sensitivity analysis that revealed that we only have statistical power to detect large effects. Therefore, any smaller effects in our sample would not be statistically significant. When conducting a multiple regression analysis with all of the predictors in one model, we did not find any of the predicted effects. This means that we were not able to find the effects when controlling for the other variables we investigate in the present study. This is likely due to this power issue, as able to find these effects in a multiple regression analysis in our previous study when only using the data from T1, where we had a sample that was more than twice that large, (96 participants; Olsen et al., 2022). We likely did not have sufficient statistical power to observe the effects when testing them in a more complex model. In general, it would have been better to have already at T1 collected a larger sample, as this would have allowed for a larger dropout. However, this was not possible because the data was collected among elementary school students in June 2020 and we were limited in time to recruit participants due to the upcoming summer break. We then had a dropout of 50 participants between T1 and T2. We could also have been more persistent in reminding the participants from T1 to participate in the questionnaire for T2. Therefore, future studies that aim to collect longitudinal data regarding the development of

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

occupational aspirations in children should make sure to recruit a sufficient sample in their initial data collection to allow for a dropout of at least fifty percent.

The small sample size in this study also caused another limitation to this study. We are testing the effects of the predictors at one timepoint on communal occupational aspirations at a later time point. In order to review the development of the effects of these predictors over time, we would need to include data from a third timepoint in our analyses. This was something we originally intended to do. However, we only have data from 26 participants at the third timepoint, meaning that we do not have the required statistical power to conduct the needed analyses to investigate the development of the predictor over time. We therefore decided to conduct our analyses only using data from two timepoints. Therefore, future studies that aim to investigate the development of occupational aspirations over time should make sure to attain a sufficient sample size in the first round of data collection, to ensure that the sample size will still be large enough after the inevitable dropout of participants between data collections.

Another limitation to this study is related to the measures. Firstly, we only included two communal occupations in the scales. Another communal occupation, namely stay-at-home parent, was originally included in the scales because it was successfully included in the preschool sample in the previous study (Olsen et al., 2022). However, including this occupation led to low reliability in the scales for this sample. This might be because older children understand that being a stay-at-home parent is not an actual occupation and can be described better as a communal role. Even though nurse and preschool teachers are examples of communal occupations that children have experiences with, it would be beneficial to include more communal occupations in the scales in future studies to get a broader understanding of children perceptions of communal occupations. Secondly, occupational status was only measured by asking children how much money they believe you make in the

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

occupations. Salary is an important aspect of status, which has been used in several previous studies as a measure for status (e.g., Hayes et al., 2018; Weisgram, 2010). However, as outlined in Gottfredson (1981), there are several other important aspects to occupational status. Such aspects include the prestige of occupations and the level of power associated with occupations. To get a better understanding of how status as a whole influences children's aspirations towards communal occupations, these aspects of status should be included in future research on this topic.

Lastly, an important limitation of this study is the cross-sectional design. The nature of this design means that we are unable to determine the causality of the effects. Our findings indicate that high perceived salary for communal occupations leads to higher aspirations towards communal occupations in children. However, since the found effect is correlational, we cannot conclude that the reverse effect is not true; namely that high communal occupational aspirations cause children to believe that you make a lot of money in communal occupations. Therefore, the found effect may be caused by children viewing the occupations they aspire towards more favorably. We have now found this effect twice, first using data from only T1, then using data from both T1 and T2 (Olsen et al., 2022). These findings together indicates strongly that there is a relationship between perceived salary of communal occupations and communal occupational aspirations, but we still cannot determine causality. There is therefore a need for experimental research that investigates predictors of occupational aspirations in children.

### **Conclusion**

The present study contributes to existing research on children's occupational aspirations by demonstrating the importance children's gender stereotypes and perceived salary in children's desire to pursue specific communal careers. Our findings are in line with the theorizing by Gottfredson (1981), which states that gender stereotypes and occupational

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

status are important predictors of children's occupational aspirations in the present age group (ages 6-13). Present interventions that aim to reduce boys' gender stereotypes to increase their interest in communal occupations might not be effective, as our findings indicate that gender stereotypes only influenced occupational aspirations in girls. Rather, that interventions that aim to increase the number of men in communal occupations might need to focus on raising the perceived and real status of communal occupations, for example by increasing the salary of communal occupations.

