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Masteroppgave

Early childhood educators' perceptions of boys' and girls' aggressive behaviour

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Abstract

The aim of this study was to examine early childhood educators' (ECEs) perceptions of children's aggressive behaviour in Norwegian kindergartens. Specifically, the perceived level of aggression, acceptability of aggression and causal attributions of the aggressive behaviour were investigated. The study used a quantitative, experimental design, where a questionnaire was developed to collect data that might help determine whether perceptions of children's aggressive behaviour depend on the child's gender (boy or girl) and the type of aggression (relational or physical) being displayed. The online questionnaire consisted of written fictional scenarios (vignettes) describing a child displaying physical and relational aggressive behaviour. The sample consisted of 120 ECEs from different parts of Norway, who were randomised into two experimental groups: one which received a questionnaire in which the vignettes used traditional boy names, and one which received vignettes using girl names.

The results showed that perceptions of children's aggression did not depend on whether the child is a boy or a girl. They also revealed that while perceived level of aggression and acceptability of aggression did not depend on the type of aggression displayed, causal attributions of aggressive behaviour did. Relational aggression was found to be more likely to be attributed to personal disposition (rather than situational factors) compared to physical aggression. These findings offer encouraging new knowledge indicating that gender stereotypes and assumptions about children's physical and relational aggression may not be as prominent in Norwegian kindergartens as hypothesised based on research from other countries. There were some limitations related to the questionnaire used to measure perceptions of aggression, and the methods used to measure perceptions of aggression should be further developed in subsequent research. Nevertheless, despite limitations, the current study provides a foundation for the further study of perceptions of children's aggression in Norwegian kindergartens.

Acknowledgements

When I started working in a kindergarten after completing by bachelor's degree in English literature, it was supposed to be temporary. However, I fell in love with the work and now, 5 years later, I am completing my master's in special needs education. It has been exciting to spend the past year immersed in my thesis, allowing me to explore how adults in kindergarten perceive children's aggressive behaviour. I believe that the way adults perceive and react to children's behaviour is crucial for a child's development. As early childhood educators, we have a responsibility to reflect on the way we perceive and meet children's behaviour every day in kindergarten.

There are several people without whom this project would not be what it is today. Firstly, I would like to offer a great deal of thanks to my supervisor, Kristin Berg Nordahl. Thank you for your considerate, helpful, and insightful comments and guidance throughout the project. Your supervision has been invaluable, and I appreciate all the time you have set aside to support me in conducting a study and writing a thesis that I am very proud of.

I would also like to thank my lecturers throughout my years of studying special needs education at the University of Oslo, who have shared their knowledge and inspired me to never stop being curious. Special thanks should be made to Gunnar Bjørnebekk, for introducing me to the field of psychosocial difficulties, and Athanasios Protopapas, for exceptional instruction and guidance on statistics.

Special thanks go out to my kindergarten, who inspired and encouraged me to pursue this path, and all the early childhood educators across Norway who made this project possible by contributing their time and effort while participating in the project.

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1. Introduction

"Boys will be boys," is a common expression used to convey the idea that boys will be rough and aggressive just because it is part of their innate personality as boys (Cambridge Dictionary, 2023). Boys are "allowed" to be aggressive because it is considered a part of their personality that is unchangeable. The statement above is most often used to refer to boys playing roughly and engaging in physical aggression. *Physical aggression* can be defined as using physical force against others through observable behaviour (Nærde et al., 2014). Another type of aggression is *relational aggression*, which involves the manipulation and damage of someone else's peer relationships (Crick & Grotpeter, 1995). Relational aggression is often referred to as "mean girl behaviour" in the media and portrayed as a "girly" phenomenon in popular culture (Kerslake, 2022; Stade, 2022). These stereotypes could indicate that boys' aggressive behaviour might be perceived differently from girls', and that different types of aggression might be perceived differently.

Could these stereotypes affect the way adults interpret and react to young boys' and girls' aggressive behaviour? Substantial research have been done on gender differences in aggressive behaviour among children (see reviews by Björkqvist, 2018; Loeber et al., 2013), but few studies have looked at how aggressive behaviour is perceived by adults depending on whether the child is a boy or a girl (Harris & Knight-Bohnhoff, 1996). *Perception* can be defined as the way humans organise sensory stimuli into experiences through interpretation and evaluation (Encyclopaedia Britannica, 2023). Our perceptions are affected by our attitudes and the stereotypes we hold, according to the theory of social cognition (Fiske & Taylor, 2013).

Perception of aggression is defined (in this study) as a spectator's interpretation of an observed behaviour that can be considered aggressive according to the definitions of physical and relational aggression given above. The aim of the current study is to explore the impact of stereotypes by investigating whether Norwegian early childhood educators' perceptions of child aggressive behaviour is dependent on the child's gender and type of aggression. In the current study, an early childhood educator (ECE) is defined as an adult who works in kindergarten, regardless of their position or education.

It is essential to gain knowledge about Norwegian ECEs' perceptions of aggression for several reasons. In Norway, almost all children between 3 and 5 years old attend kindergarten (SSB, 2022a). Considering that 98% of these spend on average 41 hours or more at

kindergarten every week, Norwegian children spend a considerable amount of time with ECEs during their early childhood. ECEs working in kindergarten are exposed to situations involving aggressive behaviour every day. Their perception of the aggressive behaviour affects how they respond to the behaviour (Fiske & Taylor, 2013). Adult perceptions of aggressive behaviour could therefore influence how children's aggressive behaviours are handled by ECEs. Research within special needs education indicates that the way adults perceive and react to aggressive behaviour affects a child's further development (Andershed & Andershed, 2007). As Norwegian children spend so much time in kindergarten, ECEs might play a part in this development.

Additionally, ECEs observe and evaluate children daily to determine whether they might need additional help to support their development (Utdanningsdirektoratet, 2022b). Children who are struggling with aggressive behaviour may be referred for assessment and special needs help. According to the shifting standards model's (see Section 2.1.2) view on stereotypes used to confirm or suspect traits such as aggression (Biernat, 2012), stereotypes relating to gender or type of aggression could affect which children are referred for special needs help. Boys who are physically aggressive might be dismissed with "boys will be boys". At the same time, girls might be referred for physical aggression that is developmentally appropriate because girls are not "supposed to" be physically aggressive. The lack of intervention when needed could lead to disadvantageous development, and resources in kindergarten could be wrongly allocated if children receive intervention without really needing it.

Lastly, equality and prevention from discrimination is part of the Framework plan for kindergartens in Norway (Kunnskapsdepartementet, 2017). If ECEs' perceptions of aggression are dependent on a child's gender, they are not following the guidelines for kindergartens set by the Norwegian government. It might therefore be important to gain knowledge about ECEs' perceptions of aggression, to determine whether gender stereotypes affect their ability to prevent discrimination in kindergartens. Knowledge about our own and others' perceptions could help us change these perceptions, and prevent them from affecting our actions (Fiske & Taylor, 2013).

The chosen population for the current study was ECEs working in Norwegian kindergartens. This population was chosen because there is little research done on adult's perceptions of children's aggressive behaviour, and research on perception of aggression in

different populations is needed to explore this topic further (Stewart-Williams, 2002). This study aims to fill part of the gap that exists in the current research on perceptions of aggression.

The study attempts to answer three research questions. The first relates to how ECEs' perceptions of children's aggression might be affected by whether the child is a boy or a girl. The second question focuses on how the type of aggression (relational or physical) could influence ECEs' perceptions of children's aggression. Lastly, the third question explores how the child's gender and the type of aggression being displayed could be intertwined in their relation to ECEs' perceptions of children's aggression. That is, does child gender affect the way type of aggression might affect perceptions of aggression, or vice versa? These three research questions will be refined and presented in further detail after the theoretical and empirical background of the project is outlined in Chapter 2. Following this, the method-chapter will describe how the project was carried out, as well as reliability, validity, and ethical considerations. The results-chapter contains the analyses of the data collected and describes the results relating to each of the three research questions. Finally, the discussion explores how the results relating to each research question can be interpreted, strengths and limitations of the study, implications of the results and suggestions for further research.

2. Background

In this chapter, the background for the study of perceptions of aggression in Norwegian kindergartens will be outlined. The theoretical foundations will be described first, followed by an overview of previous research on aggression in early childhood and perceptions of aggression. The chapter continues with a presentation of the theoretical model of perception of aggression, before presenting the research questions and several hypotheses based on the theoretical and empirical foundations of the study.

2.1. Theoretical foundations

Based on the topic and the questions raised in the introduction, the current project has been framed within the theory of social cognition and the shifting standards model. In the following, social cognition theory is described briefly, to illustrate how evaluations, attitudes and perceptions can affect the way adults respond to children's aggressive behaviour. Thereafter, the shifting standards model is described, and its relevance to the current study is considered.

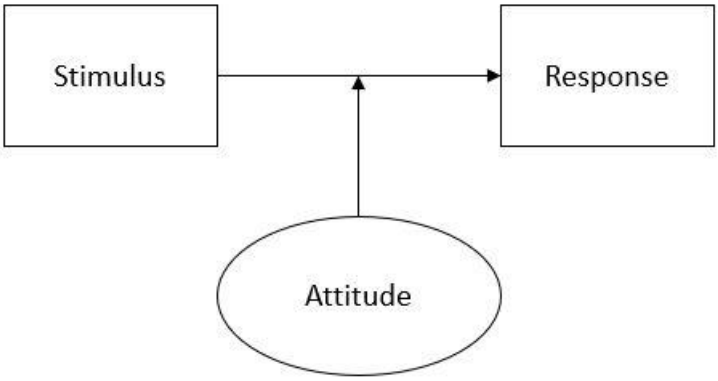
2.1.1. The theory of social cognition

Social cognition concerns the way humans understand and make sense of situations in a social context (Frith, 2008). According to Fiske and Taylor (2013), an attitude is the process of evaluation. As I wanted to investigate how aggression is evaluated by ECEs, it is useful to consider some of the theoretical knowledge about attitudes. Theories of social cognition can help explain how attitudes function and how they might predict behaviour.

Attitudes cannot be directly observed (Fiske & Taylor, 2013). Rather, "…they must be inferred from an individual's overt response to some stimulus…" (Fiske & Taylor, 2013, p. 232). Taking this into consideration, it is impossible to investigate attitudes without some sort of stimulus and some sort of response from the participant. The attitude is the evaluation that happens between the stimulus and the response. It does not directly cause the response, but might influence it. This is illustrated in Figure 1. From this, it is clear that attitudes can predict behaviour (Fiske & Taylor, 2013). If one knows the attitude of someone, one might be able to predict how they respond to certain stimuli.

Figure 1

Attitude's mediating effect on response to stimulus



Fiske and Taylor (2013) claim that attitudes help people order and organise the world, to make sense of it. For example, it has been found that attitudes help organise our memory, as we tend to remember "evidence" based on the attitude we have assigned to a person (Fiske & Taylor, 2013). That is, people are more likely to remember behaviour that aligns with the attitude they associate with a person. If an ECE possesses the attitude that "boys are more aggressive than girls", they may be more likely to remember behaviour from boys and girls that confirms this attitude. Attitudes can affect, among other things, interpretation, explanation, judgment and prediction (Fiske & Taylor, 2013). These are problem-solving activities that ECEs engage in every day. Because attitudes can affect these activities, the attitudes of ECEs might affect how they interact with children in kindergarten.

Attitudes do not always affect our responses, but emerge more easily in certain situations. For example, situations where a person is exposed to stress, increased arousal and time pressure tend to more readily bring out already-formed attitudes (Fiske & Taylor, 2013). In addition, the accessibility of attitudes is influenced by how recently the attitude was expressed, as well as how frequently it is expressed. This could imply that if attitudes concerning aggression are expressed frequently in a kindergarten, they will be more accessible and more likely to influence ECEs' responses. Individuals who are low on self-monitoring also tend to have more accessible attitudes that influence responses (Fiske & Taylor, 2013). Kindergartens tend to be environments where ECEs are exposed to stress and time pressure, which might lead to attitudes affecting their behaviour. The high-paced environment of kindergartens may also leave less time and resources to spend on self-monitoring, which also makes attitudes more accessible.

2.1.2. Shifting standards model

The other theory that will be used as a perspective to understand perceptions of aggression is the shifting standards model. The basic premise of this model is that individual group members are judged based on certain standards associated with the group they belong to (Biernat, 2012). Biernat (2012) argues that stereotypes function as standards. That is, we use stereotypes as a referent when making a judgement about an individual belonging to a stereotyped group. The evaluations that are made about an individual are based on expectancies and contrast effects (Manis et al., 1991). *Expectancies* are beliefs we hold about the traits of a certain group. *Contrast effects* explain how evaluations are affected by the memories we have of other relevant individuals. For example, Manis and Paskewitz (1984) found a contrast effect when participants assessed whether a patient was schizophrenic or not, based on vocabulary definitions supposedly produced by the patients. One group received vocabulary definitions that reflected high pathology, while another group received vocabulary definitions reflecting low pathology. Afterwards, both groups assessed a set of midscale vocabulary definitions. The contrast effect showed itself when the group who had initially received definitions reflecting low pathology, consistently rated the midscale definitions as showing a higher level of pathology compared to the participants who had initially received high pathology definitions. Because they had different standards to compare the midscale definitions to, the groups assessed these definitions differently.

Biernat (2012, p. 15) emphasises the importance of "common knowledge or common ground among communicators for appropriate coordination and understanding to occur". Stereotypes can create this common ground for communication. The shifting standards model assumes that stereotypes are shared by people in a given context, which in the case of this study is a kindergarten (Biernat, 2012). A kindergarten usually has a "kindergarden culture", which can be defined as the sum of values and attitudes that exist among the staff in a kindergarten (Helgeland & Lund, 2022). In a kindergarten, the use of stereotypes in communication and interpretation can therefore be expected according to the shifting standards model. Additionally, several types of communicative exchanges can increase the reliance on stereotypes. Biernat (2012) mentions that conveying information sequentially in a chain might tend toward stereotypicality over time. In kindergartens, information about a child is usually passed through a chain of people before a decision or judgement about the behaviour is made. For example, an ECE might report the behaviour to their leader, who will report it to the kindergarten manager. Furthermore, Thompson et al. (2000) found that

second-hand impressions of groups were more stereotypical compared to impressions formed by reading descriptions of individual behaviour directly. ECEs' view of children could also be affected by their colleagues' communication of second-hand impressions. In a kindergarten context, this could be relevant because pedagogical psychological services (PPS) in Norway base part of their assessment of a child on second-hand impressions from ECEs and parents.

According to the shifting standards model, the standards we use to judge individuals depend on the perspective from which we are judging them. Biernat (2003) separates between a within-category perspective and a common-rule perspective. A *within-category perspective* is used when an individual is judged against the standards of the group they belong to. This is done when using subjective language, according to Biernat (2003). For example, a boy might be described as "not very aggressive", compared to other boys. When judging the same boy against standards across groups using a *common-rule scale* such as a standardised test, he might be described as more aggressive because he is now being compared to all children in general. Several studies have shown that when subjective language is used in judgments, a within-category perspective is applied and stereotypes might disappear (Biernat, 2012). One example is how women were rated as more financially successful than men when a subjective scale of "financially very unsuccessful" to "financially very successful" was used. This seems to erase traditional stereotypes that men are more financially successful than women. However, when a common-rule scale of dollars earned per year was used, the men were assessed as earning more money, conforming to the stereotype of men being more financially successful than women (Biernat et al., 1991). When women are assessed on a subjective scale, they are judged on a within-category perspective, and might be judged as "financially very successful" compared to other women. Using a common-rule scale, men and women are judged against each other, and stereotypes emerge. The use of subjective scales produces contrast effects, while common-rule scales produce assimilation to stereotypes (Biernat, 2012).

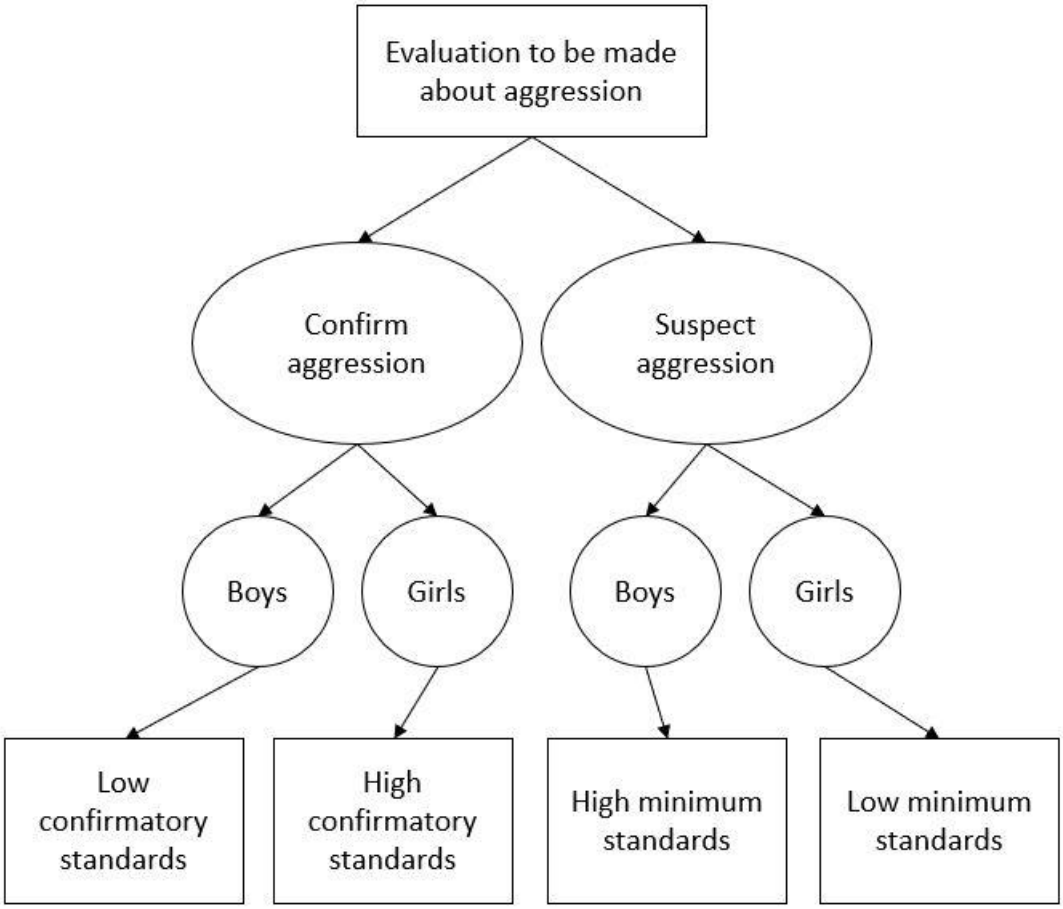
As Biernat (2012) points out, many of the conversations we have about other people in everyday verbal conversation uses subjective language. There is no reason to believe that this is any different for ECEs discussing the behaviour of children in kindergarten. Quite a few studies (summed up by Biernat, 2012) indicate that people who hear subjective descriptions of an individual will interpret these descriptions in relation to group stereotypes.

That is, describing a boy as “fairly aggressive” might conjure up different ideas about his behaviour compared to describing a girl as “fairly aggressive”.

