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What are the characteristics of effective leaders?

By Ingrid Hellen, University of Stavanger

Abstract: This study proposes the characteristics of an effective leader in the perception of students in Norway. The thesis is a partial replication of the research article by Offermann, Kennedy, and Wirtz (1994), explored with a quantitative method. Data was collected through an online survey and analyzed in the statistical program SPSS. Previous researchers have found which characteristics characterizes an effective leader, which has been supported by this thesis. Implicit Leadership Theory and Leadership Categorization Theory created a foundation to explore the characteristics of an effective leader. Additionally, an aim was to explore if the perception on leadership prototypes depended on the respondent's gender, which have been claimed by prior research. Furthermore, to investigate that the results are credible, a comparative analysis with two other studies in different context revealed that the characteristics for an effective leader is consistently as following; *Dedication*, *Intelligence*, and *Charisma*. This thesis revealed that female and male leaders are perceived very similar. However, there are still some association between communal characteristics and female leaders, and between agentic characteristics and male leaders. This is predicted by Social Role Theory which postulates the expectation of female and male leaders, to understand how these perceptions are developed. This theory also suggest that females are more interested in the relationship with others, while males are interested in having power over others.

Keywords: Effective leadership, Leadership Categorization Theory, Implicit Leadership Theory, Social Role Theory, Leadership Characteristics, Agentic and Communal Characteristics

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Forewords

This thesis represents the last part of the master's degree at the institute NHS at University of Stavanger for the master International Hospitality Management.

My encouragement for the theme of leadership and gender stems from my time with my mentor Heidi Janette Nygård. She is a strong and fair female leader who worked hard to get where she is today. She is a true inspiration. The success of this master thesis was very dependent on my counselor Trude Furunes, whom I would like to thank very much. She has helped me during the whole process, from the start to the finish. Thank you for providing me with guidance, literature and reviewing some of my work. I have a great deal of appreciation for my family, whom have always supported me during my years of studies and in life in general. Their expectations from me have pushed me through my studies. Thank you to the people in my master class. We have been through much together, teaching each other and learning from each other. I am especially thankful for my classmates Solveig and Audhild, we have been a trio as no other. We have helped each other during the whole master's degree, by motivating, supporting and working together. I am very grateful for my great friend Paris from USA who was very kind and read over my paper to edit any misspellings I overlooked in my thesis. Last but not least, I want to thank my boyfriend Leo, who without doubt has been my main supporter and most important person helping me during this semester. He has encouraged me to work in times of frustration and demotivation and inspired me to always keep going to finish. Thank you for all respondents that participated in my survey and helped me collect data to analyze. Without them, I would not have been able to do the research. In addition, several of my friends helped me distribute the survey online to get more repliers, which I owe huge thanks too!

Introduction

Gender imbalance is a continuously demanding challenge in leadership, but has been diminishing throughout the recent years, concurrently with the decrease of gender-gap (Leopold, 2017). This is an improvement in equality, but there seems as though there can never be true equality if the perception of people is not the same for female and male leaders. The author has an internal interest for leadership and especially female leaders, and the rise of gender equality inspired the thesis.

Arguably, the point is to not only achieve gender equality in the perception of leadership, but in the perception of effective leadership and it will therefore be interesting to research whether or not gender has an impact on the effectiveness of leadership. Gender inequality could be eradicated by hiring equal number of females and males as leaders, but this does not necessarily indicate or guarantee that other people perceive them as effective. This goal of this thesis is to explore that perception. To achieve true equality, the most efficient leader, regardless of gender, should be hired. For businesses and organizations, it could be crucial to know which characteristics are perceived as efficient. Characteristics of an effective leader described by the follower, and hired by recruitment team, will ensure that the followers will follow the leader because in their perception, the leader will be perceived as effective (Lord, De Vader, & Alliger, 1986). This suggests that a “inefficient” leader will cause discontentment and could affect the morale of the workplace, which in turn implies that finding characteristics that followers associate with an effective leader is important and could be beneficial for future recruitment of leaders.

Previous research on gender and leadership has focused much on women as a topic (Eagly & Johannesen-Schmidt, 2001). Gender and leadership coexist in a interdependent relationship where leaders are determined by expectations (Ayman & Korabik, 2010). The female gender role and the leader role are incompatible in such that females are deprived of the necessary characteristics to fill the leader role and are more associated with communal characteristics (Eagly & Carli, 2003). The perception of a leader is associated with masculinity (Ayman & Korabik, 2010, p. 161). Therefore, simply being a male leader qualifies as an ideal effective leader, since being recognized as more agentic is associated with an effective leader (Cann & Siegfried, 1990; Junker & van Dick, 2014; Yukl, 2006). Chemers (2000, p. 33) stated that “leadership stereotypes held by the general public about males and females are quite different.” Some researchers have concluded that people have similar perception of leaders, but dissimilar perception about leaders and females (Eagly & Johannesen-Schmidt, 2001). To conclude, evaluating leadership characteristics such as being communal or agentic may help define whether there is a difference in peoples’ perception of a leader’s gender.