**Footnotes**

<sup>1</sup> The hypotheses are presented in a slightly different order in this paper compared to the preregistration, to increase readability and flow in the paper.

<sup>2</sup> In addition to the measures presented in this thesis, we also measured several other factors in the children's questionnaire: well-being, general attitudes about school, perceived performance at school, emotions, attitudes about Covid-19 related restrictions, agentic self-perceptions, agentic occupational gender stereotypes, perceived salary for agentic occupations and agentic occupational aspirations.

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Appendix 1 – Copy of the Online Questionnaire

Code for parent

**PERSONLIG KODE - FOR DEN FORESATTE**

Nå ber vi deg skrive inn den personlige koden du lagde i det aller første spørreskjemaet, før barnet ditt begynner på sitt spørreskjema. Dette er for å kunne knytte sammen deres spørreskjema.

Koden er basert på den første og den siste bokstaven i barnet sitt navn, de to første bokstavene på den første skolen barnet ditt gikk på, og dagen barnet er født (DD). Forsøk å oppgi nøyaktig samme kode (om du brukte store og/eller små bokstaver, eller en kombinasjon).

Eksempel: Lisa, Gratangen skole, 5. mai, koden vil da være: lagr05

Information

0:00 / 0:18

**TAKK FOR AT DU DELTAR**

Tusen takk for at du deltar i en ny spørreundersøkelse. Du vil bli stilt spørsmål om hvordan du har hatt det i livet under koronatiden. De fleste av spørsmålene er veldig like de som ble stilt under den første spørreundersøkelsen, men svarene dine her kan likevel gi oss verdifull kunnskap om livet i koronatiden.

0:00 / 0:00

**LIVET I KORONATIDEN**

Dette er en spørreundersøkelse som handler om hvordan du har blitt påvirket av koronaviruset. Vi vil spørre deg om litt forskjellige ting, blant annet om skole, venner, følelser og hvordan du har det. Det vil ta cirka 20-25 minutter å svare på spørreskjemaet.

Du vil se ett spørsmål på hver side. Pass på at du leser spørsmålet nøye. For å få spørsmålet lest opp for deg kan du trykke på "spill av" knappen som du vil finne sammen med spørsmålet.

Du vil få noen svaralternativer sammen med spørsmålet. Du må lese disse, og trykke på det alternativet som du synes passer best for deg. Du trenger ikke tenke så mye på hva du svarer, det er ingen riktige eller gale svar. Når du har trykket på ditt svar, vil du automatisk gå videre til neste spørsmål. Du kan ikke gå tilbake å endre svarene dine etterpå, så pass på at du trykker på det svaret som er riktig for deg.

**På neste side vil vi fortelle deg litt mer om spørreundersøkelsen, og du vil få velge om du vil være med eller ikke. Trykk på den lille pilen for å gå videre til neste side.**

---

Consentform

0:00 / 0:00

## HVORFOR BLIR DU SPURT OM Å VÆRE MED?

Vi ønsker å lære mer om hvordan reglene for en meter avstand, mindre grupper og andre nye regler på grunn av koronaviruset påvirker barns hverdag med skole og venner. Noen av disse reglene trenger man ikke å følge lengre nå, men vi vil vite litt om hvordan det var for deg å måtte følge disse reglene. Foreldrene dine har allerede svart på noen spørsmål, men det er du som vet best hvordan du har det, derfor ønsker vi at du også skal svare på noen spørsmål om dette.

## HVA VIL SKJE DERSOM DU IKKE BLIR MED?

Det er helt frivillig å være med, og det har ingen konsekvenser for deg om du er med eller ikke. Det betyr at du ikke behøver å være med selv om foreldrene dine har sagt at de vil være med. Dersom du er med, er det kun forskerne i prosjektet og foreldrene dine som vil se svarene dine. Skolen eller vennene dine vil ikke få vite hvordan du svarer.