Another assumption of the shifting standards model is that groups which are stereotyped as “deficient” on a trait or attribute are judged on low minimum standards, but high confirmatory standards (Biernat, 2012). In the case of aggression, women are stereotyped as “deficient” because they are stereotypically less aggressive than men. A study by Biernat et al. (2008) suggests that fewer aggressive behaviours are needed to get an “inkling” that a woman may be aggressive, compared to a man. Because women are seen as deficient on the trait aggression, the minimum standards for being suspected of being aggressive are lower compared to those for men. When applying confirmatory standards, on the other hand, more aggressive behaviours are needed to “confirm” that a woman is aggressive (Biernat et al., 2008). For men, the group that is perceived as having the attribute in question (here: aggression), minimum and confirmatory standards seem to be indistinguishable. Foddy and Smithson (1989, p. 76) also note that “[a]n unexpected performance elicits a stricter standard, because the judge requires stronger evidence that this performance was due to an ability.” That is, because women are not expected to be aggressive, more evidence is needed to confirm that they possess the ability to be aggressive. This is illustrated in Figure 2.

Figure 2

Chosen standards based on the type of evaluation to be made and child gender



Thus, girls and boys in kindergarten might be treated differently because they are evaluated against different standards. The stereotype is that girls are "deficient" in the trait aggression. Girls might easier be "suspected" of being aggressive, because of low minimum standards. This might result in girls being more easily reprimanded for aggressive behaviour, or perhaps even receiving earlier low-scale help without the need of a referral to PPS. However, there will be higher confirmatory standards for girls, making it less likely that they will be "confirmed" as having the aggressive trait. To be perceived as "aggressive", girls must be more aggressive, as more evidence is needed to meet the high confirmatory standards. Because boys will have lower confirmatory standards than girls, they might be more readily referred to PPS for assessment and special help in kindergarten. In fact, the number of boys who receive special help in kindergarten was more than double the number of girls who receive special help in kindergarten in 2022 (Utdanningsdirektoratet, 2022a). Of course, there may be many reasons for this, including that boys seem to be diagnosed earlier

with disorders such as autism spectrum disorder (Salomone et al., 2016; Surén et al., 2019), and differences in developmental pace in girls and boys (Hay, 2007). However, if boys are in fact judged to a lower confirmatory standard for the "aggressive" trait, this might result in more boys receiving early intervention to reduce their aggressive behaviour.

Differences in minimum and maximum standards might also affect the causal attributions that are made when evaluating the behaviour. The behaviour of a person can be attributed to one of two causes: personal disposition or situational forces. When a person is perceived to have a trait because of a stereotype, less evidence is needed to confirm it. This perception that a boy has the trait of "aggression" might lead to his behaviour being attributed to personal disposition. However, as girls have lower confirmatory standards, their aggressive behaviour may be more easily attributed to situational forces. When more evidence is needed to "confirm" the trait, it might seem more logical to assume that a girl's aggressive behaviour arises because of contextual factors. For example, an ECE could dismiss a girl's aggressive behaviour by attributing it to contextual factors such as "she was tired" or "someone provoked her". When evaluating a boy, on the other hand, the ECE might attribute the aggressive behaviour to personal disposition by thinking "he is always so mean" or "he is so angry and lacks the ability to express it in a functional way".

2.2. Previous research

With the theoretical foundations of the project laid out, the empirical foundations will be considered. First, some of the research on aggression in early childhood will be outlined. Secondly, the previous research on perception of aggression will be summarised. The focus in this section will be on studies that have looked particularly at how perception of aggression may depend on gender and type of aggression displayed.

2.2.1. Aggression in early childhood

Even though this study focuses on how adults perceive aggressive actions performed by children based on their gender, it is useful to outline some of the research on aggression in early childhood. This will give insight into how common the two types of aggression, physical and relational, are among children of kindergarten-age, and how they commonly express these types of aggression. Nærde et al. (2014) note that physical aggression, such as hitting or pushing, is normative and fairly frequent in early childhood. In their study, they found that physical aggression can occur as early as at 8 months, although it seems to be infrequent at this age. Côté et al. (2006) found that the majority of children occasionally use

physical aggression in toddlerhood and experience a decrease in the use of physical aggression towards pre-adolescence. Common expressions of physical aggression among children in kindergarten include hitting, kicking, pushing, biting, or throwing objects (Crick et al., 1997; Nærde et al., 2014).

In terms of relational aggression, Hurd and Gettinger (2011) mention that research suggests that this type of aggression emerges in children as young as 3 years old. Crick et al. (1997) have also found reports of behaviours displaying relational aggression among children of pre-school age, and that they can be distinguished from physically aggressive behaviours. At kindergarten-age, common expressions of relational aggression include social exclusion, spreading of rumours and threats to withdraw friendship or other social "goods" (a common example is threats of not being invited to a birthday party) (Crick et al., 1997; Hurd & Gettinger, 2011; Smith-Bonahue et al., 2015).

It might also be useful to have some insight into whether there are observable gender differences in aggression among children in kindergarten. An overview of this research is useful because actual gender differences in aggression might affect what is expected of children, which influences the judgments made about behaviour according to the shifting standards model (Biernat, 2012). Loeber et al. (2013) sum up some of the research done on gender differences in aggression among children. They note that research on aggression in children has traditionally been done focusing on boys, but that research including girls has picked up in the last couple of decades. Their review concludes that there seem to be more similarities than differences between the genders, especially before puberty. However, girls seem to improve more rapidly in terms of physical aggression after the age of four, compared to boys (Maccoby, 2004). Girls between the ages of 2 and 11 years old also seem to engage in more indirect aggression (Côté et al., 2007; Crick et al., 1997; Crick & Grotpeter, 1995). There is also some evidence that boys between the ages of 2 and 11 years old engage in physical aggression more frequently than girls (Baillargeon et al., 2005; Côté et al., 2006, 2007). In a more recent review, Björkqvist (2018) also found that girls use more indirect aggression, while boys use more physical aggression. The concept of indirect aggression used in these studies have common aspects with the definition of relational aggression used in the current study.

2.2.2. Perception of aggression

The focus of this study is perceptions of aggression. *Perceptions of aggression* is defined as the spectator's evaluations of an observed behaviour that can be defined as aggressive. In this study, I am investigating how ECEs perceive aggressive behaviour performed by children against other children. Specifically, the relation between the child's gender, the type of aggression displayed, and this perception.

Several studies have investigated the relation between gender and perceptions of aggression. The results of these studies are varied, and Stewart-Williams (2002) notes that more research is needed on this topic. Fewer studies have considered whether perceptions of aggression might depend on the type of aggression displayed (Stewart-Williams, 2002; Way, 2015). In this section, I will sum up the results of this previous research and describe the studies that form the foundation for the current project.

Condry and Ross' (1985) is one of few previous studies I have found in my literature search that investigate adult perceptions of children's aggressive behaviour. Most other studies I have found that investigate gender and perception of aggression all consider adult perceptions of adults' behaviour (e.g. Harris & Knight-Bohnhoff, 1996; Stewart-Williams, 2002; Way, 2015). In their study, Condry and Ross (1985) showed participants a video of two preschool children playing roughly in the snow. Participants were all shown the same video, in which the children wore snowsuits that concealed their gender. In order to study the effect of gender, the researchers gave participants different information about the children's gender. There were four conditions in which the first child was the child to be evaluated: boy-boy, boy-girl, girl-boy, and girl-girl. After seeing the video, the participants were asked to evaluate the behaviour of the aggressor (the child displaying the aggressive behaviour).

The results showed that the boy-boy condition was rated as significantly less aggressive than the other three conditions, which were equally high (Condry & Ross, 1985). They also found that the girl-aggressor in the girl-boy condition was perceived as more potent than the boy-aggressor in the boy-boy condition and the girl-aggressor in the girl-girl condition. The boy-boy condition was also rated as more positive than the boy-girl and girl-girl conditions. This might imply that the gender of the target of the aggression affects the perception of the behaviour. In addition, they found that the effect of aggressor gender was larger for participants who had more experience with children. This is an interesting finding

relating to the current study, as ECEs can be assumed to have more experience with children compared to the average adult.

Harris and Knight-Bohnhoff (1996) conducted two studies in which they investigated the effect of gender on perceptions of aggression. Both studies used the same method, but had different samples. Study 1 had a sample consisting of college students, and Study 2 had a sample consisting of military personnel and civilians working on a military base. The researcher presented the participants with four different vignettes (written scenarios), in which the genders of the people described varied. After each vignette, the participants were asked to evaluate the aggressor's behaviour. The questions used to evaluate the behaviour asked how aggressive the behaviour was, how typical it was, how harmful it was, and how acceptable it was.

The results of Harris and Knight-Bohnhoff (1996) suggest that gender influences perceptions of aggression in a number of ways. In several of the scenarios they used, behaviour performed by a male aggressor was perceived as more harmful, less acceptable, and more aggressive compared to a female aggressor. They also found that aggression was perceived as less desirable when it was directed towards a female target than when the target was male. However, they do note that most participants perceived aggression as equally unacceptable regardless of who it was directed at. Even though they did not specifically investigate the significance of type of aggression, their results showed that certain types of behaviour were seen as less acceptable, more aggressive, or more harmful for men compared to women. Honking and rearending someone's car was seen as more acceptable for women, punching someone in the face or pushing was seen as more harmful for men, and holding someone's head under water was seen as more aggressive if a man did it. This could indicate that there is an interaction between type of aggression and gender in the way perception of aggression depend on these factors.

Stewart-Williams (2002) sought to replicate earlier findings about the effect of gender on perceptions of aggression in his study, while expanding the current knowledge by also considering causal attributions made for aggression and the possible effect of type of aggression. His sample consisted of university students. Like Harris and Knight-Bohnhoff (1996), he used a vignette followed by questions to investigate perceptions of aggression. He created two vignettes: one describing a display of physical aggression, and one describing verbal (relational) aggression. There were four gender conditions: male-female, male-male,

female-male, and female-female. The questions used by participants to evaluate the aggressive behaviour were organised into three scales: level of aggression, acceptability of aggression, and causal attributions.

The findings showed that participants rated men's aggression as less acceptable than women's aggression (Stewart-Williams, 2002). However, there were no significant effects of aggressor gender on perceived level of aggression or causal attribution. He found no significant effects of target gender on perceptions of aggression in any of the scales. The aggressive act described in the vignette did seem to affect perceptions of aggression. Physical aggression was judged to be more aggressive, more attributed to personal dispositions, and less acceptable than relational aggression.

More recently, Way (2015) investigated the relation between gender and perceptions of aggression in a workplace environment. His results showed that there was no effect of aggressor gender on perceptions of aggression. Only target gender and aggression type were found to have an effect. In a different study, Borhart and Terrell (2014) measured the effect of an aggressors gender and gender role (feminine or masculine personality) on ratings of aggression. They found that only the gender role, and not the gender, of the aggressor affected the ratings of aggression.

In summary, the findings on the relation between gender and perceptions of aggression are varied. The findings from the sparse research done on type of aggression and perceptions of aggression seem to indicate that perceptions may depend on the type of aggression displayed. In addition, most of the research on this topic has been done in the US, where adults have evaluated the aggressive behaviour of adults. This is different from the current study, which is being conducted in Norway and is looking at how ECEs perceive the aggressive behaviour of children. It will therefore be interesting to see how the results of the current study compare with the existing research.

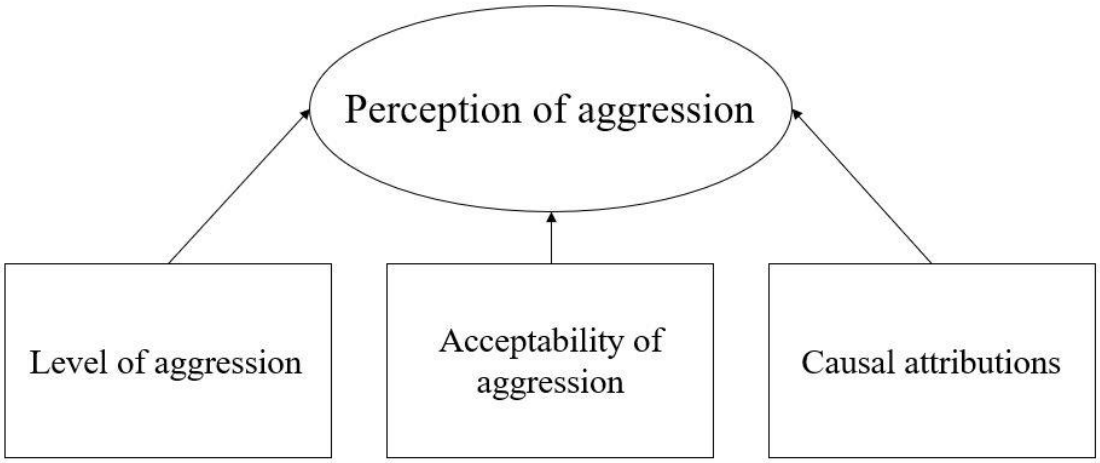
2.3. Theoretical model of perception of aggression

Based on the three components of perception of aggression used by Stewart-Williams (2002) – level of aggression, acceptability of aggression, and causal attributions – I have constructed a theoretical model of the concept "perception of aggression". A visual representation of the model can be seen in Figure 3. These aspects are similar to some of the questions Harris and Knight-Bohnhoff (1996) used to measure perception of aggression in their study. For example, they asked their participants to evaluate how aggressive and how

acceptable a described act of aggression was. Condry and Ross (1985) also include measurements that tap into some of the same aspects. Participants in their study were asked to evaluate the intensity of the aggressive behaviour (level of aggression). They also categorised the aggressor using one of two adjectives given options such as strong/weak, bad/good, and unfriendly/friendly, which could be related to causal attributions.

Figure 3

Theoretical model of perception of aggression



These seem to be somewhat established theoretical aspects of perception of aggression within the research field, but what theorical foundation might establish a connection between these aspects of perception of aggression? I have chosen to understand perception of aggression through the ABC-model of behaviour used for ABC-analysis as outlined by Dyer (2021). ABC stands for Antecedent, Behaviour, and Consequence. These three components of behaviour might help us understand the aspects of perception of aggression. The antecedents of the behaviour is what Stewart-Williams (2002) refers to as causal attributions. It is what the adult perceives as the factors that precede the behaviour and make it happen. The behaviour can be attributed to either personal dispositions or situational factors. Secondly, the behaviour itself is perceived by the adult. This is where the level of aggression is evaluated. Lastly, the consequences of the behaviour are related to the perceived acceptability of the aggression. The possible consequences that arise from the aggressive behaviour could help determine how acceptable the adult perceives the behaviour.

2.4. Research questions and hypotheses

Considering the theoretical and empirical background of the project, specific research questions and some hypotheses will be presented. Following each research question, possible hypotheses related to each research question are outlined. There are three main research questions the study aims to answer:

1. **"Do ECEs' perceptions of children's level of aggression, acceptability of aggression, and causal attributions of aggressive behaviour depend on the child's gender?"**

The first hypothesis relates to perceived level of aggression and child gender. According to shifting standards theory, the minimum standards for boys being suspected of being aggressive will be higher than the minimum standard for girls (Biernat, 2012). Consequently, their aggressive behaviour is likely to be rated as less aggressive compared to girls. This corresponds to previous findings by Condry and Ross (1985), who found that the boy-boy condition was rated as least aggressive. Therefore, I predict that level of aggression will be dependent on child gender, and that the mean rating will be significantly lower for the group evaluating boys.

When considering causal attributions, the shifting standards model claims that when a group is considered "deficient" in a trait, the confirmatory standards for that group will be higher (Biernat, 2012). As girls are stereotypically considered deficient in aggression, it requires more evidence to confirm that their aggression is related to their personality. It might be more natural to explain their aggressive behaviour using situational factors. Boys who are stereotypically considered as possessing the trait "aggression" as part of their personality, have lower confirmatory standards. It might therefore be easier to attribute their aggressive behaviour to personal factors. This leads me to predict that ECEs causal attributions will depend on child gender, and that attribution to personal factors will be significantly higher for the group evaluating boys.

2. **"Do ECEs' perceptions of children's level of aggression, acceptability of aggression, and causal attributions of aggressive behaviour depend on the type of aggression displayed?"**

Previous research indicates that perceptions of aggression depend on the type of aggression displayed (Stewart-Williams, 2002; Way, 2015). Stewart-Williams (2002) found

that type of aggression affected all three aspects of perception of aggression. Based on these findings, I predict that physical aggression will have a higher mean rating for level of aggression, a lower mean rating for acceptability of aggression, and be attributed more to personal disposition (and not situational factors).

3. **"Does the impact of child gender on ECEs' perception of children's level of aggression, acceptability of aggression, and causal attributions of aggressive behaviour depend on the type of aggression displayed (or vice versa)?"**

Research on gender differences in childhood aggression shows that girls tend to manifest more relational aggression (Björkqvist, 2018; Loeber et al., 2013), while boys engage more frequently in physical aggression (Baillargeon et al., 2005; Björkqvist, 2018). These trends may help form stereotypes and expectations (Sherman et al., 2009). Harris and Knight-Bohnhoff's (1996) results could also indicate a possible interaction between aggressor gender and type of aggression in the way they relate to perceptions of aggression. I therefore hypothesise that there will be an interaction between child gender and type of aggression for at least one aspect of perception of aggression.

3. Method

In this chapter, the design and method chosen to answer the study's research questions are described. The chapter starts with an overview of the design, followed by a description of the development of the questionnaire used for data collection. Subsequently, the study sample, recruitment procedure and data collection are described. Choices made to improve reliability and validity are highlighted throughout the chapter where appropriate, as well as in a separate section. The chapter also includes details on how ethical guidelines were followed. Finally, the statistics used in analysis are outlined.

3.1. Design

To explore the relations between child gender, type of aggression and perceptions of aggression, the project used a quantitative methodology with an experimental design. Data was collected using a questionnaire where participants responded to stimulus of fictional scenarios (vignettes). The participants were randomised into two groups, who received vignettes describing either a girl or a boy. Generating quantitative data through an experimental approach allows deliberate control and manipulation of conditions to which the participants respond, so that the effect of the independent variable on the dependent variable may be studied (Cohen et al., 2017). As the research questions ask whether perceptions of aggression depends on child gender and type of aggression, an experiment was considered the best method to respond to the research questions. Child gender and type of aggression are conditions that are difficult to control or manipulate in the real world. Vignettes were therefore used as stimuli, as it would be difficult to have all participants observe, react to, and evaluate the same scenarios of children displaying aggressive behaviour in a natural environment.