Offermann et al. (1994) identified the 41 characteristics as prototypical for leaders, and conducted a factor analysis to reduce the 41 characteristics to eight factors; *Sensitivity*, *Tyranny*, *Dedication*, *Charisma*, *Intelligence*, *Masculinity*, *Attractiveness*, and *Strength*. Johnson, Murphy, Zewdie, and Reichard (2008) suggested that *Tyranny*, *Masculinity* and *Strength* belong to agentic characteristics and *Sensitivity* to communal. *Charisma* and *Intelligence* were found to be gender neutral which concluded with them being neutral. *Dedicated* was considered to be close to agentic behavior and also very close to the leader role, but still categorized as neutral as it was more important for a leader than belonging to a gender (Johnson et al., 2008). These characteristics are adapted to this thesis to create a

questionnaire and the findings were fairly consistent with Lord et al (1984) findings (Lord & Maher, 1993), signifying validity for the characteristics and factors.

This thesis explores leadership from a student perspective to get an indication of how the future workforce perceives leadership and gender. Researching from the students' perspective means exploring implicit leadership theory, which is essential as the expectation of the followers are important when determining an effective leader's action and characteristics (Lord & Maher, 2002). Numerous studies have used students as the studied object to investigate implicit leadership such as Offermann et al. (1994), this has been done in different surroundings. Furunes (2012) adapted the implicit leadership scale from Offermann et al. (1994) and implemented it in a Norwegian hospitality context where the studied objects were employees in the hospitality industry. Showing that the scale is adaptable to many situations. Studying the implicit leadership theories of students in Norway suggest an interesting and new context as there is little research on implicit leadership in Norway (Furunes, 2012). Initiating research on students will give an insight to how students in Norway perceive effective leaders and could be useful in future settings where businesses want to employ efficient leaders. The way employees perceived leadership has become a significant part of current leadership research (Epitropaki & Martin, 2004), suggesting it is relevant to study from a students' perspective as they are part of the future workforce. Women have been constrained by gendered expectations (Ritter & Yoder, 2004), and therefore it is interesting to explore if women still are perceived by students in Norway this way.

The theoretical framework will contribute to support and assist answering the research questions. To explore effective leadership from a student perspective the following main research question was developed;

Which characteristics do students in Norway perceive an efficient leader to possess?

Research questions

The corresponding research questions was created to answer the main research question.

RQ1: Which characteristics fit to male leaders and to female leaders?

RQ2: Is a female leader connected with communal characteristics, and a male leader associated with agentic characteristics?

RQ3: Does the respondents' gender influence the perception of an effective leader?

RQ4: Are there differences between perceived characteristics of effective leadership in earlier studies in different contexts and different countries?

Theoretical Framework

Literature Review

Presenting applicable theories and concepts creates a basis for the upcoming analysis. These founding theories consist of Leadership Categorization Theory, Implicit Leadership Theory, and Social Role Theory to investigate effective leadership. The main literature reviewed in relation to the thesis is Offermann et al. (1994), which the thesis is a partial replication of. The main article is published in the high ranking academic journal *The Leadership Quarterly* at level 2, which indicate that they are high quality and have great impact (NSD, 2018b). The research article by Offermann et al. (1994) has been cited 547 times, reviewed eleven times and at least four meta-analysis have been conducted (15.02.2018). Other essential literature to the thesis consists of the chapter by Furunes (2012) in the book by Furunes, Mykletun, and Marnburg (2012). She conducted a pilot-study in Norway. Numerous articles, retrieved from google scholar, and books are used as a foundation for theoretical review in addition to the main literature. Most of the articles have a scientific level 2, which is the highest ranking of publications, and all articles have been peer reviewed. The sources are reliable and could be worth further exploring.

Leadership

The concept of leadership has countless definitions and is mainly perceived in organizational context as the process of one person having intentional impact on another person to accomplish goals in an organization (Bass & Stogdill, 1990; Lord & Maher, 1993; Yukl, 2006). Leadership is also seen as the continuation of structuring and restructuring relationships and interactions between people, and expectations (Bass & Stogdill, 1990). Leaders are influenced by their followers needs and beliefs, and the characteristics and behavior of leaders are interpreted by followers (Lord and Maher (2002)). While there are

many characteristics that determine a leader, only certain characteristics are perceived as “ensuring” effective leadership.

Leadership Categorization Theory

Individuals have conceptual perception of how leaders should behave and which contributes to categorization of leaders (Johnson et al., 2008). Categories are “defined in reference to prototypes, which are abstract collections of the attributes most commonly shared by category members” (Lord et al., 1986, p. 403). Characteristics help organize perception of leaders to categorize them (Lord et al., 1986, p. 403), and figure out which characteristics belong with an effective leader. This indicates that when exploring the characteristics of an effective leader, the result will be influenced by the students’ personal characteristics. Several authors have previously stated that “followers would tend to allow others to lead when those others matched follower’s ideas of what good leaders should be” (Lord et al., 1986, p. 403). “Because classifying others into categories involves matching stimulus characteristics to appropriate perceiver prototypes, prototypes should be key constructs for understanding person perception” (Lord et al., 1986, p. 403). Supporting the approach of this thesis.