**Jeg har mottatt og forstått informasjon om prosjektet og sier ja til å svare på spørsmålene.**

---

JA

NEI

0:00 / 0:00

Du har nå sagt nei til å svare på dette spørreskjemaet. Om du trykket nei med et uhell kan du allikevel svare på spørreskjemaet ved å trykke på JA her. Om du ikke har lyst til å svare på spørreskjemaet, så trykker du på NEI.

---

JA

NEI

Well-being

## GLEDE OG HELSE

0:00 / 0:00

Hvordan har du det? Hvordan føler du deg? Det er det vi ønsker at du skal fortelle oss om nå. Prøv å tenk på hvordan du har hatt det den siste uka, og velg det svaret som passer best for deg. Det er ingen riktige eller gale svar.

**Når du tenker på den siste uka...**

Har du klart deg bra på skolen?

---



Ikke i det hele tatt

Litt

Ganske

Veldig



I høy grad

## GLEDE OG HELSE

0:00 / 0:00

Når du tenker på den siste uka...

Har du følt deg frisk og sprek?

---



Ikke i det hele tatt

Litt

Ganske

Veldig



I høy grad

## GLEDE OG HELSE

0:00 / 0:00

Når du tenker på den siste uka...

Har du hatt nok tid for deg selv?

---



Aldri

Sjeldent

Ganske ofte

Veldig ofte



Alltid

## GLEDE OG HELSE

0:00 / 0:00

Når du tenker på den siste uka...

Har du kunnet gjøre de tingene du ønsker i fritiden din?

---



Aldri

Sjeldent

Ganske ofte

Veldig ofte



Alltid

## GLEDE OG HELSE

0:00 / 0:00

Når du tenker på den siste uka...

Har du følt at foreldrene dine behandler deg rettferdig?

---



Aldri

Sjeldent

Ganske ofte

Veldig ofte



Alltid

## GLEDE OG HELSE

0:00 / 0:00

Når du tenker på den siste uka...

Har du hatt det gøy sammen med vennene dine?

---



Aldri

Sjeldent

Ganske ofte

Veldig ofte



Alltid

## GLEDE OG HELSE

0:00 / 0:00

Når du tenker på den siste uka...

Har du følt deg full av energi?

---



Aldri

Sjeldent

Ganske ofte

Veldig ofte



Alltid

## GLEDE OG HELSE

0:00 / 0:00

Når du tenker på den siste uka...

Har du klart å følge med på skolen?

---



Aldri

Sjeldent

Ganske ofte

Veldig ofte



Alltid

## GLEDE OG HELSE

0:00 / 0:00

Når du tenker på den siste uka...

Har du følt deg ensom?

---

Aldri

Sjeldent

Ganske ofte

Veldig ofte

Alltid

## GLEDE OG HELSE

0:00 / 0:00

Når du tenker på den siste uka...

Har du følt deg trist?

---

Aldri

Sjeldent

Ganske ofte

Veldig ofte

Alltid

motions

## FØLELSER

0:00 / 0:00

Nå vil vi vite litt om hvordan du har følt deg den siste uka. Tenk tilbake, har du kanskje vært sint ofte, eller har du vært glad noen ganger også? Det vil vi at du skal svare på nå.

Vennligst svar på hvor mye du har følt deg slik den siste uka:

Jeg var glad.

---

Aldri

Sjeldent

Ganske ofte

Veldig ofte

Alltid

## FØLELSER

0:00 / 0:00

Vennligst svar på hvor mye du har følt deg slik den siste uka:

Jeg var interessert.

Aldri  Sjeldent  Ganske ofte  Veldig ofte  Alltid

## FØLELSER

0:00 / 0:00

Vennligst svar på hvor mye du har følt deg slik den siste uka:

Jeg var fornøyd.

Aldri  Sjeldent  Ganske ofte  Veldig ofte  Alltid

## FØLELSER

0:00 / 0:00

Vennligst svar på hvor mye du har følt deg slik den siste uka:

Jeg var lei meg.