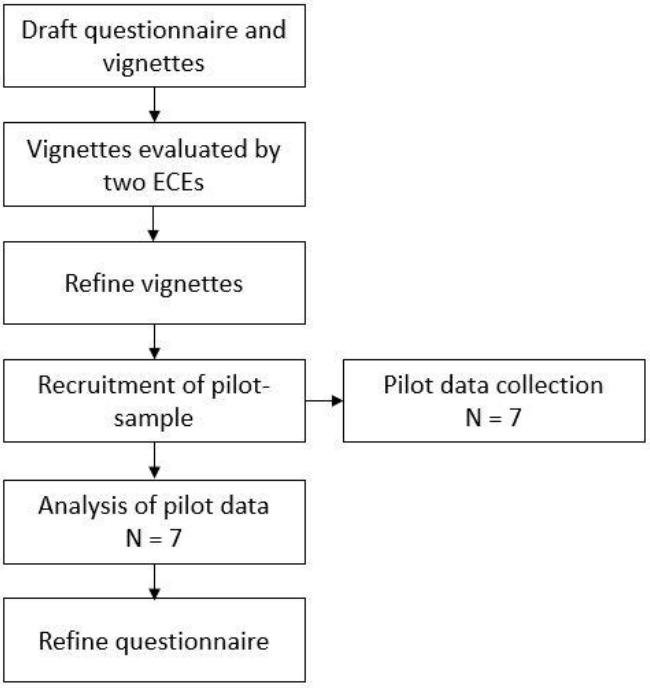
Another reason for using a questionnaire is its ability to generate quantitative data in a standardised way that is suitable for statistical analysis looking at dependent and independent variables, as well as interactions (Cohen et al., 2017). Dependency and interactions between child gender, type of aggression and ECEs' perceptions of aggression is exactly what the research questions of this study address. Additionally, a questionnaire is easier to distribute to a large group of people, making it possible to reach all parts of Norway and possibly obtain a larger sample. The chosen approach is similar to some of the research done on this subject previously (Condry & Ross, 1985; Harris & Knight-Bohnhoff, 1996; Stewart-Williams, 2002; Way, 2015), which also makes it easier to compare the results to previous findings.

3.2. Development of questionnaire

As I was unable to find an existing instrument used to measure perceptions of children's aggression, I developed my own questionnaire. The questionnaire used fictional scenarios (vignettes) as stimuli, inspired by earlier research on perceptions of aggression (Harris & Knight-Bohnhoff, 1996; Stewart-Williams, 2002). The development process is visualised in Figure 4, and included a small pilot study (see Section 3.2.3). The following sections describe the development of the questionnaire and vignettes in detail.

Figure 4

Development of questionnaire



3.2.1. Vignettes

Written vignettes were chosen as the best approach to present the participants with fictional scenarios of children's physical and relational aggressive behaviour. A *vignette* is a short story describing a hypothetical situation or individual, which is presented as stimulus to participants to gain insight into their beliefs, perceptions and attitudes (Gourlay et al., 2014; Hughes, 1998). The use of vignettes allowed the manipulation of the independent variables needed for the experimental design chosen (see Section 3.1 and 3.6.1): *child gender* and *type of aggression*. Additionally, vignettes are time-efficient to produce and easy to distribute.

Unlike methods such as using videotapes of real or acted scenarios, they avoid any violation of ethical standards of protection from harm and anonymity. Written vignettes were also used as stimulus in previous studies on perception of aggression (Harris & Knight-Bohnhoff, 1996; Stewart-Williams, 2002; Way, 2015).

Two vignettes were created to illustrate each type of aggression: relational and physical. For each of these, the name of the child in the vignette was either that of a boy or that of a girl. This resulted in two variations of each vignette. Below are the translated vignettes that were used in the questionnaire. The original Norwegian vignettes can be found in the copy of the questionnaire in Appendix A.

Vignette 1: Relational aggression

[Child's name] (4 years old) is playing with a farmhouse and animal figurines with several other children. [He/she] plays with a cow for a bit, but looks over at another child who has a horse. After a while [he/she] approaches the other child and says: "Give me the horse!" The other child replies: "No, it's taken" and keeps playing. [Child's name] says: "If you don't give me the horse, you can't come to my birthday party!"

Vignette 2: Physical aggression

[Child's name] (4 years old) is playing outside in the sandbox. [He/she] plays shop with some other children. [Child's name] goes to get some pinecones to decorate the cake [he/she] has made, but when [he/she] comes back, another child has emptied out [his/her] cake. [Child's name] throws the pinecones across the sandbox and pushes the child that emptied out the cake. On [his/her] way towards this child, [he/she] also pushes away some other children that are in [his/her] way.

The names chosen for the children in the vignettes were the two most popular baby names for girls and boys in Norway in 2021: Emma, Nora, Oskar and Noah (SSB, 2022c). These names have all been in the top 10 of baby names in Norway for the past 10 years (SSB, 2023). Popular baby names were chosen because these are most likely to be known to all participants, and to be associated with the gender that they are commonly used for.

Gourlay et al. (2014) and Hughes (1998) note that vignettes are usually developed by use of previous research, collaboration with other professionals, and use of real-life case stories or stories that reflect the local context. To create vignettes that were as realistic and believable as possible, all of these sources were used. The initial drafts of the vignettes were

written based on my own personal experience working in a kindergarten for 4.5 years, as well as on research findings concerning aggression among children in kindergarten (see Section 2.2.1). The drafts were then considered by two "ECE teachers" (three-year bachelor's degree in early childhood education) with many years of practical experience. They were sent a document containing the aim of the study, the definitions of relational and physical aggression, the vignette-drafts, and a few questions to guide them in evaluating the vignettes. Feedback was given in written form. Both ECE teachers considered the scenarios realistic and the behaviour within them as commonly observed in Norwegian kindergartens. A few suggestions for how to make the vignettes even more realistic and easier to understand were implemented.

3.2.2. Questionnaire

The questionnaire created consisted of the vignettes, followed by several statements relating to the scenarios. The participants responded to the statements using Likert-scales. Likert scales are widely used when collecting data on attitudes (Cohen et al., 2017). The questionnaire applied 7-point Likert scales. A 7-point scale allows for more choices, but not too many, which increases reliability and reduces Type II errors (Beal & Dawson, 2007; Boateng et al., 2018; Cohen et al., 2017). A type II error means that the researcher fails to reject the null hypothesis (that there is no relation between the variables), even though it is false (Navarro & Foxcroft, 2022). That is, there is an *actual* relation between the variables, but the researcher is not able to see it in the data. The scale was labelled with both numbers and text labels. The numbers ranged from 0-6, avoiding negative numbers as this is perceived as more negative by participants (Cohen et al., 2017). The "0" of the scale was labelled "Completely disagree", the "3" was labelled "Neither – nor", and the "6" was labelled "Completely agree". The use of a mid-point in the scale increases reliability and validity (Cohen et al., 2017), and the range of 0-6 was chosen because "3" seemed more intuitively like a mid-point (compared to "4" if the scale was 1-7). Likert-scales are also widely used in previous research on perceptions of aggression (Borhart & Terrell, 2014; Condry & Ross, 1985; Harris & Knight-Bohnhoff, 1996; Stewart-Williams, 2002; Way, 2015).

Statements were chosen for the participants to respond to, rather than questions. This allowed the labels of the Likert scales to remain the same throughout the questionnaire. Having the labels remain the same may make it easier for the participant to respond to the questionnaire, thus making it less strenuous to answer. It is an important ethical concern to balance methodological rigour and the use of participants' time and effort (The National

Committee for Research Ehtics in the Social Sciences and the Humanities [NESH], 2022). It also allows for direct comparison between statements, as the labels are the same throughout.

Several statements were created to reflect each of the three aspects outlined in the theoretical model of perception of aggression (see Section 2.3). A few statements were based on statements used by Harris and Knight-Bohnhoff (1996) in their study. Additional statements were developed by using research on early childhood aggression (see Section 2.2.1), terminology used to describe children's aggressive behaviour in kindergarten, synonyms, and antonyms (for reverse scored statements). In the initial questionnaire, there were 21 statements. Table 1 shows all statements that were included in the pilot questionnaire, and which were removed after the pilot. Please note that the statements in Table 1 are translated. The statements in Norwegian can be read in the copy of the questionnaire in Appendix A.

Table 1

Questionnaire statements

Intended to measure	Statement	Notes
Level of aggression	1. [Child's] behaviour is aggressive.	
	2. [Child's] behaviour is harmful.	
	3. [Child's] behaviour is hostile.	
	4. [Child's] behaviour is destructive.	
	5. [Child's] behaviour is friendly.	Reverse scored
	6. [Child's] behaviour is considerate.	Reverse scored
	7. [Child's] behaviour is nice.	Reverse scored
Acceptability of aggression	8. [Child's] behaviour is acceptable.	
	9. [Child's] behaviour creates unrest in kindergarten.	Reverse scored
	* 10. [Child's] behaviour is typical/common for children in kindergarten.	
	11. [Child's] behaviour is disruptive for those around [them].	Reverse scored
	12. I would not intervene in the situation described above.	
	13. In the same situation as described above, most children of [Child's] age would act the same way.	
	14. I would talk to/with [Child] following the situation described above.	Reverse scored
	15. I would be worried if [Child] displayed this type of behaviour more than two times per day.	Reverse scored

Causal attribution	16. I think that [Child's] behaviour in the situation describes [their] personality.	
	17. [Child] [said/did what they said/did] because [they] were frustrated.	Reverse scored
	* 18. [Child] [said/did what they said/did] because [they] have challenges related to behaviour.	
	* 19. [Child] [said/did what they said/did] because [they] did not know what to do.	Reverse scored
	20. [Child] [said/did what they said/did] because [they] are mean.	
	21. [Child] had not planned to [say/do what they said/did].	Reverse scored

Note. An asterisk indicates that the statement was removed after the pilot. The names used in the vignettes replace [Child] and the relevant gender pronouns replace [they] in the statements.

Prior to responding to the statements, the participants were provided with the study's definitions of relational and physical aggression. This was done to ensure that they understood what was meant by "aggression" when responding to the statements. In addition to responding to the statements, the participants were asked to provide some personal information at the end of the questionnaire: the county of their workplace, their position in the kindergarten, and their gender. This information was collected to get an overview of the characteristics of the sample.

The questionnaire was created using the questionnaire-service Nettskjema (www.nettskjema.no). This service allowed for digital creation, distribution, and collection of the questionnaire. An online questionnaire was chosen because it allows for collection of data from a large sample at a small cost, and improved response rates (Boateng et al., 2018). The use of Nettskjema also made the questionnaire more accessible to individuals with limited vision or dyslexia who might need to have the text read out loud. An online questionnaire might also be more accessible to individuals with limited motoric skills, as responses are chosen using a number line (by clicking it or entering the number in a box) and drop-down menus. As there is no time-limit on the online questionnaire, participants also have the time to look up words they might not understand. To ensure that people with limited computer skills knew how to answer, the use of the number line below each statement was explained at the beginning. It was considered important to create an accessible questionnaire, as the population of ECEs in Norway is heterogenous and includes individuals with different needs.

3.2.3. Piloting

The next step in development was to pilot the questionnaire, in order to assess its usefulness in measuring perceptions of aggression, and test its ease of use (Boateng et al., 2018). The pilot sample was recruited from one kindergarten in the East of Norway and consisted of 7 participants who were all women. They were recruited through direct contact with the kindergarten, and information about the pilot was shared with them through the kindergarten's Microsoft Teams-group. To sign up for the pilot, the participants entered their email address into an online recruitment form.

In addition to the statements and questions about personal information, the pilot questionnaire also contained some free-text answers such as "How did you find the questionnaire?" and "Was there anything you found difficult to understand? If so, what?". The responses to these questions were used to improve the questionnaire following the pilot.

Overall, the participants of the pilot found the questionnaire easy to respond to and understand. The vignettes were described as easy to read and realistic.

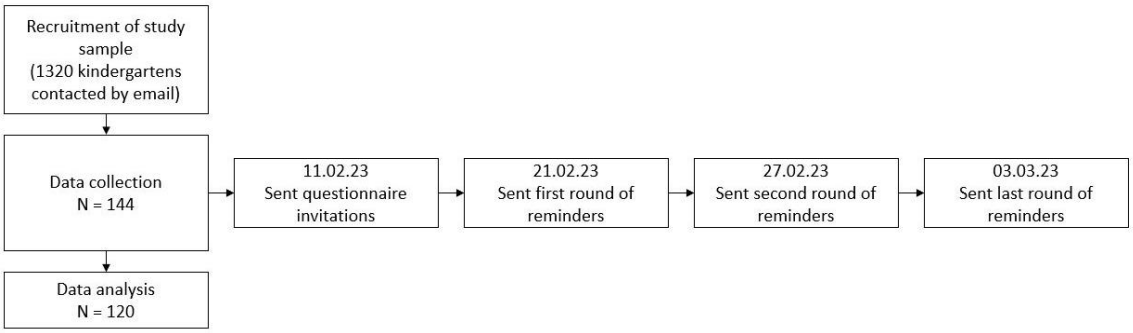
Following the pilot of the questionnaire, a reliability analysis was run to evaluate the internal consistency of the three scales (aspects of perception of aggression) in the questionnaire. Following this analysis, the choice was made to remove a few of the statements, as they did not seem to contribute significantly to the scales. Some of these statements were also considered to be redundant based on content, or too difficult to interpret and understand. The statements that were removed are indicated in Table 1 above, and details of the reliability analysis can be viewed in Appendix B.

3.3. Sampling, recruitment, and data collection

The chosen population for the current study was ECEs working in Norwegian kindergartens. Primarily, the adults who work directly with the children in kindergartens were wanted as participants. The initial information sent out to kindergartens specified that only staff working directly with the children were wanted. However, a few managers who signed up were also included in the sample. Figure 5 shows the different stages of the project, from recruitment to analysis.

Figure 5

Stages in recruitment and data collection



3.3.1. Recruitment

For the recruitment of the study sample, the goal was to obtain a sample that was as large as possible. A large sample is recommended to increase reliability and allows for the use of sophisticated statistics (Cohen et al., 2017). Cohen et al. (2017) argue that 30 is the minimum number of participants in each experimental group if the researcher wishes to do any kind of statistical analysis. However, they note that researchers should aim to have

considerably more participants in each group if possible. Because of the short timeframe and scope of this project, a convenience sample was chosen. Recruitment was carried out by contacting the managers of kindergartens by email, asking them to forward information about the study and the link to the online recruitment form to their staff. The kindergartens that were contacted were chosen at random. 120 kindergartens from each county in Norway were contacted, 1320 kindergartens in total. In addition, I reached out to my network on Facebook, asking friends and former colleagues to share information about the project.

3.3.2. Data collection

At the end of the recruitment period, which lasted for almost 4 weeks, 144 ECEs had signed up to participate in the project. According to the experimental design chosen for the study, the participants were randomised into two experimental groups using complete randomisation (in Excel). Each group contained 72 participants. All participants received an email containing information about the study, and details on how they would receive the link to the questionnaire. The questionnaire links were sent directly from Nettskjema. One group was sent the questionnaire in which the vignettes described girls, and one group was sent the questionnaire in which the vignettes described boys. The participants had over 3 weeks to respond to the questionnaire. A maximum of three reminders were sent out to participants who had not yet responded, as there are rapidly diminishing returns when sending more than three follow-ups (Cohen et al., 2017). The follow-ups re-emphasised the importance of each participant's contribution to the study and reminded them to contact me if they had not received the questionnaire link.

3.3.3. Obtained sample

Out of the 144 ECEs that signed up to participate in the study, 120 responded to the questionnaire. The "girl"-questionnaire received 58 responses, and the "boy"-questionnaire received 62 responses, making the two experimental groups almost equal. Information about the participants' gender, position in kindergarten and the county in which they worked was collected. Details on the characteristics of the participants in each experimental group can be viewed in Appendix C. In Appendix C, there are also details on how the characteristics of the obtained sample diverge from the population of Norwegian ECEs.

To determine whether the characteristics of the two experimental groups diverged significantly from each other, inferential statistics were run. A chi-square test of association was completed to determine whether there were significant differences in the proportion of

positions between the two experimental groups. The test was not statistically significant at an α-level of .05: χ^2 (3, N = 120) = 2.15, p = .542, Cramer's V = 0.13. Fisher's exact tests were run to determine whether there were significant differences in the proportions of participant gender and county of workplace in the two groups, as one assumption of the chi-square test of association was violated (Navarro & Foxcroft, 2022). These tests indicated that there were no statistically significant differences between the groups related to participant gender (two-tailed p = 1.000) nor to workplace county (two-tailed p = .359) at an α-level of .05. These results suggest that the characteristics of the two groups do not deviate significantly from each other, and that the two groups are comparable based on these characteristics.

3.4. Validity and reliability

In the following section, details will be provided on which steps have been taken to improve the validity and reliability of the results.

3.4.1. Evaluation of scale quality

Originally, the statements created to measure each aspect of perception of aggression were intended to be used to create compound variables (scales) designed to measure level of aggression, acceptability of aggression, and causal attributions. However, a thorough evaluation of these scales concluded that the quality of the scales was inadequate, and the scales did not behave as expected. Therefore, compound variables were not used for analysis. Details on the evaluation of scale quality can be viewed in Appendix B.

When discarding the compound variables, I chose to use single items to answer the research questions. To examine level of aggression, item 1 "[Child's] behaviour is aggressive" and item 2 "[Child's] behaviour is harmful" were chosen. For acceptability of aggression, item 8 "[Child's] behaviour is acceptable" and item 11 "I would not intervene in the situation described above" were chosen. Lastly, causal attribution was intended measured through item 16 "I think that [Child's] behaviour in the situation describes [their] personality" and item 18 "[Child] had not planned to [say/do what they said/did]". These items were all chosen because they were considered the items that best represented the three different aspects of perception of aggression. Item 1 directly addresses aggression, while item 2 addresses aggression using a synonym that might appear less brutal compared to the term "aggressive". Item 8 directly addresses acceptability of the behaviour, and item 11 one possible reaction (not intervening) to the behaviour. It is assumed that ECEs will not intervene in situations they find acceptable. Items 1, 2 and 8 are also similar to some of the

single items used by Harris and Knight-Bohnhoff (1996) in their study. Item 16 asks directly about attribution to personal factors, and item 18 suggests a lack of premeditation (that is, it was the situational factors of the moment that made the child behave as they did). These were considered the best choices to measure causal attribution. The implications of having to use single items in measurement are discussed in Section 5.4.

3.4.2. Construct and content validity

Construct validity concerns the operationalisation of a construct, and asks whether my understanding of the abstract concept "perception of aggression" is acceptable and similar to what is generally accepted for this concept (Cohen et al., 2017). This understanding is important because if the concept is not defined and understood well, I might not be measuring the construct of perception of aggression but something else. My understanding and definition of perception of aggression is based on earlier research on gender and perceptions of aggression (Condry & Ross, 1985; Harris & Knight-Bohnhoff, 1996; Stewart-Williams, 2002). One theoretical understanding of behaviour (the ABC-model) was also used as a foundation for the theoretical model of perception of aggression (see Section 2.3).

Because attitudes or evaluations such as those underlying how individuals perceive aggression are cannot be measured directly (Fiske & Taylor, 2013), there is a chance that you are not measuring exactly the construct you aim to measure. However, Fiske and Taylor (2013) argue that perceptions come through when an individual responds to stimuli. Therefore, in this study, I have chosen to measure perception of aggression by asking the participants to respond to written scenarios that describe aggressive behaviour.

Content validity is closely related to construct validity and concerns how well the instrument you are using covers the whole construct you aim to measure (Cohen et al., 2017). In this project, the construct I am aiming to measure is perception of aggression (the theoretical model of the construct can be found in Section 2.3). Because perception of aggression is multifaceted, three sub-categories have been used to attempt to cover the whole construct. Content validity is mainly assessed through evaluation by expert judges (Boateng et al., 2018; Cohen et al., 2017), which is why the three aspects have been chosen based on previous research that has been peer-reviewed.