The leader’s intrapsychic gender-role characteristics (such as agentic and communal characteristics) matter because they affect the leader’s preferred style of behavior and outcomes unrelatedly of the gender of the leader (Ayman & Korabik, 2010). Leadership characteristics have often been categorized as communal, agentic or neutral (Johnson et al., 2008). Agentic behavior refers to leaders that look for power and to control others, while leaders with communal behavior strive to form social relationships (Johnson et al., 2008). This was supported by Hoyt and Burnette (2013) who stated that men have occupied the

positions of power and women have held lower status positions or were not in any leadership position at all. There is an apparent conflict between the female role and the leader role (Eagly & Carli, 2003; Eagly & Johannesen-Schmidt, 2001; Eagly & Karau, 2002; Garcia-Retamero & López-Zafra, 2006). The incongruity between a leadership and femininity arises because social perceivers typically construe leadership roles in agentic terms. Conversely, people tend to expect and prefer that women exhibit communal characteristics (Eagly & Karau, 2002). The “think-leader—think-male” is an old-fashion way of thinking (Hoyt, 2005, p. 2), the increase in female leaders could imply changes in the practices of leadership (Eagly & Carli, 2003).

To study an effective leader’s characteristics, it is imperative to have theories that support how the characteristics influence the perception of leaders. Characteristics can be explained as “ideal qualities for a particular type of leader” (Yukl, 1981, p. 233), such as an effective leader. This theory suggests that exploring the perception of the follower will indicate if a leader is effective, which again could indicate if the follower will follow a leader, proposing Implicit Leadership Theory is essential and will further be discussed.

Implicit Leadership Theory

According to (Ling, Chia, & Fang, 2000, p. 730) implicit leadership “could serve as the foundation for the study of leadership,” since the theory creates a structure of leadership (Ling et al., 2000). Furunes (2012, p. 166) defined Implicit Leadership Theory as “leadership theories or viewing leadership from the perspective of followers.” Implicit leadership perception have become a common way to understand leadership attributes and leader perception (Offermann et al., 1994). The Implicit Leadership Theory says that an individual

will perceive a leader to have ideal personality traits if the leader exemplifies traits similar to their own (Furunes, 2012). Signifying that leaders are perceived based on individuals own implicit theory of leaders characteristics (Offermann et al., 1994) which supports that when determining leadership perception, Implicit Leadership Theory is an important aspect (Lord & Maher, 1993). Implicit Leadership Theory has an explanatory power for the perception of leadership prototypes (Holmberg & Åkerblom, 2006). The perception of the follower can influence his or her attainment of goals (Lord & Maher, 1993), as the follower will be easier influenced if they share beliefs and expectations with the effective leader. Furunes (2012) suggest that it is essential that the leader is conscious of the implicit leadership theories held by followers. This supports the aim of this thesis to explore students' perception on which leadership characteristics an effective leader should have.

Implicit Leadership Theories could be viewed as a categorization system (Bass & Stogdill, 1990). The categorization of leaders allow followers to separate effective leaders from ineffective leaders (Furunes, 2012). When a leader and a follower have a clear relationship, both parties are affected by the implicit leadership theories the followers hold from previous experience and pervious beliefs (Bass & Stogdill, 1990; Epitropaki & Martin, 2004; Yukl, 2006), supporting the use of characteristics to examine which belong to effective leader in the students in Norway implicit leadership perspective. Leaders that do not meet the expectations of followers may be evaluated less favorable than leaders that correspond to role expectations held by followers (Yukl, 2006). This argues that it is essential for businesses to know what expectations is expected from a leader.

Social Role Theory

Further, this thesis will explore Social Role Theory. Social roles are defined as “socially shared expectations that apply to persons who occupy a certain social position or are members of a particular social category (Biddle, 1979; Sarbin & Allen, 1968, cited by Eagly & Karau, 2002, p. 574). Suggesting that people are to hold to a specific social role. Social Role Theory expressed something about the influence of leader’s behavior when it comes to sex difference and similarities (Eagly & Johannesen-Schmidt, 2001). Previous times have shown that females are expected to be the homemaker while the male is the moneymaker. However, this is a norm that changed throughout the years varying based on culture and geographical areas. Still, research continue to find differences between male and female perceptions.

Leadership roles have been predominately held by males in many sectors, while women have only gradually gained access to leadership positions and thus, there is still a scarcity of female leaders (Eagly & Karau, 2002). Prominence of men in leadership today is evident, especially in the largest businesses (Colbjørnsen & Knudsen, 2018). Data retrieved from Statistisk-Sentralbyrå (2018a) show that 35.3 % of leadership positions are filled by women, which is proof that there is still an inequality gap between number of male and female leaders. In 2017, Norway was ranked as number two in gender equality, closing more than 83 % of its overall gender gap, and the progress is steadily growing towards a gender neutral country (Leopold, 2017). According to Seo, Huang, and Han (2017) recent studies report finding more resemblances, than differences, in female and male leadership, implying that difference in perceptions of a female and male leader’s effectiveness are minimal. Furthermore, the thesis will aim to explore if there not only are more resemblance and equal view by students in Norway, but also if the leadership characteristics are perceived to belong to one specific gender.