Aldri  Sjeldent  Ganske ofte  Veldig ofte  Alltid

## FØLELSER

0:00 / 0:00

Vennligst svar på hvor mye du har følt deg slik den siste uka:

Jeg var redd.

Aldri  Sjeldent  Ganske ofte  Veldig ofte  Alltid

## FØLELSER

0:00 / 0:00

Vennligst svar på hvor mye du har følt deg slik den siste uka:

**Jeg var sint.**

Aldri	Sjeldent	Ganske ofte	Veldig ofte	Alltid
<input type="radio"/>				

**GATS**

**SKOLE**

0:00 / 0:00

Nå vil vi spørre deg om hva du synes om skolen. Du skal velge det svaret som passer best med hva du synes. Det er ingen riktige eller gale svar, og ingen fra skolen din eller vennene dine vil få vite hva du har svart.

**Blir du glad når du kan dra hjem fra skolen?**

Aldri	Sjeldent	Ganske ofte	Veldig ofte	Alltid
<input type="radio"/>				

**SKOLE**

0:00 / 0:00

**Liker du å være på skolen?**

Aldri	Sjeldent	Ganske ofte	Veldig ofte	Alltid
<input type="radio"/>				

**SKOLE**

0:00 / 0:00

**Når du står opp om morgenen, er du glad for at du skal på skolen?**

Aldri	Sjeldent	Ganske ofte	Veldig ofte	Alltid
<input type="radio"/>				

**SKOLE**

0:00 / 0:00

**Bruker du å spørre mamma eller pappa om å få være hjemme fra skolen?**

Aldri	Sjeldent	Ganske ofte	Veldig ofte	Alltid
<input type="radio"/>				

**SKOLE**

0:00 / 0:00

**Synes du det er fælt å være på skolen?**



## SKOLE

0:00 / 0:00

### Synes du skolen er gøy?

Ikke i det hele tatt	Litt	Ganske	Veldig	I høy grad
<input type="radio"/>				

## REGLENE PÅ GRUNN AV KORONAVIRUSET

0:00 / 0:00

Når koronaviruset kom til Norge ble mye av samfunnet stengt, for eksempel skolene. Da måtte nesten alle barn i Norge ha hjemmeskole. Nå vil vi spørre deg litt om hvordan det var for deg å ha hjemmeskole og hva du synes om de nye reglene som kom på grunn av koronaviruset. Det er ingen riktige eller gale svar, og ingen fra skolen din eller vennene dine får vite hva du har svart.

### Hvor mye likte du å ha hjemmeskole?

Ikke i det hele tatt	Litt	Ganske	Veldig	I høy grad
<input type="radio"/>				

## REGLENE PÅ GRUNN AV KORONAVIRUSET

0:00 / 0:00

### Likte du å ha hjemmeskole bedre enn å ha vanlig skole?

Likte hjemmeskole bedre	Likte hjemmeskole litt bedre	Likte begge like mye	Likte vanlig skole litt bedre	Likte vanlig skole bedre					
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## REGLENE PÅ GRUNN AV KORONAVIRUSET

0:00 / 0:00

### Hvordan følte du deg når du hadde hjemmeskole?

Dårlig	Litt dårlig	Verken bra eller dårlig	Litt bra	Bra
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

General coronaquestions

## KORONAVIRUSET

0:00 / 0:00

**Synes du reglene som har kommet på grunn av koronaviruset er bra eller dårlig?**



Dårlig



Litt dårlig



Verken bra eller dårlig



Litt bra



Bra

**KORONAVIRUSET**

0:00 / 0:00

**Har du hatt det bedre eller dårligere siden koronaviruset kom?**



Dårligere



Litt dårligere



Verken bedre eller dårligere



Litt bedre



Bedre

**KORONAVIRUSET**

0:00 / 0:00

**Er du bekymret for koronaviruset?**

Ikke i det hele tatt

Litt

Ganske

Veldig

I høy grad

**REGLENE PÅ GRUNN AV KORONAVIRUSET**

0:00 / 0:00

Da alle barna begynte på skolen igjen, ble mange sine klasser delt inn i mindre grupper, og noen fikk nye lærere og måtte flytte til andre klasserom.