3.4.3. External validity

External validity is the generalisability of the results to the wider population, or other settings or contexts (Cohen et al., 2017). A convenience sample (as used in this study) does

not allow for much generalisability, as all members of the study populations do not have an equal chance of being selected for participation (Cohen et al., 2017). However, steps were taken to give ECEs from all parts of Norway the opportunity to participate (see Section 3.3.1) and a large sample was obtained. The thorough development of the vignettes improved their realism, which might make them more generalisable to similar (real) situations in Norwegian kindergartens.

3.4.4. Internal validity

Internal validity relates to how confidently one can "trust" the results obtained. This can be considered the "truthfulness" or "credibility" of the results (Cohen et al., 2017). How sure can one be that the results reflect the "true" relations between variables? The reliability of the instrument used affects the internal validity. Several choices were made in the creation of the questionnaire to improve its reliability, for example the choices made when developing the Likert-scales used (see Section 3.2.2).

The use of an experimental design where the independent variables are controlled also improved the internal validity of the results, as less confounding variables are expected to affect the relations between variables (Cohen et al., 2017). For example, the gender of the child that is the "target" of the aggressive behaviour in the fictional scenarios was kept neutral, as some studies have shown that the gender of the target can influence perception of aggression (Condry & Ross, 1985; Harris & Knight-Bohnhoff, 1996). Randomisation of the participants into the two conditions (boy/girl) was used with the aim of cancelling out the effects of other confounding variables (Bhattacherjee, 2012) such as participant characteristics.

Attrition, that is, loss of participants throughout the study, is another threat to internal validity (Cohen et al., 2017). An online questionnaire that was easy and quick to complete was designed to increase response rates. The initial sample consisted of 144 ECEs, and 120 of them responded to the questionnaire. This is a response rate of 83%. To keep attrition low, several reminders were sent to participants, reminding them to respond and emphasising the importance of their answer. Participants were encouraged to contact me if they had any problems completing the survey, which resulted in me solving a few technical issues and receiving a higher response rate.

3.5. Ethical considerations

To ensure adherence to ethical research standards, considerations and choices in the planning and execution of this project have been made in accordance with ethical guidelines for research conducted in Norway (created by NESH).

To ensure the obtainment of consent that is voluntary, informed, unambiguous and documentable (NESH, 2022), information about the project was shared with the participants both before and after they signed up to participate. The document containing information about the project was written using Sikt's template (Sikt, n.d.), and can be found in Appendix D. A separate, but similar, document was created for the recruitment of the pilot-sample, as participation in the pilot had different aims and implications (this can also be found in Appendix D). To make information easy to understand for all possible participants, it was reviewed several times to ensure that it was written in a clear and uncomplicated manner.

To ensure unambiguous and documentable consent to participate, the beginning of the questionnaire included a statement where participants had to actively check off a box to reach the questionnaire. The intention was to make participants actively consent before completing the questionnaire, as well as remind them of what participation would entail and prompt them to read the information sent by email if they had not already.

The researcher is also responsible for ensuring anonymity and confidentiality (NESH, 2022). This includes responsible storage of data and participants' information. To ensure this, a plan for data handling and storage was created. This plan was submitted to and approved by Sikt (the relevant documents can be found in Appendix E). Nettskjema was used for data collection, as they are approved by the University of Oslo as an external data processor. All data was stored on my University of Oslo OneDrive, as this is approved to store the type of data collected in this study (University of Oslo, 2022). Emails were sent using the "blind carbon copy"-field, to ensure that participants did not have access to the emails of other participants.

Participants should also be protected from harm or undue strain (NESH, 2022). To ensure that participants experienced as little strain as possible, the questionnaire was kept short. The use of an online questionnaire enabled participants to fill out the questionnaire at a time and place convenient to them. Steps were also taken to make the questionnaire as accessible as possible (see Section 3.2.2).

3.6. Statistics and analysis

3.6.1. Variables

In a quantitative approach, independent and dependent variables are defined. The independent variables are manipulated in the experiment. The *independent variables* of this study are child gender (girl or boy) and type of aggression (physical or relational).

Child gender is a grouping variable, meaning that it is measured between participants. That is, each participant only read fictional scenarios describing either a boy or a girl, not both.

Type of aggression is a repeated measure, meaning that it is measured within participants. Each participant read vignettes describing both relational and physical aggression and answered the same statements relating to each of the types of aggression.

In accordance with the research questions, and the theoretical model of perception of aggression (see Section 2.3), the intention was to measure three dependent variables: perceived *level of aggression*, perceived *acceptability of aggression*, and *causal attributions*. However, as the compound variables (scales) had to be discarded (see Section 3.4.1), 6 single items are used as dependent variables in analysis.

Item 1 "Aggressive" and *item 2 "Harmful"* are intended to reflect level of aggression (how aggressive the behaviour is perceived). A high score on each item indicates high perceived level of aggression.

Item 8 "Acceptable" and *item 11 "Not intervene"* are intended to reflect acceptability of aggression (how acceptable the aggressive behaviour is perceived). A high score on each item indicates high perceived acceptability of aggression.

Item 16 "Personality" and *item 18 "Not planned"* are intended to reflect causal attributions (whether the aggressive behaviour is perceived as being attributable to personal disposition or situational factors). A high score on "Personality" indicates attribution of behaviour to personal disposition, while a high score on "Not planned" indicates attribution of behaviour to situational factors.

The development of the questionnaire intended to measure level of aggression, acceptability of aggression, and causal attributions is described in Section 3.2.

3.6.2. Method of analysis

I chose to use Analysis of Variance (ANOVA) for statistical analysis, as it allowed me to answer my research questions while being robust to wrongful conclusions despite the violation of some assumptions (Norman, 2010). In an ANOVA, the means of two or more groups are compared. The two first research questions ask whether ECEs' perceptions of level of aggression, acceptability of aggression, and causal attributions are dependent on child gender and/or type of aggression. ANOVA is a suitable test as this study has several independent variables with multiple levels each (Navarro & Foxcroft, 2022). The third research question asks whether one independent variable's relation to perceived level of aggression, acceptability of aggression, and causal attributions is impacted by the other independent variable. In statistical terms, this can be defined as an interaction. An interaction is present when one independent variable affects how the other independent variable relates to the dependent variable (Navarro & Foxcroft, 2022). ANOVA allows for the analysis of possible interactions between the independent variables (child gender x type of aggression). Partial eta squared was chosen as a measurement of effect size, as it reports the proportion of variability in the data accounted for by a particular factor, and that is not accounted for by anything else (Navarro & Foxcroft, 2022).

A mixed-design ANOVA was carried out for each dependent variable: item 1, 2, 8, 11, 16 and 18. This type of ANOVA was used because there is one repeated measure (type of aggression) and one grouping variable (child gender) in the data. For all analyses, type II sum of squares was used, as this is recommended for unbalanced designs where you do not have a clear model and want to investigate both interactions and main effects (Navarro & Foxcroft, 2022). An α-level of .05 was desired, to minimise the risk of type I errors (false positives). Because 6 mixed-design ANOVAs were carried out, the Hommel method of correcting for multiple comparisons was used. This method of correcting for multiple comparisons was used because it provides power gains compared to methods such as the Bonferroni correction (Lydersen, 2021; Vickerstaff et al., 2019). The new, corrected α-level used to interpret the analyses was .0125.

3.6.3. Testing of ANOVA-assumptions

Prior to running the ANOVAs, assumptions were tested. The normality assumption of ANOVA is violated as ordinal data (which is not normal) is being used for analysis. However, the test is considered robust enough to still report trustworthy results (Norman,

2010). The assumption of sphericity was fulfilled for all the dependent variables, as there are only two levels to each independent variable (relational aggression/physical aggression, and boy/girl). The last assumption of a mixed-design ANOVA is homogeneity of variance, which was tested for each dependent variable using the Levene's test. The results showed that all items except "Acceptable" (relational aggression) fulfil the assumption of homogeneity of variance, as they have *p*-values above .05. An overview of the results of the Levene's tests can be seen in Table 2. As only one item did not pass the Levene's test and the ANOVA is robust despite violations of assumptions, I decided to go ahead with analysis using mixed-design ANOVAs.

Table 2

Results of Levene's test for the dependent variables

Aspect	Dependent variable	Type of aggression	*F*	df1	df2	*p*
Level of aggression	"Aggressive"	Relational	2.97	1	118	.087
		Physical	0.01	1	118	.939
	"Harmful"	Relational	0.64	1	118	.426
		Physical	0.29	1	118	.594
Acceptability of aggression	"Acceptable"	Relational	5.72	1	118	.018
		Physical	0.44	1	118	.508
	"Not intervene"	Relational	0.07	1	118	.798
		Physical	2.00	1	118	.160
Causal attribution	"Personality"	Relational	1.13	1	118	.290
		Physical	3.84	1	118	.053
	"Not planned"	Relational	2.65	1	118	.106
		Physical	1.33	1	118	.251

4. Results

The results of the study will be reported in this chapter. For a description of the variables in the study, see Section 3.6.1. Descriptive statistics will be reported for all items, and the results of the mixed-design ANOVAs will be reported relating to each research question.

4.1. Descriptive statistics

Because single items from the questionnaire are used in analysis, the data obtained is on an ordinal scale. Appropriate descriptive statistics for ordinal data include median, interquartile range (IQR) and bar graphs (Navarro & Foxcroft, 2022). As ANOVAs are used for analysis, the mean will also be reported. The descriptive statistics for each dependent variable are separated by type of aggression and child gender (the gender of the child in the vignette read by the participant). Type of aggression is a repeated measure in this study. To avoid each participant being in the analyses more than once, the data for each type of aggression is reported separately. Table 3 shows the descriptive statistics for each item. Figure 6, Figure 7, and Figure 8 show the bar graphs for each single item intended to measure each aspect of perception of aggression.

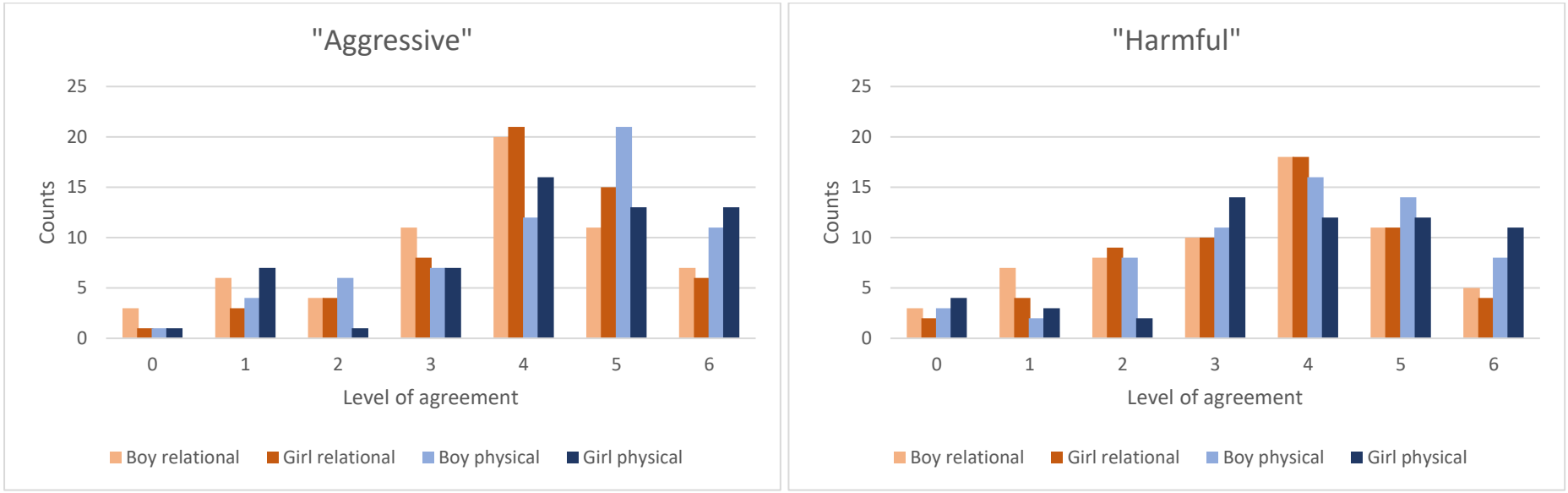
Table 3

Descriptive statistics of the dependent variables

Aspect	Dependent variable	Child gender	Relational aggression			Physical aggression		
			Median	Mean	IQR	Median	Mean	IQR
Level of aggression	"Aggressive"	Boy	4	3.6	2	5	4.1	2
		Girl	4	4.0	2	4	4.1	2
	"Harmful"	Boy	4	3.4	2.75	4	3.8	2
		Girl	4	3.5	2.5	4	3.8	2
Acceptability of aggression	"Acceptable"	Boy	1	1.2	2	1	1.4	2
		Girl	0	0.8	1	1	1.3	2
	"Not intervene"	Boy	0	1.1	1	0	0.9	1
		Girl	0	1.0	1.75	0	0.7	1
Causal attribution	"Personality"	Boy	2.5	2.2	2	2	2.0	2
		Girl	2.5	2.1	2	1.5	1.6	2.75
	"Not planned"	Boy	4.5	4.2	2.75	6	5.1	1
		Girl	4.5	4.1	3	6	5.0	1

Figure 6

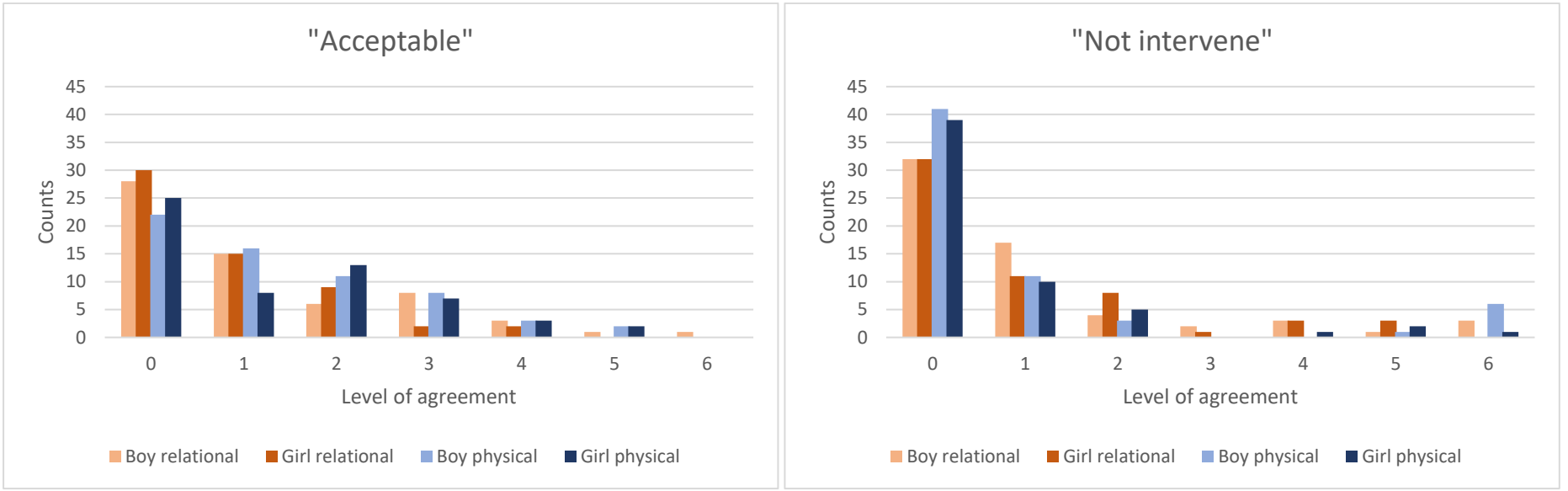
Bar plots of dependent variables intended to measure the aspect "Level of aggression", presented by child gender (boy/girl) and type of aggression (relational/physical)



Note. Level of agreement was measured on a scale of 0 to 6, where 0 was labelled "Completely disagree", 3 was labelled "Neither – nor", and 6 was labelled "Completely agree".

Figure 7

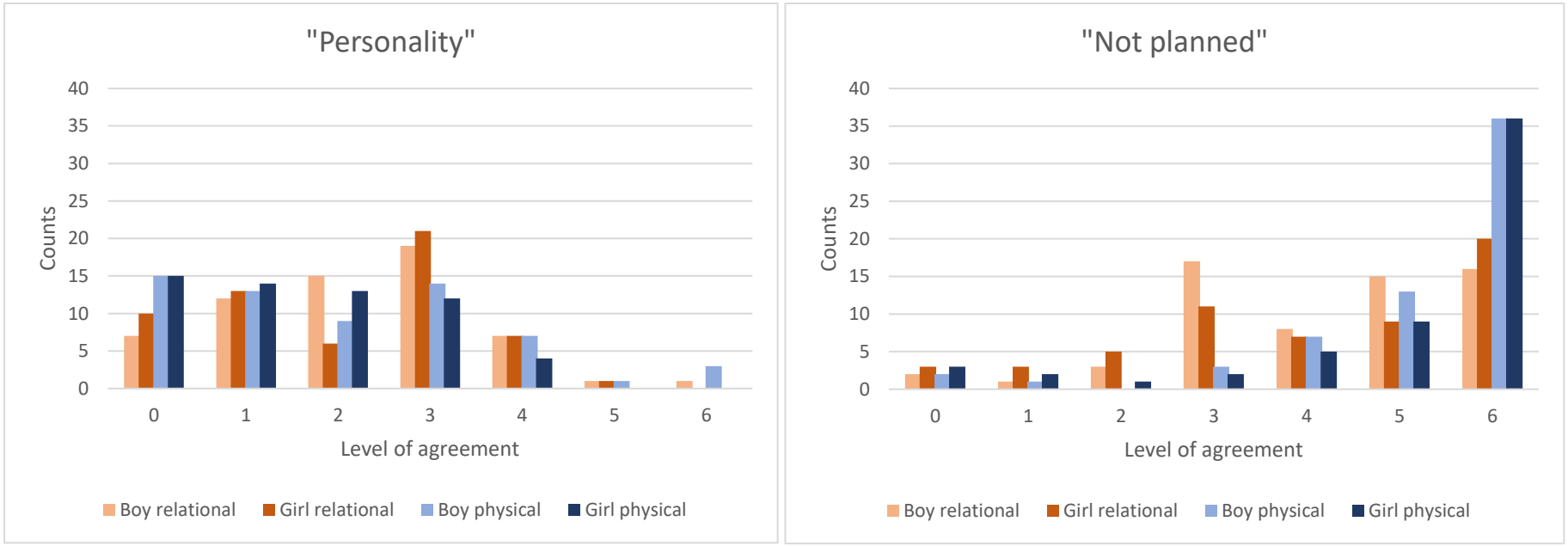
Bar plots of dependent variables intended to measure the aspect "Acceptability of aggression", presented by child gender (boy/girl) and type of aggression (relational/physical)



Note. Level of agreement was measured on a scale of 0 to 6, where 0 was labelled "Completely disagree", 3 was labelled "Neither – nor", and 6 was labelled "Completely agree".

Figure 8

Bar plots of dependent variables intended to measure the aspect "Causal attributions", presented by child gender (boy/girl) and type of aggression (relational/physical)



Note. Level of agreement was measured on a scale of 0 to 6, where 0 was labelled "Completely disagree", 3 was labelled "Neither – nor", and 6 was labelled "Completely agree".