As mentioned, women are often connected to communal characteristics and males are associated with agentic characteristics, stressed by numerous studies such as Eagly and Karau (2002). Male leaders have been evaluated as more effective than female leaders (Seo et al., 2017). Rosette and Tost (2010) suggest that efficient leaders should acquire both agentic and communal characteristics. Diekmann and Goodfriend (2006) suggest that as groups move into new roles, the attributes that facilitate those roles will be more positively evaluated. This could imply that as females have been in leader roles for many years, the evaluation could differ from previous times, suggesting that the social roles change. This thesis aims to investigate this further by exploring if women still are associated with communal characteristics and male with agentic characteristics.

Colbjørnsen and Knudsen (2018) found a difference between the experience of female leaders in a 12-year period. In 2011, women in the initial stages of their career experienced a more favorable prerequisite than women that were in their starting phase twelve years earlier. Thus, it appears to have been a shift in the inequality issue. Inequality between gender roles in leadership is continually sustained according to statistics (Eagly & Karau, 2002). Suggesting that even with the enormous change toward accepting women in positions of power and influence in society over the last half century, women are still perceived less favorable for a leadership position than men (Hoyt & Burnette, 2013).

Effective leadership

An effective leader has the traits of a leader and the skills of efficiency (Randol, 2016), which indicate that an effective leader is a combination of personal characteristics associated with

leadership and has high efficacy when attaining goals with their followers. Examining the leadership characteristics are therefore applicable to researching effective leadership. A way of describing an effective leader is through the characteristics the leader holds. There are many characteristics which form the foundation of an individual becoming an effective leader (Turaga, 2017). As previously stated, Offermann et al. (1994) found 41 leadership characteristics for leadership that will be used to explore the effectiveness of leaders. Previously the depiction of an effective leader included masculine characteristics such as being confident, task-oriented, competitive, objective, decisive, and assertive (Yukl, 2006).

Mayer and Caruso (2002) states that an essential part in efficient leadership is that the leader have the ability to address underlying feelings and emotions of his employees that is discovered during different circumstances. This indicates that an efficient leader should be understanding of its followers, which is historically considered feminine. Yukl (2006) supported this claim and specified that effective leaders correspondingly need “feminine” characteristics such as being trusting, empowering and developing. Proposing that a leader should have both masculine and feminine characteristics. Johnson et al. (2008) uncovered that if female should be perceived as efficient leader they must be both sensitive and strong, while “manly” leaders only need to show to strength. However, “research has consistently found that effective leadership is perceived as characterized by traits similar to those associated with masculine gender roles” (Cann & Siegfried, 1990). This indicates that the gender of leaders can influence the evaluation of the leader effectiveness, which was confirmed by Rojahn and Willemsen (1994).

Chemers (2000) propose that effective leadership is in the middle of a leader-follower relationship, then it will make sense to study effective leadership from a follower's point of view, in other words, using implicit leadership theory. Defining an effective leader in the students in Norway's perspective and researching the characteristics they consider an effective leader have, is a way to explore this.

Culture and Effective leadership

Examining leadership prototypes developed in one country, does not necessarily indicate that they will fit into another country. As one country's practice of effective leadership might not be considered as effective leadership in other countries (House, Javidan, Hanges, & Dorfman, 2002). There are cultural differences that impact the personality characteristics of people and thus leaders, which cause for differences in, for example, effective leadership from country to country. Furunes (2012) examine Offermann et al. (1994) scale in Norway and found that it was applicable in the context of her study, as already mentioned. This thesis is in a different context in Norway, by investigating students instead of employees in the hospitality industry which could imperatively affect the findings in the analysis. Characteristics students in US find belong to an effective leader, could differ from what students in Norway find belong to an effective leader. An in-depth analysis of cultural differences in US and Norway will not be conducted in this thesis, but if found dissimilarity, this could be the cause as cultures have different opinions on values and beliefs (Conger, 1999). Thus, the perception of effective leadership could vary across various cultural settings (Conger, 1999).

Through this theoretical framework, many controversial topics have been discussed. An overview of theory about gender, leadership and perspective is presented as a foundation for

further investigating of the research questions. Social Role Theory can explain some of the causes for the gender gap in leadership position, because of the expectations held towards each gender. While Leadership Categorization Theory is the backbone for using characteristics as a way to define effective leadership, figure out which of the leadership characteristics are fitted to female and/or male and reviewing previous findings for similar research. Previous research has created the foundation and the causes for why it is essential to study leadership in an implicit leadership perspective. Researching for an implicit leadership perspective will then give the perception of the up and coming workforce on how they review female and male leaders, and if the gender of the students implicates the response.

Methodological Framework

Introduction

This thesis is a partial replication of the study by Offermann et al. (1994). Implicit Leadership Theory and Leadership Categorization Theory is applied in this thesis to study from a student's perspective. Quantitative research design is applied to answer the research questions, requiring a large sample, as the sample should be representative for the whole population of students in Norway. The method used is cross-sectional, as the study is conducted once and is examining a point in time (W. L. Neuman, 2014). The unit of analysis are students in Norway at Universities and other higher education institutes. Ethical considerations were taken as respondents are anonymous in order to respect the respondents right to their privacy (W. L. Neuman, 2014).