**Ble din klasse delt inn i mindre grupper?**

Ja

Nei

**REGLENE PÅ GRUNN AV KORONAVIRUSET**

0:00 / 0:00

Din klasse ble delt inn i mindre grupper på grunn av koronaviruset. Nå har reglene endret seg, og klassene trenger ikke lenger være delt opp i mindre grupper. Vi vil at du skal tenke tilbake til hvordan det var når klassen din var delt inn i mindre grupper.

**Hadde du lyst til å bytte gruppe i klassen din?**

Ja

Nei

## SKJERMBRUK NÅR SKOLENE VAR NEDSTENGT

0:00 / 0:00

Nå ønsker vi å stille deg et spørsmål om skjermbruk når skolene var stengt. Med skjermbruk mener vi tid brukt på å se eller spille på TV, nettbrett, mobiltelefon, eller datamaskin.

Hvordan var skjermbruken når skolene var stengt ned, sammenlignet med nå?

Mye mindre

Litt mindre

Likt

Litt mer

Mye mer

received performance

## HVORDAN GJØR DU DET PÅ SKOLEN?

0:00 / 0:00

Nå vil vi gjerne vite hvordan du gjør det på skolen for tiden. Vi vil spørre deg om hvordan du gjør det i forskjellige fag. Tenk over hvordan du har gjort det i faget, og trykk på det svaret du synes passer best for deg.

Jeg gjør det bra i matematikk for tiden.



Ikke i det hele tatt

Litt

Ganske

Veldig



I høy grad

## HVORDAN GJØR DU DET PÅ SKOLEN?

0:00 / 0:00

Jeg gjør det bra i norsk for tiden.



Ikke i det hele tatt

Litt

Ganske

Veldig



I høy grad

## HVORDAN GJØR DU DET PÅ SKOLEN?

0:00 / 0:00

Jeg gjør det bra i engelsk for tiden.



Ikke i det hele tatt

Litt

Ganske

Veldig



I høy grad

CareerCommunal**HVA VIL DU BLI NÅR DU BLIR STOR?**

0:00 / 0:00

Nå vil vi spørre deg om hvor mye du har lyst til å ha noen forskjellige jobber. Du har sikkert tenkt på hva du har lyst til å bli når du blir stor, og kanskje du har bestemt deg for hvilken jobb du vil ha. Vi vil allikevel at du skal prøve å se for deg hvor mye du ville likt å ha noen forskjellige jobber nå. Velg det svaret som passer best for deg.

Hvor mye har du lyst til å bli en sykepleier når du blir stor?

				
Ikke i det hele tatt	Litt	Noe	Ganske	Veldig mye
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**HVA VIL DU BLI NÅR DU BLIR STOR?**

0:00 / 0:00

Hvor mye har du lyst til å bli en barnehagelærer når du blir stor?

				
Ikke i det hele tatt	Litt	Noe	Ganske	Veldig mye
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**HVA VIL DU BLI NÅR DU BLIR STOR?**

0:00 / 0:00

Hvor mye har du lyst til å være hjemme med barna dine når du blir stor?

				
Ikke i det hele tatt	Litt	Noe	Ganske	Veldig mye
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

CareerAgentic**HVA VIL DU BLI NÅR DU BLIR STOR?**

0:00 / 0:00

Hvor mye har du lyst til å bli en brannkonstabel når du blir stor?



## HVA VIL DU BLI NÅR DU BLIR STOR?

0:00 / 0:00

Hvor mye har du lyst til å bli en soldat når du blir stor?

---

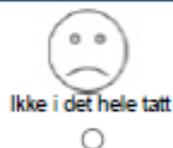


## HVA VIL DU BLI NÅR DU BLIR STOR?

0:00 / 0:00

Hvor mye har du lyst til å bli en pilot når du blir stor?