4.2. Perceptions of boys' and girls' aggressive behaviour

The first research question of this study is: "Do ECEs' perceptions of children's level of aggression, acceptability of aggression, and causal attributions of aggressive behaviour depend on the child's gender?". As can be seen in Table 3, the median, mean, and IQR vary marginally depending on gender condition for some of the items. The bar plots in Figure 6, Figure 7, and Figure 8 show a slight difference in the distribution of answers depending on the child's gender. This might indicate a relation between perception of child aggressive behaviour and gender.

To investigate whether there is a statistically significant difference between the answers given depending on child gender, mixed-design ANOVAs were carried out. A summary of the results can be found in Table 4.

Table 4

Results of ANOVAs for main effect of child gender

Aspect	Dependent variable	*F*	df1	df2	MSE	*p*
Level of aggression	"Aggressive"	0.43	1	118	1.44	.516
	"Harmful"	0.16	1	118	0.58	.688
Acceptability of aggression	"Acceptable"	1.02	1	118	2.52	.315
	"Not intervene"	0.52	1	118	1.61	.473
Causal attribution	"Personality"	1.40	1	118	4.59	.240
	"Not planned"	0.21	1	118	0.71	.649

The tests showed no significant main effects of child gender on any of the items (at an α-level of .0125). That is, there were no significant differences between the means of each experimental group. These results led to a rejection of the two hypotheses related to gender

and perception of aggression, that predicted that level of aggression and causal attributions would depend on child gender.

4.3. Perceptions of child aggressive behaviour and type of aggression

The second research question of this study is "Do ECEs' perceptions of children's level of aggression, acceptability of aggression, and causal attributions of aggressive behaviour depend on the type of aggression displayed?". As seen in Table 3, the median, mean, and IQR vary slightly depending on type of aggression. The bar plots in Figure 6, Figure 7, and Figure 8 also show a slight difference in the distribution of answers depending on type of aggression. This could imply that there is a relation between perceptions of child aggressive behaviour and type of aggression.

Mixed-design ANOVAs were carried out for each item, and a summary of the results can be found in Table 5.

Table 5

Results of ANOVAs for main effect of type of aggression

Aspect	Dependent variable	*F*	df1	df2	MSE	*p*	η^2_p
Level of aggression	"Aggressive"	4.48	1	118	6.34	.036	-
	"Harmful"	5.35	1	118	7.70	.022	-
Acceptability of aggression	"Acceptable"	5.72	1	118	6.67	.018	-
	"Not intervene"	1.35	1	118	2.60	.249	-
Causal attribution	"Personality"	9.50	1	118	7.70	.003	0.08
	"Not planned"	26.38	1	118	50.42	<.001	0.18

Significant main effects of type of aggression were found for two items: "Personality" and "Not planned" (at an α-level of .0125). These results strengthen the hypothesis that

causal attributions are dependent on type of aggression, but weaken the hypotheses that perceived level of aggression and acceptability of aggression are dependent on type of aggression.

Because significant main effects of type of aggression were found, the post hoc test Tukey's HSD was conducted for each item with a significant effect to determine the difference between the types of aggression. Tukey's HSD was chosen because it examines pairwise differences and corrects the p-values for multiple comparisons, reducing the chance of type I errors (Navarro & Foxcroft, 2022). The mean differences and p-values of the post hoc Tukey tests are summarised in Table 6. The p-value of the post hoc Tukey test indicates whether the difference between the two types of aggression is significant (p =< .05). The estimated marginal means plot visualises the difference, and these can be seen for each item in Figure 9.

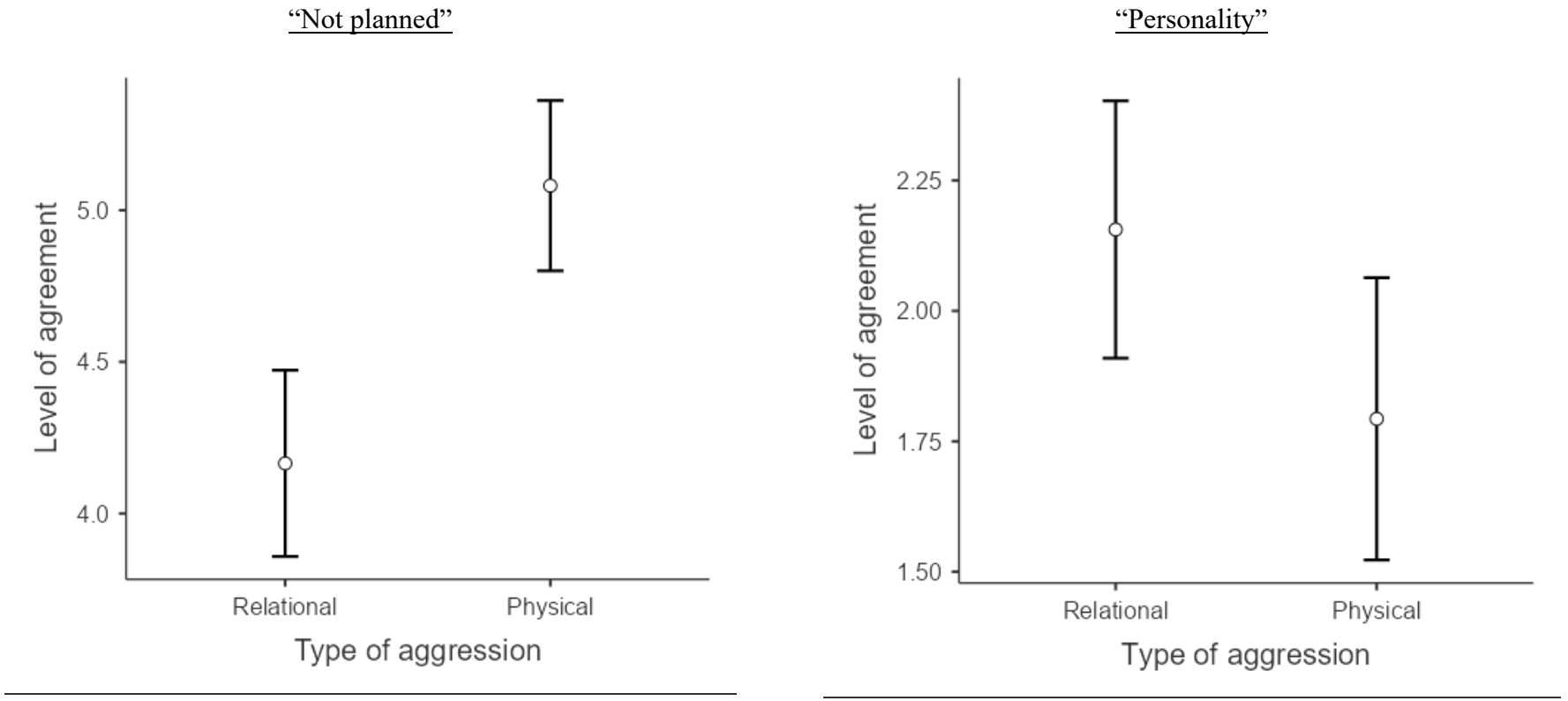
Table 6

Results of post hoc Tukey tests for each dependent variable with a significant main effect of type of aggression

Aspect	Dependent variable	Mean difference	*p*
Causal attribution	"Personality"	0.363	.002
	"Not planned"	0.916	<.001

Figure 9

Estimated marginal means plots for each dependent variable with a significant main effect of type of aggression



The answers to the item “Not planned” indicate that relational aggression is more likely to be perceived as a planned act, compared to physical aggression which might be perceived as something the child engages in without premeditation. The results also suggest that relational aggression is more likely to be attributed to personal factors than physical aggression, according to the answers to the item “Personality”. The hypothesis that physical aggression is attributed more to personal factors must be rejected.

4.4. Interactions between child gender and type of aggression

The third research question of this study is “Does the impact of child gender on ECEs’ perception of children’s level of aggression, acceptability of aggression, and causal attributions of aggressive behaviour depend on the type of aggression displayed (or vice versa)?”. This type of relation is defined as an interaction (see Section 3.6.2).

Mixed-design ANOVAs were used to examine the possibility of an interaction between the two independent variables: child gender and type of aggression. The results are summarised in Table 7.

Table 7

Results of ANOVAs for interaction effects of child gender and type of aggression

Aspect	Dependent variable	*F*	df1	df2	MSE	*p*
Level of aggression	“Aggressive”	1.66	1	118	2.34	.200
	“Harmful”	0.01	1	118	0.01	.933
Acceptability of aggression	“Acceptable”	1.63	1	118	1.90	.204
	“Not intervene”	0.21	1	118	0.40	.649
Causal attribution	“Personality”	1.39	1	118	1.13	.241
	“Not planned”	0.01	1	118	0.02	.913

No significant interactions were found for any of the items analysed (at an α-level of .0125). That is, the independent variables do not influence each other's effect on perceptions of aggression. As there are no significant interactions, the hypothesis that there is an interaction for at least one aspect of perception of aggression is weakened. The fact that there are no interactions allows for the interpretation of the main effect of type of aggression that was significant for the items "Personality" and "Not planned" (Navarro & Foxcroft, 2022).

5. Discussion

Contrary to the hypotheses, the results showed that ECEs perceptions of child aggressive behaviour did not depend on the child's gender for any of the aspects of perception of aggression outlined in the theoretical model (see Section 2.3). Moreover, the findings revealed that only causal attributions of aggressive behaviour depended on the type of aggression displayed. Finally, and contrary to the prediction made, no significant interactions were found for any included aspects of perception of aggression. In this chapter, the results related to each research question will be discussed. Strengths and limitations of the study will be considered, in addition to the implications of the results and suggestions for further research.

5.1. Perception of boys' and girls' aggression

According to the results of this study, ECEs perceptions of child aggressive behaviour do not depend on the child's gender. This is contrary to what was predicted based on the shifting standards theory, which posits that the group stereotyped as "deficient" on aggression will be judged on lower minimum standards and higher confirmatory standards (Biernat, 2012, see Section 2.1.2). Based on the results obtained, stereotypes about gender and aggression do not seem to affect ECEs' perceptions of child aggressive behaviour. This is also contrary to the findings of Condry and Ross (1985) and Harris and Knight-Bohnhoff (1996), who found that perceptions of aggression are dependent on the gender of the person performing the aggressive act.

However, the shifting standards model also argues that the use of subjective language produces reliance on "within-category" standards (Biernat, 2003). That is, when using subjective language to evaluate behaviour, we are more likely to compare the individual to the group they belong to. For example, boys will be compared to other boys, and girls to other girls. This could produce different judgements than when boys or girls are compared to all children. In fact, Biernat (2003) argues that the use of Likert-type scales will invoke within-category standards which could lead to the erasure of stereotypical judgements. As the current study used Likert-type scales in data collection, the impact of stereotypes relating to gender and aggression might be absent in the results because within-category standards have been used by the participants.

The theory of social cognition also offers some insight into which types of situations are more likely to elicit reliance on stereotypes. Fiske and Taylor (2013) argue that attitudes (based on stereotypes) are more likely to affect responses in situations characterised by stress, high arousal and time pressure. As the participants of the current study were asked to give responses in what can be considered a low-stress, low-arousal situation without time pressure, this might have affected the degree to which stereotypes about gender guided their responses. ECEs' responses to actual displays of aggression in kindergarten could elicit more attitude-based judgements because the environment might elicit more stress. In a real situation, the ECEs are also expected to react quickly to children's aggressive behaviour, bringing in an element of time pressure. Therefore, stereotypical perceptions of aggression might not have emerged in this study because of the situation that prompted the participants' responses.

Memory also plays a part in the emergence of stereotypes, according to Fiske and Taylor (2013) (see Section 2.1.1). As the participants had access to the vignette while responding to the statements in the questionnaire, they did not have to remember the details of the scenarios. This could be different in real situations, where ECEs might have to recall the aggressive behaviour of children days, weeks or even months after it occurs. This could result in emergence of gender stereotypes, where evidence of stereotypical behaviour might be more easily remembered according to the theory of social cognition (Fiske & Taylor, 2013). The lack of reliance on memory in the current study could therefore be one explanation of the lack of stereotypical perceptions of aggression.

Another explanation of the unexpected results could be that stereotypical views of gender and aggression have changed in the years since the early research on perceptions of aggression (Condry & Ross, 1985; Harris & Knight-Bohnhoff, 1996). In fact, Way (2015) found that perception of aggression did not depend on the gender of the aggressor. Stewart-Williams (2002) found that the perceived level of aggression and causal attributions were not dependent on aggressor gender, but that the acceptability of the aggression was. He comments that gender stereotypes relating to aggression may be less prominent in modern Western society due to cultural influences such as feminism. Norway is ranked 3rd in the Global Gender Gap Report (World Economic Forum, 2022), being evaluated as having closed 84.5% of their gender gaps. The Norwegian population of ECEs used for the current study could represent a population that is less reliant on gender stereotypes, compared to other countries and time-periods.

Stewart-Williams (2002) found that perceived acceptability of aggression was dependent on gender, and that a woman's aggression was perceived as more acceptable than a man's aggression. The current study found no significant difference in the perceived acceptability depending on the child's gender. This could be because children's aggression is perceived differently from adult aggression. In his study, Stewart-Williams (2002) argues that men's aggression could be perceived as less acceptable because men are generally physically stronger and have the potential to do more damage compared to women. As the physiological differences between the genders are less significant in early childhood, the same considerations of physical strength may not impact the perception of child aggressive behaviour. This could be one explanation of why perceived acceptability of aggression does not seem to depend on gender in the current study.

5.2. Perception of aggression and type of aggression

The results of the study showed that only ECEs' causal attributions of aggressive behaviour seem to depend on the type of aggression displayed. This was contrary to predictions, as the hypotheses stated that perceived level of aggression and acceptability of aggression would also depend on type of aggression. The items intended to measure perceived level of aggression, "Aggressive" and "Harmful", did not vary significantly depending on the type of aggression displayed. This implies that both physical and relational aggression are considered equally aggressive by ECEs. On average, the ECEs tended to agree that the behaviour described was "aggressive" and "harmful", but the ratings tended towards the middle of the Likert-scale ("Neither – nor") rather than the top ("Completely agree"). This could imply that children's behaviour is less often defined by Norwegian ECEs as "aggressive" or "harmful", even if the behaviour might be considered aggressive based on definitions used in research. This could point to a possible gap between the field of research and theory on aggressive behaviour in kindergarten and the field of practice.

In fact, some of the qualitative research done in Norwegian kindergartens indicates that the aggressive behaviour of children is often described as expressions of anger and frustration, rather than aggression (Huse-Olsen, 2016; Kiese, 2022; Malmin, 2013; Øwre, 2013; Sommerbakk, 2012; Sunde, 2019). Some ECEs also seem to be of the opinion that the term "aggressive" should not be used to describe young children's behaviour (Kiese, 2022; Malmin, 2013; Øwre, 2013). These findings could help explain why the results of this study are different from those of Stewart-Williams (2002). He found that physical aggression was perceived as more aggressive compared to relational aggression. Perhaps the results differ

because the participants in Stewart-Williams' (2002) were more inclined to use the term "aggressive" to define adult aggressive behaviour, compared to the ECEs evaluating children's behaviour in the current study.

The items intended to measure acceptability of aggression, "Acceptable" and "Not intervene", showed no significant differences between the ratings for relational and physical aggression. The ratings for "Acceptable" were low for both types of aggression. That is, the ECEs reported that they found the two types of aggressive behaviour equally unacceptable. They also rated "Not intervene" low for both types of aggression, implying that they would be likely to intervene in the situation, regardless of the type of aggression displayed. This implies that both types of aggression are considered unacceptable in kindergarten. These findings are in accordance with findings by Øwre (2013), who found that ECEs will intervene in displays of aggression that correspond to both physical and relational aggression as defined in the current study. Interestingly, these types of aggressive behaviour were often reacted to in different ways. Physical aggression often led to a physical removal of the child from the situation to calm them down, while relational aggression focused on talking to the children about how they should speak and act towards others (Øwre, 2013). This shows that even though both types of aggression are reacted to, the reactions might differ depending on the type of aggression.

Stewart-Williams' (2002) findings showed that perceived acceptability of aggression varied significantly depending on type of aggression, and that physical aggression was perceived as less acceptable than relational aggression. Again, this could be related to the physiological differences between children and adults. Because adults have the capacity to cause more physical harm, this could explain why perceptions of acceptability vary depending of type of aggression in Stewart-Williams' (2002) study and not in the current one. Additionally, the negative impact of relational aggression in the form of bullying has become part of the discussion about how to improve Norwegian kindergartens over the last few years (Heide & Nicolaisen, 2021). This could account for a change in perceptions of relational aggression over the past two decades since Stewart-Williams (2002) conducted his research, and thus explain the difference in results.

The two last items, "Not planned" and "Personality", were intended to measure the causal attribution aspect of perception of aggression. Relational aggression was rated significantly lower than physical aggression for the "Not planned" item. ECEs were more

likely to perceive relational aggression as an action that was planned. This perception of premeditation may suggest that the behaviour is not perceived as affected by situational factors, but rather personal ones. The item "Personality" also showed that relational aggression was attributed more to personal factors compared to physical aggression.

The effect size used was partial eta squared (η^2_p), which is the proportion of variation in the data for an item that is accounted for by type of aggression (Navarro & Foxcroft, 2022). The effect size for these items were 0.08 for "Personality" and 0.18 for "Not planned", meaning that type of aggression accounted for 8% and 18% (respectively) of the variation in the data for these items. Bakeman (2005) suggests that an eta squared effect size of 0.02 should be considered small, 0.13 considered medium, and 0.26 considered large. Other sources suggest these thresholds: 0.01 is small, 0.06 is medium, and 0.14 is large (Daines, 2023; Zach, 2021). The effect sizes of the "Personality" and "Not planned" items can therefore be considered small to medium and medium, respectively. In determining the relative size of an effect, one should also aim to compare results with previous studies examining the same topic. As Stewart-Williams (2002) used eta squared for effect size, it is not appropriate to compare these, as eta squared is not suitable for comparison across studies (Bakeman, 2005). However, the values from Stewart-Williams' (2002) analysis were input into an effect size calculator (Uanhoro, 2017) to convert it to partial eta squared for comparison. The effect size of type of aggression on causal attributions in his study was η^2_p = 0.03. Compared to the results of Stewart-Williams (2002), the effect sizes of the items intended to measure causal attributions in this study are fairly large.

The finding that relational aggression is attributed more to personal disposition contradict that of Stewart-Williams (2002), who found that physical aggression was more likely to be attributed to personal factors. This difference could be due to the difference in perception of adult aggressive behaviour and child aggressive behaviour. Among children of kindergarten age, some physical aggression is considered common and part of a normative development (Nærde et al., 2014). If engaging in physical aggression is viewed as normal for most children, it might be less likely to be attributed to the personality of the individual child. Relational aggression, however, might not be considered as "normal" among children in kindergarten and might therefore be attributed to the personality of the child engaging in it.