Research design

The research questions determine the choice between research methods (Marshall, 1996). Which in this thesis included “does” and “which”, which indicate that the purpose for this thesis is descriptive (W. L. Neuman, 2014). Thus, a descriptive research method is applied to assess the characteristics of an effective leader, what characteristics are connected to female leader, male leader, both or neither, and if there are difference in the response based on the responses gender. Descriptive method estimate the relationship between the variables, in this case, the characteristics and effective leader (Hopkins, 2008). This method is used as there is much groundwork already established, and this thesis explores the concept further (W. L. Neuman, 2014). The conceptual model has a quantitative design, where a survey based validated questionnaire, literature and peer reviewed journals is applied. Existing statistics were used in the comparative analysis (W. L. Neuman, 2014). Data collection method was the online survey.

Measurements

The measurements, adapted from Offermann et al. (1994), in this thesis are the 41 characteristics that describe effective leadership. The measurements by Offermann et al. (1994) are used and cross-validated by other researchers, such as Furunes (2012) and Epitropaki and Martin (2004). *Figure 1.0* demonstrates the division of the factors and the variables. It varies from each factor how many characteristics are included in them.

Masculinity and *Strength* have only two that could cause for some imperfections when doing data analysis. *Tyranny* and *Sensitivity* on the other hand include many characteristics. In Part 1 the measurements are the four units; both, female, male and neither (leaders). The measurement scale in Part 2 goes from 1 not at all characteristic to 10 - extremely characteristics for the traits.

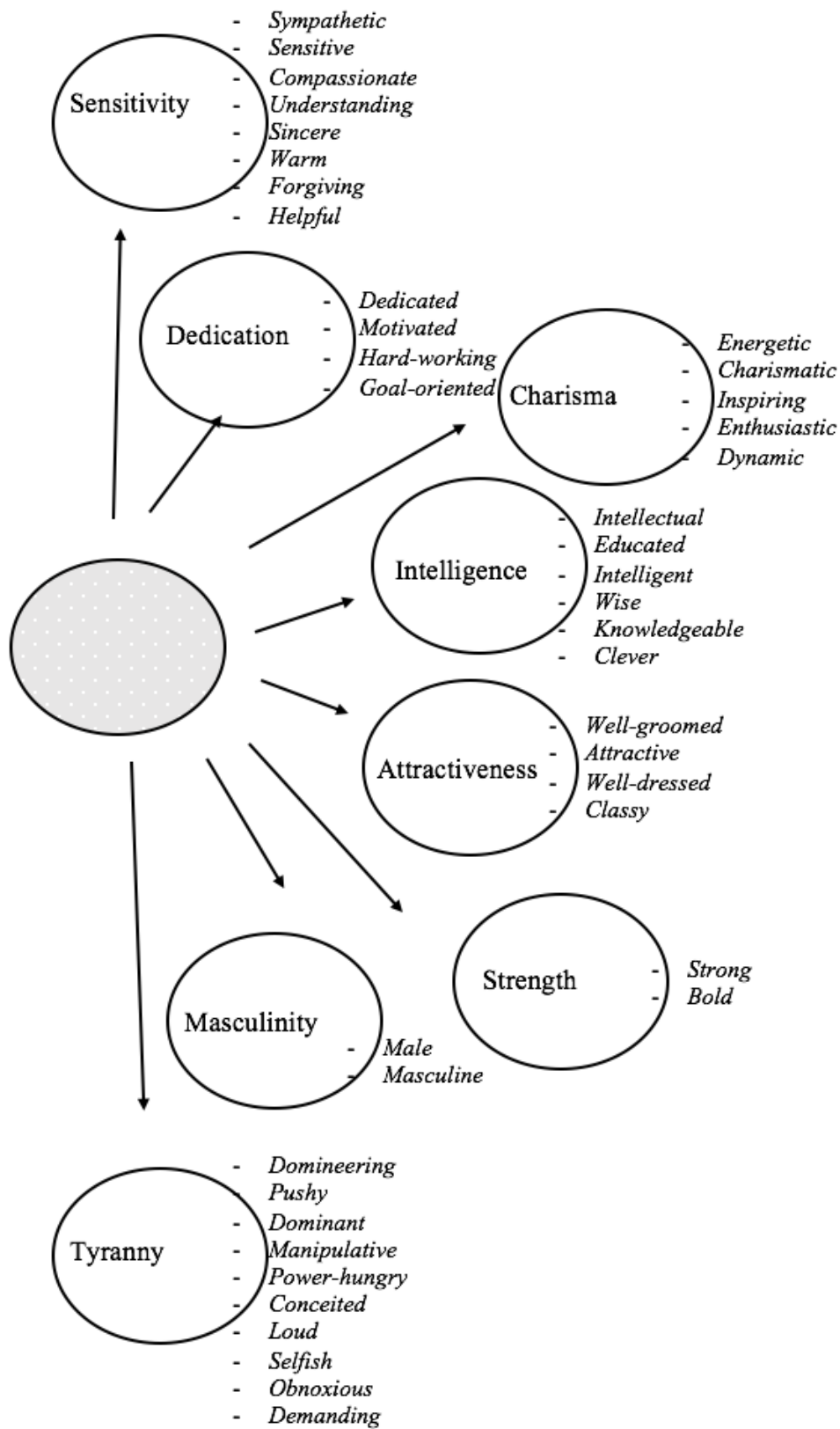


Figure 1: Eight implicit leadership factors with 41 characteristics (adapted from Offermann et al. (1994))