---



elfperceptionCommunal

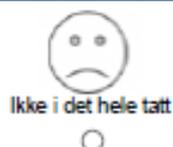
## HVA LIKER DU Å GJØRE?

0:00 / 0:00

Nå vil vi spørre deg om hva du liker å gjøre. Mange liker å gjøre forskjellige ting, så det er ingen riktige eller gale svar. Ingen fra skolen din eller vennene dine vil få vite hva du har svart.

Liker du å hjelpe andre barn når de har det vondt?

---



## HVA LIKER DU Å GJØRE?

0:00 / 0:00

...

## OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD



### HVA LIKER DU Å GJØRE?

0:00 / 0:00

Liker du å trøste andre barn når de er lei seg?

---



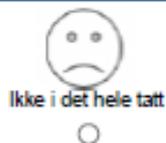
selfperceptionAgentic

### HVA LIKER DU Å GJØRE?

0:00 / 0:00

Liker du å bestemme når du leker med andre?

---



### HVA LIKER DU Å GJØRE?

0:00 / 0:00

Liker du å konkurrere med andre?

---

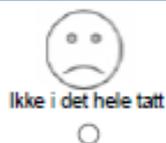


### HVA LIKER DU Å GJØRE?

0:00 / 0:00

Liker du å snakke høyt foran klassen?

---



## JOBBER FOR MENN OG KVINNER

0:00 / 0:00

Nå vil vi stille deg noen spørsmål om hvilke jobber du tror menn og kvinner kan ha. Vi vil vite hva du tror, så det er ingen riktige eller gale svar.

Hvem kan være en sykepleier?



Bare menn



Flest menn



Både menn og kvinner



Flest kvinner



Bare kvinner

## JOBBER FOR MENN OG KVINNER

0:00 / 0:00

Hvem kan være en barnehagelærer?



Bare menn



Flest menn



Både kvinner og menn



Flest kvinner



Bare kvinner

## JOBBER FOR MENN OG KVINNER

0:00 / 0:00

Hvem kan være hjemme med barna?



Bare menn



Flest menn



Både kvinner og menn



Flest kvinner



Bare kvinner

DescriptiveSTAgentic

## JOBBER FOR MENN OG KVINNER

0:00 / 0:00

Hvem kan være en brannkonstabel?



Bare menn



Flest menn



Både kvinner og menn



Flest kvinner



Bare kvinner

## JOBBER FOR MENN OG KVINNER

# OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

0:00 / 0:00

## Hvem kan være en soldat?



Bare menn



Flest menn



Både kvinner og menn



Flest kvinner



Bare kvinner



## JOBBER FOR MENN OG KVINNER

0:00 / 0:00

### Hvem kan være en pilot?



Bare menn



Flest menn



Både kvinner og menn



Flest kvinner



Bare kvinner



### MoneyCommunal

## LØNN

0:00 / 0:00

Nå vil vi stille deg noen spørsmål om hvor mye penger du tror man tjener når man har disse jobbene. Vi vil vite hva du tror, så det er ingen riktige eller gale svar.

### Hvor mye penger tror du en sykepleier tjener?



Veldig lite



Lite



Sånn passe



Mye



Veldig mye



## LØNN

0:00 / 0:00

### Hvor mye penger tror du en barnehagelærer tjener?



Veldig lite



Lite



Sånn passe



Mye



Veldig mye



## LØNN

0:00 / 0:00

Hvor mye penger tror du en som er hjemme med barna tjener?

---



Veldig lite



Lite



Sånn passe



Mye



Veldig mye

MoneyAgentic

## LØNN

0:00 / 0:00

Hvor mye penger tror du en brannkonstabel tjener?

---



Veldig lite



Lite



Sånn passe



Mye



Veldig mye

## LØNN

0:00 / 0:00

Hvor mye penger tror du en soldat tjener?

---



Veldig lite



Lite



Sånn passe



Mye



Veldig mye

## LØNN

0:00 / 0:00

Hvor mye penger tror du en pilot tjener?