5.3. Lack of interactions between child gender and type of aggression

No significant interactions were found between child gender and type of aggression in the way they relate to perception of aggression in this study. This means that regardless of child gender, perceptions of aggression depend on type of aggression, and regardless of type of aggression, perceptions of aggression do not depend on child gender. The results contradict the predictions made that there would be an interaction between child gender and type of aggression, because the types of aggression may be associated with a certain gender (Baillargeon et al., 2005; Björkqvist, 2018; Loeber et al., 2013). However, the results are in agreement with the results of Stewart-Williams (2002), who found no interactions between type of aggression and aggressor gender. This indicates that even though girls and boys may engage in different types of aggression, the way adults perceive the different types of aggressive behaviour is not influenced by the child's gender.

5.4. Strengths and limitations

There are several strengths to this study, one of which is its sample size. The sample that was obtained was relatively large for a master's thesis with a short timeline and contains participants from all counties of Norway. Even though the sample is a convenience sample that might not be representative, the large sample size increases statistical power and lowers the chance of type II errors (Navarro & Foxcroft, 2022). This is also the first study that explores perceptions of aggression in Norwegian kindergartens. Therefore, despite not being a truly representative sample, the study results based on the current sample could be a good foundation for further research on perceptions of aggression in young children among Norwegian ECEs.

The questionnaire used in this study has some limitations that might affect the results. Interpretations of Likert-scales may be somewhat subjective (Cohen et al., 2017) and the use of vignettes and statements might not reflect how ECEs would react in a real situation. However, the validity and reliability of the results are strengthened by the fact that the vignettes used were thoroughly developed to be as realistic as possible (see Section 3.2.1). A small pilot was also completed to improve the questionnaire before it was used for data collection (see Section 3.2.3). The use of single items in measurement may increase the chance that other factors, such as statement wording, could have affected participant responses (Stewart-Williams, 2002). Additionally, the use of single items could limit the aspects of perception of aggression that are being measured, thus resulting in important

aspects of the concept not being covered. Nonetheless, several of these items were based on items used in previous research and based on the existing theoretical understanding of perception of aggression, which strengthens their validity.

The use of an experimental design is a strength. This allows for control of independent variables, as well as possible confounding variables (Cohen et al., 2017). As the research questions ask about dependency, it was important to choose a design that would be able to answer these questions. The use of vignettes made stimuli more comparable and as equal as possible for all participants. They allowed for more control of other variables that might influence perceptions of aggression, such as the ECEs relationship with the child performing the aggressive behaviour.

5.5. Implications for practice and future research

The results indicate that the way children's aggressive behaviour is perceived by ECEs is not affected by whether the child is a boy or a girl. This could suggest that gender stereotypes are less prominent in Norwegian kindergartens than what was hypothesised at the beginning of the project. However, there is a chance that there are gender stereotypes that affect perceptions of aggression that were not found in the current data because of the way data was collected (see Section 5.1 and 5.4). One should therefore be tentative in confirming whether there are gender stereotypes in Norwegian kindergarten that could affect the way children's aggressive behaviour is perceived.

The findings that ECEs neither agree nor disagree that both physical and relational aggression are harmful or aggressive could suggest a gap between the terms used to describe this type of behaviour in research, compared to the field of practice in Norway (see Section 5.2). To better incorporate theory, research and practice, the ways children's aggressive behaviour is described within the different fields should be investigated further. If terminology and descriptions surrounding aggressive behaviour is different between theory, research, and practice, it may be difficult to work towards a common goal of securing functional and good development for all children in Norway. Future research should therefore aim to explore how best to describe children's aggressive behaviour in a way that is functional and understandable to both research and practice.

The ECEs in the study rated both physical and relational aggression as equally unacceptable and agreed that they would intervene in both scenarios. This implies that even though ECEs may not use the terms "harmful" or "aggressive" to describe the observed

behaviours, they believe that it is crucial to intervene. Both physical and relational aggression can have lasting harmful effects for the child engaging in it and the children targeted by it. The use of relational or physical aggression could evolve into bullying, which can be very harmful for the victim and cause lasting psychosocial difficulties (Aaseth et al., 2021). It is also important to help the child engaging in physical or relational aggression. Displaying physical or relational aggression in childhood is associated with the co-occurrence of behavioural, social, and emotional problems (Andershed & Andershed, 2007; Bartels et al., 2018; Leff et al., 2010). The results from the current study are therefore encouraging, as it seems that ECEs in Norwegian kindergartens understand the importance of early intervention and the importance of communicating that both types of aggression are unacceptable.

If, as found, relational aggression is attributed more to personal factors (rather than situational factors), there could be a chance that children are labelled as mean or manipulative. The relationally aggressive behaviour may affect the way adults describe their personality, rather than separating their behaviour and personality. In fact, one recent study of Norwegian ECEs perceptions of relational bullying behaviour, indicated that ECEs tend to attribute the behaviour to the children's personality and not external environmental factors (Sørnes, 2017). In describing factors underlying displays of relational bullying behaviour, the ECEs in Sørnes' (2017) study used terms such as bossy, popular, and insecure. These are terms that clearly describe a child's personality.

As this study is the first to explore perceptions of aggression in Norwegian kindergarten, there is still much to investigate. The preliminary nature of this study does not allow for any firm conclusions about the research questions, but might present a foundation for further research on this topic in Norwegian kindergartens. This research is important because ECEs' perceptions of aggression could affect how they handle children's aggression (Fiske & Taylor, 2013), which again might impact the child's further developmental trajectory (Andershed & Andershed, 2007).

Further research should aim to improve the way perceptions of aggression are measured. To explore perceptions of aggression in Norwegian kindergartens further, other types of studies should be completed to compliment this preliminary research. For example, seeing behavioural responses to aggressive behaviours in a real situation might generate different results than the responses to the statements a questionnaire. Qualitative interviews asking a participant to describe their perception of aggression related to a real or fictious

scenario could also produce different results. It might be interesting to perform observations of behavioural responses in situations where a child behaves aggressively and compare these results to the responses to the vignettes and statements in a mixed-methods study.

Additionally, further research should aim to explore in what way ECEs intervene when observing aggressive behaviour. The current study found that ECEs agree that they would intervene in scenarios describing aggressive behaviour, regardless of the type of aggression or whether the child is a boy or a girl. However, more knowledge is needed to understand whether the interventions, or reactions, of the ECEs might differ depending on type of aggression or the child's gender. Even though ECEs are likely to intervene in all situations where there is aggressive behaviour, this does not mean that they are likely to respond to the behaviour in the same way. For example, Øwre (2013) found that ECEs reported different interventions for different types of aggression. This could be an interesting and important avenue for further research, as the specific reactions ECEs have to aggressive behaviour could affect how the behaviour might develop (Andershed & Andershed, 2007).

Despite the limitations of the current study that prevent any firm conclusions, these preliminary results on perceptions of children's aggressive behaviour are encouraging. Based on this study, it does not seem like Norwegian ECEs hold the belief that "boys will be boys" and "mean girls" engage in relational aggression. The results also imply that ECEs in Norway understand the implications of physical and relational aggression, and the importance of intervention. Perhaps an updated phrase along the lines of "Children will be children, and they need guidance on how to become well-adjusted adults," is more fitting for the perceptions of aggression among Norwegian early childhood educators.

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Appendix A: Questionnaire

Note. *As the questionnaire was online/digital, the copy of the questionnaire presented here might diverge slightly from what it looked like to participants. This is the questionnaire containing boys' names and pronouns. The other questionnaire was identical, except that the names and pronouns were those of girls.*

Spørreskjema: "Voksnes vurdering av barns handlinger"

Velkommen til spørreskjema for prosjektet «Voksnes vurdering av barns handlinger»!

Takk for at du vil bidra til prosjektet. Ditt bidrag er viktig og verdifullt for oss!

Samtykkeerklæring

Jeg har mottatt og forstått informasjon om prosjektet «Voksnes vurdering av barns handlinger» (informasjon tilsendt på epost), og har fått anledning til å stille spørsmål. Jeg samtykker til:

☐ Å delta i spørreskjema

Jeg samtykker til at mine opplysninger og svar behandles frem til prosjektet er avsluttet. Dersom du ikke samtykker til betingelsene over, skal du ikke besvare spørreskjemaet.

_____ SIDESKIFT _____

Prosjektet handler om voksnes vurdering av barns handlinger. I utsagnene under vil det bli brukt ord som "aggressiv" og "fiendtlig", som kanskje ikke er ord du vanligvis ville brukt til å beskrive barn. Det er viktig å huske at dette er begreper som brukes for å beskrive atferden og handlingene, ikke barnet selv.

Her er definisjonene på aggresjon som brukes i prosjektet:

Relasjonell aggresjon er en handling/atferd som skader andre gjennom målbevisst manipulering og/eller skade av deres relasjoner med jevnaldrende, for eksempel ved å trekke tilbake vennskap, ekskludere noen i lek eller spre skadelige rykter.

Fysisk aggresjon er en handling/atferd der man bruker fysisk makt mot andre i form av observerbar atferd som for eksempel sparking, uten vurdering av hensikt bak handlingen.

Du skal nå få lese et scenario hentet fra en typisk barnehagehverdag.

Oskar (4 år) leker med en bondegård og dyrefigurer sammen med flere andre barn. Han leker litt med en ku, men ser bort på et annet barn som har en hest. Etter litt går han bort til det andre barnet og sier: «Gi meg hesten!» Det andre barnet svarer: «Nei, den er opptatt» og leker videre. Oskar sier: «Hvis ikke du gir meg hesten, så får du ikke komme i bursdagen min!»

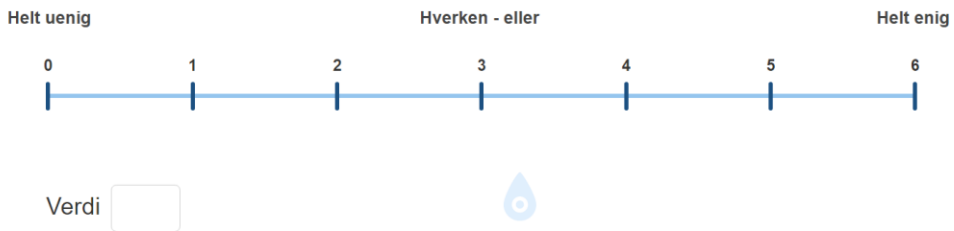
Du skal nå vurdere hvor enig eller uenig du er i følgende utsagn, basert på scenarioet over:

Gi svarene dine ved å trykke på tall-linja eller skrive et tall inn i "verdi"-boksen.

Oskars atferd er aggressiv.

Oskars atferd er skadelig.

Oskars atferd er fiendtlig.



Oskars atferd er destruktiv (ødeleggende).

Verdi

Oskars atferd er vennlig.

Verdi

Oskars atferd er hensynsfull.

Verdi

Oskars atferd er hyggelig.

Verdi

Oskars atferd er akseptabel.

Verdi

Oskars atferd skaper uro i barnehagen.

Verdi

Oskars atferd er forstyrrende for de rundt ham.

Verdi

Jeg ville ikke grepet inn i situasjonen beskrevet over.

Verdi

I samme situasjon som beskrevet over, ville de fleste barn på Oskars alder handlet på samme måte.

Verdi

Jeg ville snakket til/med Oskar i etterkant av situasjonen beskrevet over.

Verdi

Jeg ville vært bekymret dersom Oskar viste denne typen atferd mer enn to ganger hver dag.

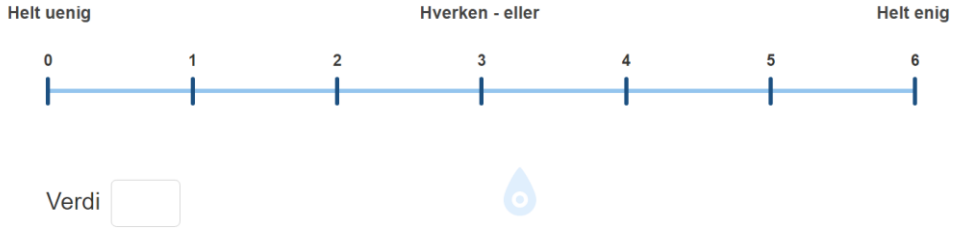
Verdi

Jeg tror at Oskars atferd i situasjonen beskriver hans personlighet.

Verdi

Oskar sa at barnet ikke fikk komme i bursdagen hans fordi han ble frustrert.

Oskar sa at barnet ikke fikk komme i bursdagen hans fordi han er slem.



Oskar hadde ikke planlagt å si at barnet ikke fikk komme i bursdagen hans.

_____ SIDESKIFT _____

Før du fortsetter vil vi minne om definisjonene på aggresjon som brukes i prosjektet:

Relasjonell aggresjon er en handling/atferd som skader andre gjennom målbevisst manipulering og/eller skade av deres relasjoner med jevnaldrende, for eksempel ved å trekke tilbake vennskap, ekskludere noen i lek eller spre skadelige rykter.

Fysisk aggresjon er en handling/atferd der man bruker fysisk makt mot andre i form av observerbar atferd som for eksempel sparking, uten vurdering av hensikt bak handlingen.

Du skal nå få lese et nytt scenario hentet fra en typisk barnehagehverdag.

Noah (4 år) leker ute i sandkassa. Han leker butikk sammen med noen andre barn. Noah går for å hente noen kongler til å pynte kaka han har laget, men når han kommer tilbake har et annet barn helt ut kaka hans. Noah kaster konglene utover sandkassa og dytter barnet som har helt ut kaka, på veien bort til dette barnet dytter han også unna noen andre barn som står i veien.

Du skal nå vurdere hvor enig eller uenig du er i følgende utsagn, basert på scenarioet over:

Noahs atferd er aggressiv.

Noahs atferd er skadelig.

Noahs atferd er fiendtlig.

Noahs atferd er destruktiv (ødeleggende).

Verdi

Noahs atferd er vennlig.

Verdi

Noahs atferd er hensynsfull.

Verdi

Noahs atferd er hyggelig.

Verdi

Noahs atferd er akseptabel.

Verdi

Noahs atferd skaper uro i barnehagen.

Verdi

Noahs atferd er forstyrrende for de rundt ham.

Verdi

Jeg ville ikke grepet inn i situasjonen beskrevet over.

Verdi

I samme situasjon som beskrevet over, ville de fleste barn på Noahs alder handlet på samme måte.

Verdi

Jeg ville snakket til/med Noah i etterkant av situasjonen beskrevet over.

Verdi

Jeg ville vært bekymret dersom Noah viste denne typen atferd mer enn to ganger hver dag.

Verdi

Jeg tror at Noahs atferd i situasjonen beskriver hans personlighet.

Verdi

Noah kastet konglene og dyttet fordi han ble frustrert.

Verdi

Noah kastet konglene og dyttet fordi han er slem.

Verdi

Noah planla ikke å kaste konglene og dytte de andre barna.

Verdi

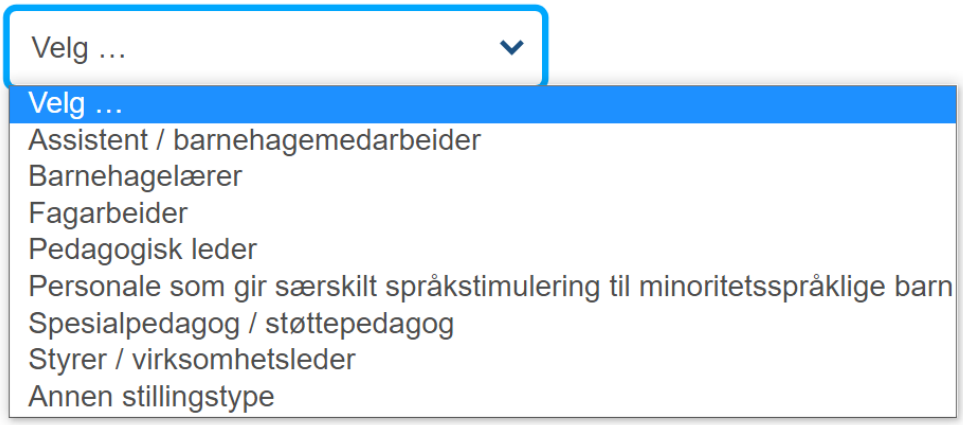
SIDESKIFT

Vennligst fyll ut følgende informasjon om deg selv:

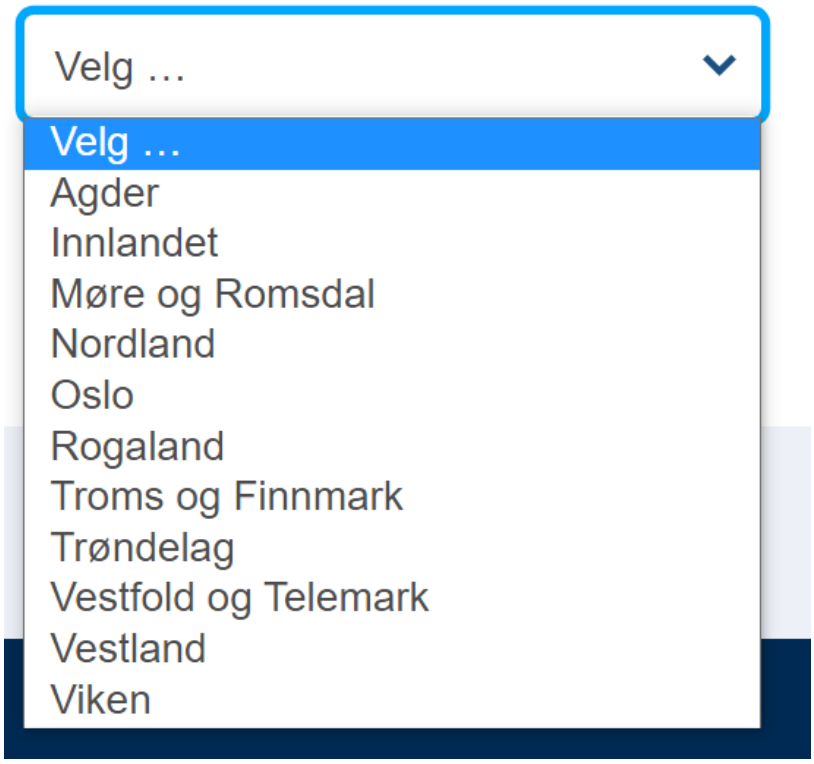
Kjønnsidentitet:

- ○ Mann
- ○ Kvinne
- ○ Ikke-binær

Stilling i barnehagen:



Hvilket fylke jobber du i:



Appendix B: Evaluation of scale quality

The quality of the proposed scales (intended as a means of creating compound variables) – level of aggression, acceptability of aggression, and causal attributions – was assessed carefully following the small pilot study and the main data collection. The evaluation process is detailed in this appendix.

After the pilot, McDonald's ω was calculated for each scale before and after the items were removed (Table B1). It is common to use Cronbach's α as a measure of internal consistency, but it has been challenged by researchers who argue that it is not a robust or accurate measure of a scale's internal structure (Crutzen & Peters, 2017; Kalkbrenner, 2023). Cronbach's α is not reported in this project because of this criticism, and because it assumes that the items in a scale are measured on a continuous level scale, and the items in this questionnaire are measured on an ordinal level scale. Therefore, only McDonald's ω is reported, as it does not rely on this assumption and is a more robust measurement of internal consistency (Kalkbrenner, 2023).