Survey

The survey was based on the adapted model from Offermann et al. (1994), and modified to fit the research questions of this thesis. Prior to publishing the questionnaire, a pilot study was conducted to ensure the quality of the questionnaire and eliminate any weakness and deficiencies in the questionnaire. The pilot-questionnaire was elicited to six people, with some additional questions about the questionnaire. The flaws detected were removed. Among other things, people reacted to the words “domineering and dominant” as these are translated to the same word in Norwegian. The questionnaire was tested in relation to personal data through Norwegian Centre for Research Data (NSD). According to NSD (2018a) no alignment of personal data from the respondents to the answers from the survey, indicating that it did not need to be approved by NSD. The study was distributed from March 8th at 14:00 to March 27th 09:42. See *Appendix II* for an illustration of the message from NSD.

The survey included a fixed collection of questions the respondents would answer, all questions were mandatory to complete the survey (W. L. Neuman, 2014). Distributing the survey online made it inexpensive and easy, for both the author of the thesis and the respondents. By answering to the survey, the respondents could join a voluntary contest to win two cinema tickets. To keep the anonymity of the respondents, another web page was used to enter the email and was not possible to trace back to the answer in the survey. The contest was included as the author of the thesis suspected in advance that the survey was quite bothersome and could end up with many unfinished replies. Unfortunately, this scenario occurred with many incomplete replies in the survey., which had to be removed. Leaving a much smaller sample than anticipated.

The survey consisted of three parts. The first section of the survey contained demographical questions to get information about the respondents, to map out gender, degree, experience with a leader and work experience. The second section (named Part 1) listed the 41 characteristics and had the respondents had chosen if the characteristics was a fit in one of four units; a female leader, a male leader, both or neither. The third section (named Part 2) included the same list of 41 characteristics but used a 10-point Likert-scale to which degree the characteristics described an effective leader. The Likert scale was selected as the point of the thesis is to detect students' perception in terms of ordinal-level categories (W. L. Neuman, 2014). A 10-point Likert scale increases the sensitivity of the scale as oppose to a 5-point or a 7-point (W. L. Neuman, 2014). The questionnaire is illustrated in *Appendix I*.

Sample

The sample used in this thesis is a convenient sample (Yin, 2009). The achieved sample size was 306, with 38 removed with the control question. These were deleted form the data for further analysis, leaving 268 as the appropriate sample. A fair sample size is 200, and a good is 300 and more and a factor analysis requires at least a sample size of 250 (MacCallum, Widaman, Zhang, & Hong, 1999). This indicates that the sample size of 268 is adequate for a factor analysis. However, as outlined by Kadam and Bhalerao (2010) a sample should have a 95 % significant level to be representative for the whole population. Based on the number of students in Norway, which is 288 989 (in 2016), a representative sample require of 384 (Statistisk-Sentralbyrå, 2018b). This was not achieved in this thesis.

Prior to removal of the non-students, a frequency analysis was conducted to review the degree of the respondents, in addition to see how many should be removed as they are not students. It

was found that 50 % were on a bachelor level, 32.7 % on master level, 2 % were on a doctor level, 12.4 % go to other studies (such as one-year study) and there were also 2.9 % of respondents were not students. The last group was then removed from further analysis and the rest of this thesis.

Valid	Frequency	Percent	Valid percent	Cumulative percent
Bachelor	153	50.0	50.0	50.0
Master	100	32.7	32.7	82.7
Doctor	6	2.0	2.0	84.6
Other	38	12.4	12.4	97.1
Not a student	9	2.9	2.9	100.0
Total	306	100.0	100.0	

Table 1: Frequency analysis of the degree of the respondents

There was a much higher percentage of female with 69.8 %, and only 29.9 % males, and 0.4 % were not willing to specify their gender. The year the respondents were born varied from 1946 to 1998. The majority of the people replying to the survey were between 1990-1997, which was not surprising as the survey was distributed on student's web pages. 63.7 % were within this age group.

Valid	Frequency	Percent	Valid percent	Cumulative percent
Male	80	26.1	29.9	29.9
Female	187	61.1	69.8	99.6
Would rather not say	1	.3	.4	100.0
Total	268	100.0	100.0	

Table 2: Frequency analysis of the gender of the respondents

Most of the repliers had experience with a leader at 81 % and 79.7 % had experience with more than one leader. Of the respondents, the majority of students has first-hand experience with a leader. Statistisk-Sentralbyrå (2018b) revealed that 1/3 students in Norway have work beside their fulltime studies. In this thesis 92.5 % of the respondents have experience with a leader and 91.0 % have work experience. It was expected that most of the respondents would have work experience, which could implicate the perception of leaders. Thus, the respondent without experience was not excluded to find all students' perspective of an effective leader. This part of the survey was an overview of how many students have experience with leadership.