---



Veldig lite



Lite



Sånn passe



Mye



Veldig mye

0:00 / 0:00

**Nå er du nesten ferdig! Først vil vi stille deg noen enkle spørsmål om deg selv. Trykk på den lille pilen for å gå videre til neste spørsmål etterpå.**

**Hvor mange år er du?**

---

0:00 / 0:00

**Hvilket kjønn er du?**

---

- Gutt
- Jente
- Jeg vil ikke si
- Annet

0:00 / 0:00

**Snakker du noe annet enn norsk til noen i familien?**

---

- Ja
- Nei

0:00 / 0:00

**Er du født i Norge?**

---

- Ja
- Nei

**Inderstanding**

0:00 / 0:00

**Forsto du spørsmålene våre?**

---

- Ja
- Nei

0:00 / 0:00

**Fikk du hjelp av en voksen til å svare på spørsmålene?**

---

- Ja
- Nei

**Appendix 2 – Ethical Approvals from the Internal Board of Ethics at Institute of  
Psychology at UiT The Arctic University of Norway**



UiT Norges arktiske universitet

Institutt for psykologi  
Arkiv ref.: 2017/1912  
Dato: 08.05.2020  
off. § 26,4

Professor Sarah Martiny  
Dept of Psychology  
UiT

**Ethical evaluation of research project**

Dear colleague,

Your research project:

**How do changes implemented in Norwegian schools due to the Covid 19 pandemic affect children's emotions and well-being?**

has been ethically evaluated by the Department of Psychology's internal research ethics committee based on received information. Your project has been exempted from full review and thus approved by the Department of Psychology's Research Ethics Committee.

Sincerely yours, on behalf of the Committee

A handwritten signature in blue ink, appearing to read 'Martin E. Sævi'.

Vedlegg:

Kopit:  
John Vegard Bjerklund  
Ole Åsli

## Appendix 3 – Ethical Approval from the Norwegian Centre for Research Data (NSD)

11.6.2020

Meldeskjema for behandling av personopplysninger



### NSD sin vurdering

#### Prosjekttittel

Hvordan påvirker koronatiltakene i skolen barns trivsel og livskvalitet

#### Referansenummer

164246

#### Registrert

11.05.2020 av Kjærsti Thorsteinsen - kjarsti.thorsteinsen@uit.no

#### Behandlingsansvarlig institusjon

UIT – Norges Arktiske Universitet / Det helsevitenskapelige fakultet / Institutt for psykologi

#### Prosjektansvarlig (vitenskapelig ansatt/veileder eller stipendiat)

Kjærsti Thorsteinsen, kjarsti.thorsteinsen@uit.no, tlf: 77646269

#### Type prosjekt

Forskerprosjekt

#### Prosjektperiode

20.05.2020 - 01.07.2022

#### Status

04.06.2020 - Vurdert

### Vurdering (1)

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#### 04.06.2020 - Vurdert

Det er vår vurdering at behandlingen av personopplysninger i prosjektet vil være i samsvar med personvernlovgivningen så fremt den gjennomføres i tråd med det som er dokumentert i meldeskjemaet 04.06.2020 med vedlegg, samt i meldingsdialogen mellom innmelder og NSD. Behandlingen kan starte.

#### MELD VESENTLIGE ENDRINGER

Dersom det skjer vesentlige endringer i behandlingen av personopplysninger, kan det være nødvendig å melde dette til NSD ved å oppdatere meldeskjemaet. Før du melder inn en endring, oppfordrer vi deg til å lese om hvilke type endringer det er nødvendig å melde:

[https://nsd.no/personvernombud/meld\\_prosjekt/meld\\_endringer.html](https://nsd.no/personvernombud/meld_prosjekt/meld_endringer.html)

Du må vente på svar fra NSD før endringen gjennomføres.

#### TYPE OPPLYSNINGER OG VARIGHET

Prosjektet vil behandle særlige kategorier av personopplysninger om helse, etnisk opprinnelse og seksuell orientering, samt alminnelige kategorier av personopplysninger frem til 01.07.2022.