Table B1

McDonald's ω for each proposed scale following the pilot study

Scale	McDonald's ω before items removed	McDonald's ω after items removed
Level of aggression	0.895	No items removed
Acceptability of aggression	0.847	0.862
Causal attribution	0.737	0.803

Based on the data from the pilot study, the internal consistencies of the scales appeared to be acceptable, as they were all above the frequently used cut off of 0.7 (Navarro & Foxcroft, 2022). Navarro and Foxcroft (2022) argue that this criterion is somewhat arbitrary and depends on what the scale is measuring. However, all the scales were at least at 0.8, which is associated with 20% error variance (or less) in the scale. This was considered acceptable for this project.

The scales were measured overall, and not split according to type of aggression or gender condition, because of the small number of participants in the pilot. As a result, it is not clear to which degree the internal consistency of the scales might differ between the different scenarios. However, the aim was to have the scales work for all scenarios, which they seemed to do in the pilot sample. In addition, the fact that type of aggression was a repeated measure means that each participant was entered into the reliability analysis twice. This could have contributed to creating an artificially high internal consistency, as two answers from a single person might be expected to correlate more than the answers of two different people.

Following the data collection of the main study, the statements and scales were thoroughly evaluated using the data from the final sample. Assessing scale quality should include several steps and measures, and Peters (2014) suggests the following steps: 1) Compute McDonald's Omega (ω), 2) Conduct factor analyses, 3) Inspect the descriptive statistics for each item, 4) Generate a correlation matrix, 5) Inspect scatterplots of the items, and 6) Inspect the histogram of each item. These are the steps I used to evaluate my scales on a statistical level. Steps 5 and 6 are not possible to do with ordinal data, however, so these were not completed.

The first step was to compute McDonald's ω. The internal consistency measurement was calculated for each scale overall (without separating data by type of aggression or gender condition), separated by type of aggression, separated by gender condition, and separated by both of the independent variables. The results can be seen in Table B2 below.

Table B2

McDonald's ω for each proposed scale following the main data collection

	Overall	Separated by type of aggression		Separated by gender condition		Separated by type of aggression and gender condition			
Scale		RA	PA	G	B	RA-G	PA-G	RA-B	PA-B
Level of aggression	0.846	0.787	0.793	0.833	0.861	0.742	0.822	0.810	0.782
Acceptability of aggression	0.765	0.659	0.723	0.771	0.785	0.661	0.749	0.680	0.714
Causal attribution	0.653	0.421	0.460	0.656	0.675	0.446	0.451	0.429	0.514

Note. RA = Relational aggression, PA = Physical aggression, G = girl, B = boy. Overall = combining the items in scales without separating by type of aggression or gender condition.

As can be seen from these results, the internal consistency of the scales "level of aggression" and "acceptability of aggression" is above or just below the cut off of 0.7 for all measurements. As this is around 30% error variance for the scale, this was considered acceptable for this project. These two scales seem to act similar for both conditions and both types of aggression, although they have slightly less internal consistency for relational aggression compared to physical aggression. The level of aggression scale seems to work better for boys, but only for relational aggression. For physical aggression it seems to work better for girls. The acceptability of aggression scale seems to be working equally well for both gender conditions. At first glance, the causal attribution scale seems to have an internal consistency that is slightly below the accepted level of 0.7. However, internal consistency

drops quite low when scales are analysed separated by type of aggression. These results seem to suggest that this scale acts very differently for each type of aggression and should not be used across them.

The next step is to conduct an exploratory factor analysis (EFA). An EFA was completed for each type of aggression separately. For both tests, assumptions of sphericity and sampling adequacy were met. For relational aggression, the result of the Bartlett's test of sphericity was significant at a .05 α-level: χ^2 (153, N = 120) = 615.9, p < .001, which indicates that the observed correlation matrix is significantly divergent from the null, and suitable for EFA (Navarro & Foxcroft, 2022). The test of sphericity was also significant at a .05 α-level for physical aggression: χ^2 (153, N = 120) = 837.5, p < .001. The overall measure of sampling adequacy was 0.74 for relational aggression and 0.80 for physical aggression, which are good and indicate that the EFA is efficient (Navarro & Foxcroft, 2022). For relational aggression, oblique rotation of factors was used, as one of the inter-factor correlations were above 0.3. An orthogonal rotation of factors was used for physical aggression, on the other hand, as none of the inter-factor correlations were greater than 0.3 (Navarro & Foxcroft, 2022).

To consider how many factors are contained in the data, Navarro and Foxcroft (2022) suggest that three techniques should be used to evaluate the data produced by the EFA. Firstly, choose all components with Eigen values greater than 1. Then, examine the "point of inflection" in the scree plot. Lastly, use the parallel analysis technique to identify the last point at which the Eigen values of the collected data are greater than the Eigen values that would be found with random data. Table B3 shows the number of factors obtained through each of three techniques described above. Figure B1 shows the scree plot for relational aggression, and Figure B2 shows the scree plot for physical aggression. As can be seen from these results, the EFA seems to find 2-4 factors for both types of aggression. However, it is crucial to keep in mind that EFA may overestimate the number of factors when using ordinal scale data (Crutzen & Peters, 2017). Additionally, the overall proportion of variance that is accounted for by 3 factors for relational aggression is 36%, and for physical aggression the proportion is 41%. These numbers are not very high, and it would have been better if the factors accounted for more of the overall variance in the data.

Table B3

Factors obtained through exploratory factor analysis for relational and physical aggression

	Eigen values > 1	"Point of inflection" in scree plot	Parallel analysis technique
Relational aggression	2	2-3	4
Physical aggression	2	2-3	3

Figure B1

Scree plot for exploratory factor analysis for relational aggression

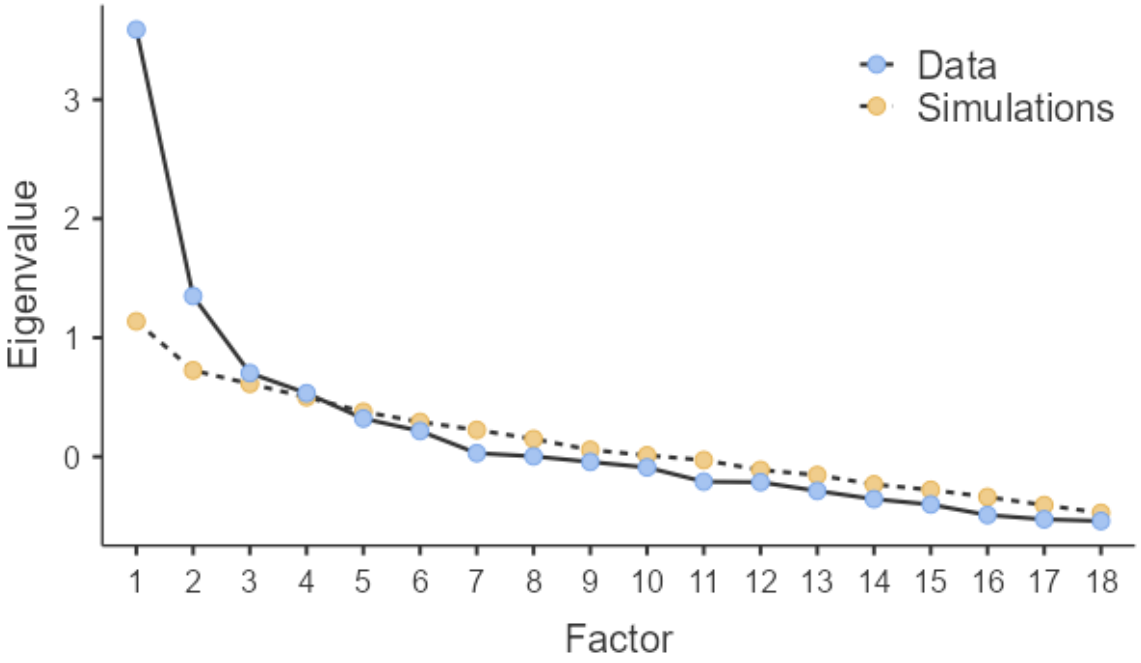
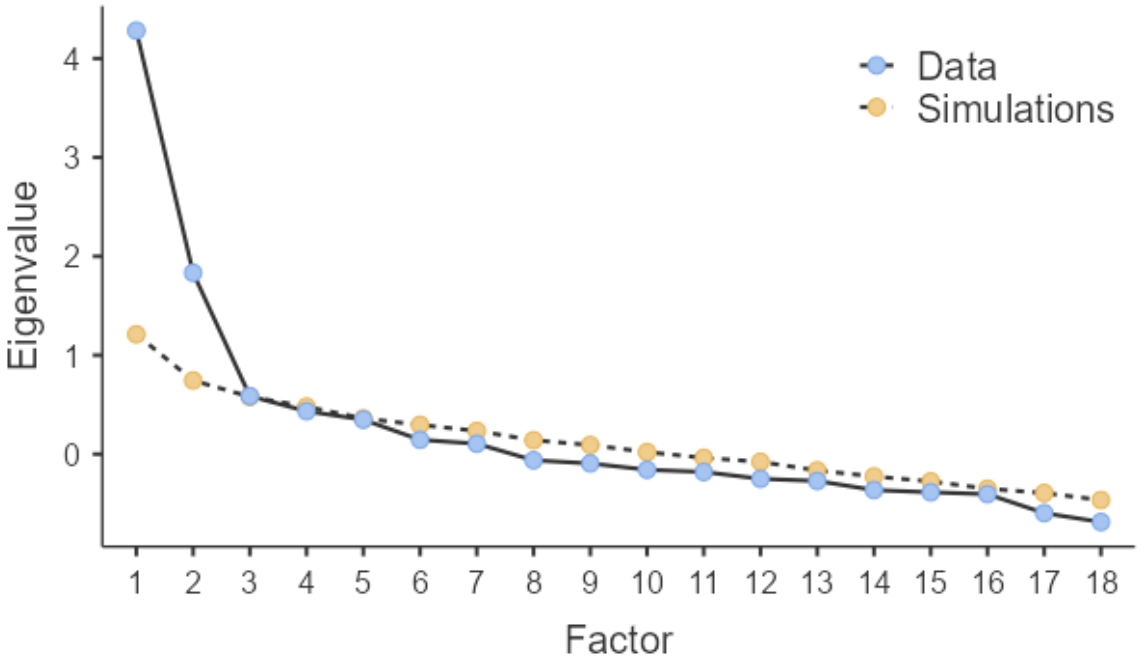


Figure B2

Scree plot for exploratory factor analysis for physical aggression



Following the EFA, a confirmatory factor analysis (CFA) was carried out. A CFA investigates how well a pre-specified model fits the collected data (Navarro & Foxcroft, 2022). The pre-specified model is shown in Table 1, where the items associated with each scale are indicated. Latent factors are allowed to co-vary, as it is expected that the three factors correlate with each other to some extent. This is because they are all considered measurements of perception of aggression. The chi-square test for exact fit was statistically significant at an α-level of .05 for both relational (χ^2 (132, N = 120) = 275.7, p < .001) and physical aggression (χ^2 (132, N = 120) = 389.0, p < .001). As the null hypothesis of this chi-square test is that the model fits perfectly (Bastos, 2021), the statistically significant results indicate poor model fit for both types of aggression. In addition, the Comparative Fit Index (CFI), the Tucker Lewis Index (TLI), and the Root Mean Square Error of Approximation (RMSEA) and its 90% confidence interval should be evaluated. A satisfactory model fit, according to Navarro and Foxcroft (2022), is indicated by CFA and TLI > 0.9, and RMSEA of about 0.05 to 0.08. These indices are summarised in Table B4 below. As can be seen, none of the indices meet the required standards, indicating poor model fit for both types of aggression.

Table B4

Indices of confirmatory factor analysis by type of aggression

	CFI	TLI	RMSEA	RMSEA 90% CI
Relational aggression	0.716	0.671	0.095	0.079-0.111
Physical aggression	0.654	0.599	0.127	0.113-0.142

The third step outlined by Peters (2014) is to inspect the descriptive statistics for each item. I chose to compare the descriptive statistics for each item grouped by scale, separated by type of aggression. Median and inter quartile range (IQR) were used for each item, as these are suitable measures of central tendency and dispersion for ordinal scale data. The descriptive statistics can be viewed in Table B5 below.

Table B5

Descriptive statistics for all items

Scale	Item	Descriptive statistic	Type of aggression	
			Relational	Physical
Level of aggression	1 “Aggressive”	Median	4	4
		IQR	2	2
	2 “Harmful”	Median	4	4
		IQR	3	2
	3 “Hostile”	Median	4	3
		IQR	2	2
	4 “Destructive”	Median	4	4
		IQR	1.25	2
	5 “Friendly” (R)	Median	0	0
		IQR	1	1
	6 “Considerate” (R)	Median	0	0
		IQR	1	1
	7 “Nice” (R)	Median	0	0
		IQR	0.25	1
Acceptability of aggression	8 “Acceptable”	Median	1	1
		IQR	2	2
	9 “Unrest” (R)	Median	4	4
		IQR	2	2

	10 “Disruptive” (R)	Median	4	5
		IQR	2	1
	11 “Intervene”	Median	0	0
		IQR	1	1
	12 “Similar”	Median	3	3
		IQR	2	2
	13 “Talk” (R)	Median	6	6
		IQR	1	1
	14 “Worried” (R)	Median	4	5
		IQR	1	1
Causal attribution	15 “Personality”	Median	2	2
		IQR	2	2.25
	16 “Frustrated” (R)	Median	5	6
		IQR	2	1
	17 “Mean”	Median	0	0
		IQR	0	0
	18 “Planned” (R)	Median	4.5	6
		IQR	3	1

Note. Full statements can be read in Table 1. R = reverse scored item.

Items 1-4 in the level of aggression scale seem to capture the range of the 0-6 Likert-scale, as the median is around the middle (3 is the middle of the Likert-scale) and the IQRs are between 1.25 and 3. For items 5-7 in the level of aggression scale, this does not seem to be the case, as most of the answers seem to fall to one side of the Likert-scale with medians of 0 and IQRs between 0.25 and 1. This tendency to one side of the Likert-scale can also be seen from the bar plot of each item. A tendency to use only one side of the Likert-scale can also be seen from the descriptive statistics and bar plots of several items in the acceptability of aggression and causal attribution scales. This could indicate that the statements are not formulated in a way that encourages the full use of the Likert-scale.

The last step in evaluating scale quality is creating correlation matrices. Two correlation matrices were created for all items, one for each type of aggression because this is a repeated measure variable. Spearman's rho was used as the correlation coefficient, as this is suitable for ordinal data (Laerd Statistics, n.d.). For all three scales, the patterns of significant correlations and strength of correlations were similar for both types of aggression. For physical aggression, there were stronger correlations within all scales, and more of these correlations were statistically significant at an α-level of .05. According to Boateng et al. (2018), inter-item correlations below 0.3 are may be inadequate within scales. For all scales, there were several inter-item correlations below 0.3 and correlations that were not statistically significant. The correlations seemed to be weakest between normal- and reverse-scored items within each scale. The causal attribution scale generally had poor inter-item correlations, suggesting that the items in this scale did not measure the same underlying construct. There were also some correlations between items across scales. This should be expected, as all three scales measure the underlying concept of perception of aggression.

The conclusion following the evaluation of scale quality was that the quality of the proposed scales was inadequate, and the scales were therefore not used to create compound variables for analysis.

Appendix C: Characteristics of sample

This appendix contains details concerning the characteristics of the main sample, as well as how these characteristics compare to the overall population of ECEs in Norway.

Table C1

Frequencies of gender in each experimental group

Gender of participant	Child gender in vignette	
	Boy	Girl
Man	4	3
Woman	58	55
Total	62	58

Table C2

Frequencies of county in each experimental group

County of workplace	Child gender in vignette	
	Boy	Girl
Agder	4	4
Innlandet	3	6
Møre og Romsdal	8	5
Nordland	1	6
Oslo	9	3
Rogaland	7	4
Troms og Finnmark	7	5
Trøndelag	8	9
Vestfold og Telemark	4	8
Vestland	5	4
Viken	6	4
Total	62	58

Table C3

Frequencies of position in each experimental group

Position in kindergarten	Child gender in vignette	
	Boy	Girl
Assistant	3	4
Kindergarten teacher	7	4
Vocational worker	8	4
Pedagogic leader	34	31
Special needs educator	6	6
Manager	4	8
Other	0	1
Total	62	58

Note. "Assistant" is a position which requires no pedagogic education. "Vocational worker" is a position which requires pedagogic education at an upper secondary school level, including a time of vocational practice. "Kindergarten teacher", "Pedagogic leader" and "Manager" are positions that require a three-year bachelor's degree in early childhood education. "Special needs educator" is not a position that has specific requirements related to education, but typically these positions are filled by ECEs with a three-year bachelor's degree in early childhood education or special needs education.

The representativeness of the sample was examined using chi-square goodness of fit tests and statistical data on Norwegian ECEs from Statistics Norway. Not including managers, administrative staff and staff classed as "other paid staff" by Statistics Norway, there were a total of around 81,000 ECEs working in Norwegian kindergartens in 2021 (SSB, 2022a). Around 8,000 of these, or about 10%, were men. The expected proportions of gender in the goodness of fit test were therefore set to 0.1 for men, and 0.9 for women. The test was not statistically significant at an α-level of .05: χ^2 (1, N = 120) = 2.32, p = .128. This indicates that there was no statistical difference in the proportions of gender in the sample and in the population of ECEs as a whole.

The distribution of counties and the distribution of positions were not representative of the population as a whole. The expected proportions of counties and positions were obtained from Statistics Norway (SSB, 2022b). For county of workplace, the chi-square goodness of fit test was significant at an α-level of .05: χ^2 (10, N = 120) = 28.33, p = .002.

There was a significant difference between the number of ECEs in each county in the sample, compared to the number in the population. Viken county seemed to be under-represented in the sample, while Trøndelag, Møre og Romsdal and Finnmark seemed to be over-represented.

When testing the proportion of positions in the sample compared to the population, I had to combine a few of the positions reported in the questionnaire to match it with the data from Statistics Norway. The statistics of Statistics Norway do not separate between "Vocational worker", "Assistant", "Kindergarten teacher" and "Other", but rather combines these positions into one group called "Other essential staff". These groups were therefore combined in the sample to compare the data with that of Statistics Norway. The chi-square goodness of fit test was also significant at an α-level of .05 for position in kindergarten: χ^2 (3, N = 120) = 23.12, $p < .001$. Compared to the population, the sample therefore did not have the same proportions of positions among the ECEs. "Other essential staff" seemed to be under-represented, while managers and pedagogic leaders seemed to be over-represented. This difference could be due to the way the questionnaire was distributed, by emailing managers and asking them to distribute the information to their staff. In Norwegian kindergartens, managers and pedagogic leaders spend time in an office, where they complete administrative tasks and planning. Therefore, ECEs in these positions may check their emails more frequently and might possibly even have time to complete the questionnaire during their workhours. Additionally, ECEs who are managers and pedagogic leaders also have more time to keep themselves updated on the latest research. This could make them more aware of the importance of and need for research, which might make them more likely to participate in new research.

Appendix D: Information sent to participants

Information sent to pilot study participants:

Vil du delta i pilotering av spørreskjema til forskningsprosjektet

«Voksnes vurdering av barns handlinger»?