	Experience years	Experience months
Full-time	39.5	22.2
Part-time	65.4	14.7

Table 3: Overview of work experience for the respondents (specified in percentage)

Table 3 shows the measurement of students in Norway's work experience. These numbers reveal that most of the students have years of experience working. This may be considered self-explanatory as most students study full-time and prioritize studying. It creates a foundation for good answers when most of the respondents have real experience with leadership and have generated their implicit theories about leadership. However, students are included as the aim is to explore students' perception, not only the students with leadership experience perception.

Data Collection

The survey was distributed online on University social media pages (UiS, UiB, UiT, and UiA) and the Norwegian School of Economics (NHH). Missing many other higher education institutes caused a defect since not all students in Norway were able to take the survey. In addition to removing the possibility for many other respondents to fulfill the required sample size for a representative sample.

Reliability and validity

As this thesis pursues the truth, measuring reliability and validity is important (Roberts, Priest, & Traynor, 2006). To guarantee credibility of the literature, a literature review was conducted. This thesis creates reliability of the scale as it is used before generating similar results in different contexts (Roberts et al., 2006). To measure the internal consistency of the survey, a Cronbach's alpha was calculated. The scores were high, over 0.7 for all factors excluding one and could be considered reliable with the exception of the one factor. The reliability was ensured for the questionnaire by using a list of characteristics that had been validated and used several times before. In addition, a pilot survey was performed to assure the prominence of the survey.

To establish trustworthiness of the results and evidently demonstrate that the results are consistent, a large sample size was important to the reliability of this thesis. The sample size for the thesis is not considered to be a satisfactory sample. Distribution of the survey was limited to a handful of Norwegian institutes of higher education, limiting the credibility of the representativeness. External validity is attained when the findings are generalizable (W. L. Neuman, 2014), which was proved to not be achieved.

Validity of the scale is about whether it measures what it is supposed to measure (Hammersley, 1987; W. L. Neuman, 2014; Pallant, 2013; Roberts et al., 2006), in this thesis the scale is supposed to measure effective leadership characteristics or which characteristics fit to either female, male, both or neither leaders, which it accomplished. According to Furunes (2012) and Offermann et al. (1994), Offermann et al. (1994) scale has high internal consistency establishing construct validity. To achieve internal validity, the measurements could actually explain the variable that is researched (W. L. Neuman, 2014). Complete validity is unmanageable to accomplish, but one could with some certainty say there is internal validity as the scale has been cross-validated and used in many articles by several authors. By using a validated scale with characteristics associated with leaders, there is an ability to measure the characteristics students find an effective leader having.

Content validity is achieved if the scale measures all aspects of a construct (W. L. Neuman, 2014). This validity is difficult to establish, Offermann et al. (1994) have done several studies to establish the characteristics that explain leadership, and this could mean that to some degree content validity is reached. But there could still be characteristics that explain effective

leadership not included in this scale. Criterion validity seemed fulfilled as the measurement instrument was validated as a scale that measure leadership characteristics (W. L. Neuman, 2014).

The potential bias exists in all research and is an predisposition if the research findings is due to a systematic distortion of statistical results (Smith & Noble, 2014). Bias could impact the validity and reliability of the research and are tried to be minimized. Bias could occur when the author misinterpret the data, which is a risk when only one person analyzes the findings (Smith & Noble, 2014). In this thesis the results are straight forward and hard to misinterpret which reduce the risk for researcher bias (Fraenkel, Wallen, & Hyun, 1993), reducing the probability of internal validity. Other bias could occur and will be discussed in limitations.

Data analysis

The statistical program SPSS was used to do all data analysis. Several analysis were applied to answer the research questions. These analyses included descriptive analysis, factor analysis, variance analysis (ANOVA) and correlation analysis. SPSS offers many different data analysis, but these were chosen as most relevant to answer the research questions.

Various descriptive analysis is applied to get an overview over the data collected from the three sections of the survey. Reliability analysis is applied to ensure credibility in the scale, which is important as a foundation for a good study. Furthermore, factor analysis is done to reduce the number of characteristics, as there are 41 which is difficult to analyze and will make the findings easier to detect and present. The variance analysis was conducted to examine if the difference between how a female characterizes an effective leader, and how a male characterizes an effective leader. Last but not least, correlation analysis is conducted to

review the inter-correlation between the factors to evaluate if there are any unusual patterns in the way the respondents characterize an effective leader. For this thesis. The reliability analysis, factor analysis, variance analysis and correlation analysis were only conducted of the data retrieved from Part 2 of the survey. While the descriptive analysis was applied to the demographic questions, Part 1 and Part 2. A 95 % confidence interval is selected, which is commonly used in social science research (W. L. Neuman, 2014). This thesis falls under social science research as it studies people and showing trends in effective leadership characteristics (W. L. Neuman, 2014). All factors will start with a capital letter and be reported in cursive, while characteristics will be stated with only cursive to separate them. The next part of the thesis concerns implementing the findings from these analyses performed.