### LOVLIG GRUNNLAG FOR UTVALG 1

Prosjektet vil innhente samtykke fra de registrerte til behandlingen av personopplysninger. Vår vurdering er at prosjektet legger opp til et samtykke i samsvar med kravene i art. 4 nr. 11 og art. 7, ved at det er en frivillig, spesifikk, informert og utvetydig bekreftelse, som kan dokumenteres, og som den registrerte kan trekke tilbake.

Lovlig grunnlag for behandlingen vil dermed være den registrertes uttrykkelige samtykke, jf. personvernforordningen art. 6 nr. 1 bokstav a, jf. art. 9 nr. 2 bokstav a, jf. personopplysningsloven § 10, jf. § 9 (2).

### LOVLIG GRUNNLAG FOR UTVALG 2

Prosjektet vil innhente samtykke fra de foresatte (utvalg 1) til behandlingen av personopplysninger da barna (utvalg 2) vil være under 16 år. Vår vurdering er at prosjektet legger opp til et samtykke i samsvar med kravene i art. 4 nr. 11 og art. 7, ved at det er en frivillig, spesifikk, informert og utvetydig bekreftelse, som kan dokumenteres, og som den registrerte kan trekke tilbake. Barna vil også samtykke til å delta.

Lovlig grunnlag for behandlingen vil dermed være den registrertes uttrykkelige samtykke, jf. personvernforordningen art. 6 nr. 1 bokstav a, jf. art. 9 nr. 2 bokstav a, jf. personopplysningsloven § 10, jf. § 9 (2).

### PERSONVERNPRINSIPPER

NSD vurderer at den planlagte behandlingen av personopplysninger vil følge prinsippene i personvernforordningen om:

- lovlighet, rettferdighet og åpenhet (art. 5.1 a), ved at de registrerte får tilfredsstillende informasjon om og samtykker til behandlingen
- formålsbegrensning (art. 5.1 b), ved at personopplysninger samles inn for spesifikke, uttrykkelig angitte og berettigede formål, og ikke viderebehandles til nye uforenlige formål
- dataminimering (art. 5.1 c), ved at det kun behandles opplysninger som er adekvate, relevante og nødvendige for formålet med prosjektet
- lagringsbegrensning (art. 5.1 e), ved at personopplysningene ikke lagres lengre enn nødvendig for å oppfylle formålet

### DE REGISTRERTES RETTIGHETER

Så lenge de registrerte kan identifiseres i datamaterialet vil de ha følgende rettigheter: åpenhet (art. 12), informasjon (art. 13), innsyn (art. 15), retting (art. 16), sletting (art. 17), begrensning (art. 18), underretning (art. 19), dataportabilitet (art. 20).

NSD vurderer at informasjonen som de registrerte vil motta oppfyller lovens krav til form og innhold, jf. art. 12.1 og art. 13.

Vi minner om at hvis en registrert tar kontakt om sine rettigheter, har behandlingsansvarlig institusjon plikt til å svare innen en måned.

### FØLG DIN INSTITUSJONS RETNINGSLINJER

NSD legger til grunn at behandlingen oppfyller kravene i personvernforordningen om riktighet (art. 5.1 d), integritet og konfidensialitet (art. 5.1. f) og sikkerhet (art. 32).

Qualtrics er databehandler i prosjektet. NSD legger til grunn at behandlingen oppfyller kravene til bruk av databehandler, jf. art 28 og 29.

For å forsikre dere om at kravene oppfylles, må dere følge interne retningslinjer og eventuelt rådføre dere med behandlingsansvarlig institusjon.

### OPPFØLGING AV PROSJEKTET

NSD vil følge opp ved planlagt avslutning for å avklare om behandlingen av personopplysningene er avsluttet.

# OCCUPATIONAL ASPIRATIONS IN MIDDLE CHILDHOOD

11.6.2020

Meldeskjema for behandling av personopplysninger

Lykke til med prosjektet!

Kontaktperson hos NSD: Tore Andre Kjetland Fjeldsbø  
Tlf. Personverntjenester: 55 58 21 17 (tast 1)