Dette er et spørsmål til deg om å delta i pilotering (utprøving/testing) av et spørreskjema. Spørreskjemaet skal brukes i et forskningsprosjekt hvor formålet er å undersøke faktorer ved voksnes vurdering av barns handlinger relatert til både relasjonell og fysisk aggresjon og til barnets kjønn. I dette skrivet gir vi deg informasjon om målene for prosjektet og hva deltakelse i pilotering vil innebære for deg.

Formål
Formålet med prosjektet er å undersøke faktorer ved voksnes vurdering av barns handlinger relatert til både relasjonell og fysisk aggresjon og til barnets kjønn. Problemstillingen som undersøkes er: «Hva slags sammenheng er det mellom type aggresjon og kjønn, og måten barnehageansatte oppfatter aggressive handlinger utført av barnet?» Barnehageansattes vurderinger og oppfattelse av handlingene skal undersøkes innenfor disse underkategoriene: oppfattet aggresjonsnivå, hvor akseptable handlingene oppfattes, og hva som oppfattes som årsak til handlingene. Undersøkelsen er en del av en masteroppgave i spesialpedagogikk ved Universitetet i Oslo. Formålet med piloteringen er å undersøke kvaliteten på spørreskjemaet som skal brukes i prosjektet.

Hvem er ansvarlig for forskningsprosjektet?
Universitetet i Oslo er ansvarlig for prosjektet.

Hvorfor får du spørsmål om å delta?
Du får spørsmål om å delta fordi du er ansatt i en barnehage i Norge. Målet er å rekruttere barnehageansatte i forskjellige type stillinger fra alle deler av Norge. Vi ønsker deltakere til undersøkelsen som jobber direkte med barna i barnehagen (ikke styrere og andre administrativt ansatte), fra hele landet og i alle aldre. Din utdanning eller bakgrunn spiller ingen rolle.

Hva innebærer det for deg å delta?
Hvis du velger å delta i piloteringen, innebærer det at du fyller ut et spørreskjema. Det vil ta ca. 5-10 minutter. Spørreskjemaet inneholder beskrivelser av to forskjellige situasjoner som kan oppstå i løpet av en barnehagehverdag. Etter å ha lest de korte beskrivelsene vil du bli

spurt om å vurdere hvor enig du er i forskjellige påstander relatert til handlingene som beskrives. I tillegg vil du få noen spørsmål der du skal vurdere kvaliteten på spørreskjemaet. Dine svar fra spørreskjemaet vil bli registrert elektronisk, og du kan fylle ut spørreskjemaet på et tidspunkt som passer deg. Spørreskjemaet fungerer på forskjellige enheter, så du kan velge om du vil fylle det ut ved bruk av mobil, nettbrett eller PC.

Det er frivillig å delta
Det er frivillig å delta i piloteringen. Hvis du velger å delta, kan du når som helst trekke samtykket tilbake uten å oppgi noen grunn. Alle dine personopplysninger vil da bli slettet. Det vil ikke ha noen negative konsekvenser for deg hvis du ikke vil delta eller senere velger å trekke deg.

Ditt personvern – hvordan vi oppbevarer og bruker dine opplysninger
Vi vil bare bruke opplysningene om deg til formålene vi har fortalt om i dette skrivet. Vi behandler opplysningene konfidensielt og i samsvar med personvernregelverket. Det er kun jeg (Siril Grini) som student og min veileder (Kristin Berg Nordahl) som vil ha tilgang til opplysningene som samles inn. Data samles inn ved hjelp av tjenesten Nettskjema. Datamaterialet lagres på min konto på Universitetet i Oslos OneDrive (skylagringstjeneste). Svarene som oppgis i spørreskjemaet vil ikke kunne spores tilbake til deg, da svarene vil analyseres på gruppenivå. Kontaktopplysningene dine (epostadresse) vil jeg erstatte med en kode som lagres på en egen liste adskilt fra øvrige data.

Hva skjer med personopplysningene dine når forskningsprosjektet avsluttes?
Prosjektet vil etter planen avsluttes når masteroppgaven er sensurert og godkjent, rundt august 2023. Etter prosjektslutt vil datamaterialet med dine personopplysninger slettes.

Hva gir oss rett til å behandle personopplysninger om deg?
Vi behandler opplysninger om deg basert på ditt samtykke. På oppdrag fra Universitetet i Oslo har Personverntjenester vurdert at behandlingen av personopplysninger i dette prosjektet er i samsvar med personvernregelverket.

Dine rettigheter
Så lenge du kan identifiseres i datamaterialet, har du rett til:

- innsyn i hvilke opplysninger vi behandler om deg, og å få utlevert en kopi av opplysningene
- å få rettet opplysninger om deg som er feil eller misvisende
- å få slettet personopplysninger om deg
- å sende klage til Datatilsynet om behandlingen av dine personopplysninger

Hvis du har spørsmål til studien, eller ønsker å vite mer om eller benytte deg av dine rettigheter, ta kontakt med:

- Universitetet i Oslo ved Siril Grini (student) på epost sirilgr@student.uv.uio.no
- Kristin Berg Nordahl (veileder) på epost k.b.nordahl@nubu.no
- Personvernombudet ved Universitetet i Oslo: Roger Markgraf-Bye personvernombud@uio.no

Hvis du har spørsmål knyttet til Personverntjenester sin vurdering av prosjektet, kan du ta kontakt med:

- Personverntjenester på epost (personverntjenester@sikt.no) eller på telefon: 53 21 15 00.

Med vennlig hilsen

Kristin Berg Nordahl	Siril Grini
(Forsker/veileder)	(Student)

Information sent to main study participants:

Vil du delta i forskningsprosjektet

***«Voksnes vurdering av barns handlinger»*?**

Dette er et spørsmål til deg om å delta i et forskningsprosjekt hvor formålet er å undersøke faktorer ved voksnes vurdering av barns handlinger relatert til både relasjonell og fysisk aggresjon og til barnets kjønn. I dette skrivet gir vi deg informasjon om målene for prosjektet og hva deltakelse vil innebære for deg.

Formål

Formålet med prosjektet er å undersøke faktorer ved voksnes vurdering av barns handlinger relatert til både relasjonell og fysisk aggresjon og til barnets kjønn. Problemstillingen som undersøkes er: «Hva slags sammenheng er det mellom type aggresjon og kjønn, og måten

barnehageansatte oppfatter aggressive handlinger utført av barnet?» Barnehageansattes vurderinger og oppfattelse av handlingene skal undersøkes innenfor disse underkategoriene: oppfattet aggresjonsnivå, hvor akseptable handlingene oppfattes, og hva som oppfattes som årsak til handlingene. Undersøkelsen er en del av en masteroppgave i spesialpedagogikk ved Universitetet i Oslo.

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Hva innebærer det for deg å delta?
Hvis du velger å delta i prosjektet, innebærer det at du fyller ut et spørreskjema. Det vil ta ca. 10 minutter. Spørreskjemaet inneholder beskrivelser av to forskjellige situasjoner som kan oppstå i løpet av en barnehagehverdag. Etter å ha lest de korte beskrivelsene vil du bli spurt om å vurdere hvor enig du er i forskjellige påstander relatert til handlingene som beskrives. Vi ber også om litt informasjon om deg, for eksempel hvilket fylke du jobber i og hvilken stillingstype du har. Dine svar fra spørreskjemaet vil bli registrert elektronisk, og du kan fylle ut spørreskjemaet på et tidspunkt som passer deg. Spørreskjemaet fungerer på forskjellige enheter, så du kan velge om du vil fylle det ut ved bruk av mobil, nettbrett eller PC.

Det er frivillig å delta
Det er frivillig å delta i prosjektet. Hvis du velger å delta, kan du når som helst trekke samtykket tilbake uten å oppgi noen grunn. Alle dine personopplysninger vil da bli slettet. Det vil ikke ha noen negative konsekvenser for deg hvis du ikke vil delta eller senere velger å trekke deg.

Ditt personvern – hvordan vi oppbevarer og bruker dine opplysninger
Vi vil bare bruke opplysningene om deg til formålene vi har fortalt om i dette skrivet. Vi behandler opplysningene konfidensielt og i samsvar med personvernregelverket. Det er kun student (Siril Grini) og veileder (Kristin Berg Nordahl) som vil ha tilgang til opplysningene som samles inn. Data samles inn ved hjelp av tjenesten Nettskjema. Datamaterialet lagres og behandles i systemer som er godkjent av Universitetet i Oslo for disse dataene. Personopplysninger fra spørreskjemaet vil brukes til å vurdere om utvalget i prosjektet er representativt for barnehageansatte i Norge. Svarene som oppgis i spørreskjemaet vil ikke

kunne spores tilbake til deg, da svarene vil analyseres på gruppenivå. Kontaktopplysningene dine (epostadresse) som du oppgav da du meldte deg på prosjektet, vil ikke kobles til svarene du oppgir i spørreskjemaet. Det vil derfor være svært vanskelig å identifisere deg basert på svarene du oppgir i spørreskjemaet, og det er tilnærmet anonymt.

Hva skjer med personopplysningene dine når forskningsprosjektet avsluttes?
Prosjektet vil etter planen avsluttes når masteroppgaven er sensurert og godkjent, rundt august 2023. Etter prosjektslutt vil datamaterialet med dine personopplysninger slettes.

Hva gir oss rett til å behandle personopplysninger om deg?
Vi behandler opplysninger om deg basert på ditt samtykke. På oppdrag fra Universitetet i Oslo har Personverntjenester vurdert at behandlingen av personopplysninger i dette prosjektet er i samsvar med personvernregelverket.

Dine rettigheter
Så lenge du kan identifiseres i datamaterialet, har du rett til:

- innsyn i hvilke opplysninger vi behandler om deg, og å få utlevert en kopi av opplysningene
- å få rettet opplysninger om deg som er feil eller misvisende
- å få slettet personopplysninger om deg
- å sende klage til Datatilsynet om behandlingen av dine personopplysninger *Ettersom svarene i spørreskjemaet er tilnærmet anonyme, må du være forberedt på å oppgi personopplysninger og hva du har svart i spørreskjemaet dersom du ønsker å benytte deg av dine rettigheter etter innsending av spørreskjemaet.*

Hvis du har spørsmål til studien, eller ønsker å vite mer om eller benytte deg av dine rettigheter, ta kontakt med:

- Universitetet i Oslo ved Siril Grini (student) på epost sirilgr@student.uv.uio.no
- Kristin Berg Nordahl (veileder) på epost k.b.nordahl@nubu.no
- Personvernombudet ved Universitetet i Oslo: Roger Markgraf-Bye personvernombud@uio.no

Hvis du har spørsmål knyttet til Personverntjenester sin vurdering av prosjektet, kan du ta kontakt med:

- Personverntjenester på epost (personverntjenester@sikt.no) eller på telefon: 53 21 15 00.

Med vennlig hilsen

Kristin Berg Nordahl (Veileder)

Siril Grini (Student)

Appendix E: Sikt application documents

Application form to Sikt:

Sikt

Meldeskjema / Barns kjønn og voksnes vurderinger av barns handlinger / Eksport

Meldeskjema

Referansenummer

587305

Hvilke personopplysninger skal du behandle?

- E-postadresse, IP-adresse eller annen nettidentifikator
- Bakgrunnsopplysninger som vil kunne identifisere en person

Beskriv hvilke bakgrunnsopplysninger du skal behandle

Kjønnsidentitet, fylke (arbeidsplass), og stillingstype

Prosjektinformasjon

Prosjekttittel

Barns kjønn og voksnes vurderinger av barns handlinger

Prosjektbeskrivelse

Formålet med prosjektet er å undersøke om det er en sammenheng mellom hvordan barnehageansatte vurderer barns handlinger og barnets kjønn. Spesifikt vil studien se på handlinger som kan tolkes som aggressive.

Problemstillingen som undersøkes er: «Hva slags sammenheng er det mellom barnets kjønn og måten barnehageansatte oppfatter aggressive handlinger utført av barnet?»

Barnehageansattes vurderinger og oppfattelse av handlingene skal undersøkes innenfor disse underkategoriene: oppfattet aggresjonsnivå, hvor akseptable handlingene oppfattes, og hva som oppfattes som årsak til handlingene.

Undersøkelsen er en del av en masteroppgave i spesialpedagogikk ved Universitetet i Oslo.

Begrunn hvorfor det er nødvendig å behandle personopplysningene

Epostadresse er nødvendig for å sende ut spørreskjema til deltakerne. Andre personopplysninger skal samles inn for å si noe om hvor representativt utvalget er i forhold til populasjonen (barnehageansatte i Norge).

Prosjektbeskrivelse

Prosjektplan masteroppgave - Siril Grini.pdf

Ekstern finansiering

Ikke utfyllt

Type prosjekt

Studentprosjekt, masterstudium

Kontaktinformasjon, student

Siril Grini, sirilgr@student.uv.uio.no, tlf: 90703996

Behandlingsansvar

Behandlingsansvarlig institusjon

Universitetet i Oslo / Det utdanningsvitenskapelige fakultet / Institutt for spesialpedagogikk

Prosjektansvarlig (vitenskapelig ansatt/veileder eller stipendiat)

Gunnar Bjørnebekk, gunnar.bjornebekk@isp.uio.no, tlf: 22858067

Skal behandlingsansvaret deles med andre institusjoner (felles behandlingsansvarlige)? Nei

Utvalg 1

Beskriv utvalget

Barnehageansatte som jobber direkte med barna (ikke styrere, renholdere, kokker og lignende)

Beskriv hvordan rekruttering eller trekking av utvalget skjer

Rekruttering skjer gjennom et påmeldingsskjema som sendes ut til barnehager i Norge på epost, som deler skjemaet med sine ansatte.

Påmeldingsskjemaet vil også deles med barnehageansatte i mitt eget nettverk, og gjennom sosiale medier (Facebook).

Alder

18 - 67

Personopplysninger for utvalg 1

- E-postadresse, IP-adresse eller annen nettidentifikator

- Bakgrunnsopplysninger som vil kunne identifisere en person

Hvordan samler du inn data fra utvalg 1?

Elektronisk spørreskjema

Vedlegg

Utkast til spørreskjema.pdf

Grunnlag for å behandle alminnelige kategorier av personopplysninger

Samtykke (Personvernforordningen art. 6 nr. 1 bokstav a)

Informasjon for utvalg 1

Informerer du utvalget om behandlingen av personopplysningene?

Ja

Hvordan?

Skriftlig informasjon (papir eller elektronisk)

Informasjonsskriv

Informasjon og samtykke (utfylt NSD-mal).pdf

Tredjepersoner

Skal du behandle personopplyninger om tredjepersoner? Nei

Dokumentasjon

Hvordan dokumenteres samtykkene?

- Elektronisk (e-post, e-skjema, digital signatur)

Hvordan kan samtykket trekkes tilbake?

Ved å kontakte studenten på epost.

Hvordan kan de registrerte få innsyn, rettet eller slettet personopplysninger om seg selv?

Ved å kontakte studenten på epost.

Tillatelser

Skal du innhente følgende godkjenninger eller tillatelser for prosjektet?

Ikke utfyllt

Behandling

Hvor behandles personopplysningene?

- Ekstern tjeneste eller nettverk (databehandler)

Hvem behandler/har tilgang til personopplysningene?

Student (studentprosjekt)

Eksterne medarbeidere/samarbeidspartnere innenfor EU/EØS Databehandler

Hvilken databehandler har tilgang til personopplysningene?

Nettskjema

Tilgjengeliggjøres personopplysningene utenfor EU/EØS til en tredjestat eller internasjonal organisasjon? Nei

Sikkerhet

Oppbevares personopplysningene atskilt fra øvrige data (koblingsnøkkel)?

Ja

Hvilke tekniske og fysiske tiltak sikrer personopplysningene?

- Flerfaktorautentisering
- Adgangsbegrensning
- Andre sikkerhetstiltak

Hvilke

Passordbeskyttede dokumenter, automatisk tastelås på mobil enhet etter kort tid

Varighet

Prosjektperiode

16.01.2023 - 01.08.2023

Hva skjer med dataene ved prosjektslutt? Data slettes (sletter rådataene)

Vil de registrerte kunne identifiseres (direkte eller indirekte) i oppgave/avhandling/øvrige publikasjoner fra prosjektet? Nei

Tilleggsopplysninger

Har ekstern veileder ved NUBU, Kristin Berg Nordahl, som er den eneste bortsett fra meg (og databehandler) som evt. vil ha tilgang til data.

Sikt

Vurdering av behandling av personopplysninger

Referansenummer	Vurderingstype	Dato
587305	Automatisk	17.12.2022

Prosjekttittel

Barns kjønn og voksnes vurderinger av barns handlinger

Behandlingsansvarlig institusjon

Universitetet i Oslo / Det utdanningsvitenskapelige fakultet / Institutt for spesialpedagogikk

Prosjektansvarlig

Gunnar Bjørnebekk

Student

Siril Grini

Prosjektperiode

16.01.2023 - 01.08.2023

Kategorier personopplysninger

Alminnelige

Lovlig grunnlag

Samtykke (Personvernforordningen art. 6 nr. 1 bokstav a)

Behandlingen av personopplysningene er lovlig så fremt den gjennomføres som oppgitt i meldeskjemaet. Det lovlige grunnlaget gjelder til 01.08.2023.

Grunnlag for automatisk vurdering

Meldeskjemaet har fått en automatisk vurdering. Det vil si at vurderingen er foretatt maskinelt, basert på informasjonen som er fylt inn i meldeskjemaet. Kun behandling av personopplysninger med lav personvernulempe og risiko får automatisk vurdering. Sentrale kriterier er:

- De registrerte er over 15 år
- Behandlingen omfatter ikke særlige kategorier personopplysninger;
    - Rasemessig eller etnisk opprinnelse
    - Politisk, religiøs eller filosofisk overbevisning
    - Fagforeningsmedlemskap
    - Genetiske data
    - Biometriske data for å entydig identifisere et individ
    - Helseopplysninger
    - Seksuelle forhold eller seksuell orientering
    - Behandlingen omfatter ikke opplysninger om straffedommer og lovovertredelser
- Personopplysningene skal ikke behandles utenfor EU/EØS-området, og ingen som befinner seg utenfor EU/EØS skal ha tilgang til personopplysningene
- De registrerte mottar informasjon på forhånd om behandlingen av personopplysningene.
- Informasjon til de registrerte (utvalgene) om behandlingen må inneholde
    - Den behandlingsansvarliges identitet og kontaktopplysninger
    - Kontaktopplysninger til personvernombudet (hvis relevant)
    - Formålet med behandlingen av personopplysningene
    - Det vitenskapelige formålet (formålet med studien)
    - Det lovlige grunnlaget for behandlingen av personopplysningene

- Hvilke personopplysninger som vil bli behandlet, og hvordan de samles inn, eller hvor de hentes fra
- Hvem som vil få tilgang til personopplysningene (kategorier mottakere)
- Hvor lenge personopplysningene vil bli behandlet
- Retten til å trekke samtykket tilbake og øvrige rettigheter

Vi anbefaler å bruke vår mal til informasjonsskriv.

Informasjonssikkerhet

Du må behandle personopplysningene i tråd med retningslinjene for informasjonssikkerhet og lagringsguider ved behandlingsansvarlig institusjon. Institusjonen er ansvarlig for at vilkårene for personvernforordningen artikkel 5.1. d) riktighet, 5. 1. f) integritet og konfidensialitet, og 32 sikkerhet er oppfylt.