Findings

Reliability analysis

The reliability analysis was construed to ensure quality of the scale, this analysis was only applied to the data from Part 2 of the survey as mentioned. Cronbach's alpha score ought to be a minimum of .7 and .8 to be satisfactory (Bland & Altman, 1997). The Cronbach's alpha was measured for each for the factors found by Offermann et al. (1994), and the scores are revealed in *Table 4*. All factors have a relative high Cronbach's alpha with the exception of *Strength*. If the overall Cronbach's alpha score is low, Alpha if Item Deleted will give an indication for which variable might be deleted to ensure consistency and credibility of the scale (Pallant, 2013).

Factor	α
Sensitivity	.901
Tyranny	.897
Dedication	.844
Charisma	.771
Attractiveness	.835
Masculinity	.853
Intelligence	.877
Strength	.492

Table 4: Reliability score for each factor

Tyranny scored a Cronbach's alpha at $\alpha = .901$ and would be .903 if the variable *demanding* (T20) was deleted. The difference was minimal. The corrected item-total correlation was high from .567-.773. *Demanding* had a corrected item-total correlation which was somewhat low

with .472. *Sensitivity* scored a $\alpha = .897$ and if *sensitive* (S12) was deleted the $\alpha = .902$. *Sensitive* (S12) had a low corrected item-total correlation, while the rest was high .627-.779. *Dedication* Cronbach's alpha was at $\alpha = .844$, with high corrected item-total correlation between the variables. *Charisma* had an $\alpha = .771$, if *charismatic* (C12) was deleted the $\alpha = .776$. The corrected item-total correlation was from .425 - .668. *Attractiveness* had a $\alpha = .835$ and if *attractive* (A12) was deleted Cronbach's alpha would be $\alpha = .864$. the corrected inter-item correlations were between .689 - .767. *Attractive* had a low corrected item-total correlation score, while the other was high from .689-.767. *Masculinity* had a Cronbach's alpha coefficient at $\alpha = .853$, there were not given a Cronbach's alpha if item deleted because in this factor there are two variables. In addition, *Masculinity* scored high on the corrected item-total correlation with $\alpha = .743$ for both variables. *Intelligence* scored a high Cronbach's alpha with $\alpha = .877$, the Cronbach's alpha would be higher if *education* (I12) was deleted, with $\alpha = .885$. The corrected inter-item correlation scored between .527 - .794. The factor *Strength* did not specify Cronbach's alpha if item deleted, the Cronbach's alpha $\alpha = .492$. this score does not suffice. However, the author of this thesis decided to include it to be able to compare with other studies. Summary of reliability analysis is found in *Appendix III*.

Descriptive analysis

Explore analysis

To analyze the possible outliers and to assess the normality of the distribution, exploring analysis is useful. In this analysis there is a possibility to establish if the responses in the scale have a normal distribution. *Masculinity* and *Tyranny* were both extremely skewed to the left showing negative skewness, in addition to positive kurtosis, which indicate a peak in the distribution. *Attractiveness* and *Strength* were normally distributed. *Sensitivity*, *Charisma*,

Dedication and *Intelligence* were tremendously skewed to the right. Further, to explore any outliers that could impact the results later on a boxplot was used. Three of the factors, *Masculinity*, *Attractiveness* and *Strength* showed no outliers, while the other factors exposed outliers. *Tyranny*, which was skewed to the bottom of the scale, had outliers on the top. While the rest of the factors, which was skewed highly on the top part of the scale, had outliers that was on the lower end of the scale. The outliers show that there might be a necessity to remove the outliers, which could potentially be evident to do in further studies. Though, by proceeding with the scale that Offermann et al. (1994) it is possible to compare the studies, which is major aim in this thesis.

Frequency analysis of Part 1

Part 1 of the questionnaire was analyzed to understand how the characteristics were categorized in either one of these units; Male leader, Female leader, Both, or Neither. By using frequency analysis, it was possible to see how many percent each characteristic was connected to each unit. Of the characteristics 30 of 41 were categorized as fitting to “Both” describing both male and female leaders. To analyze further, it was measured which of the characteristics that stood out to fit to both male leader and female leaders to see which seemed without a doubt to belong to both gender. If over 70 % of the respondents categorized the characteristics as fit to both gender, then it would be with certainty suggest an equal perception of the respondents. *Dedicated* (82.8 %), *knowledgeable* (82.5 %), *hard-working* (82.5 %), *educated* (76.5 %), *intelligent* (81.3 %), *wise* (80.2%), *motivated* (81.0 %), *clever* (79.5 %), *intellectual* (75.7 %), *goal-oriented* (71.3 %), *enthusiastic* (70.5 %), and *strong* (70.1 %), showed to be the characteristics strongest associated with both leader. To conclude, all the above is identified as characteristics that is equally perceived belonging to female- and male leaders. The rest of the characteristics in the unit “Both” score between 42.3 % to 68.7

%). There were eight characteristics scored highest that scored the highest in the unit “Neither”, and these were *attractive* (42.5 %), *obnoxious* (53.0 %), *conceited* (60.8 %), *power-hungry* (45.9 %), *bold* (36.2 %), *manipulative* (50.7%), *loud* (42.2 %), and *selfish* (49.3%). *Sensitive* scored highest in the unit “Female” with 46.3 %. *Male* (54.9 %) and *masculine* (58.6 %) was rated highest in “Male”. See *Appendix V* for an overview over the scores.

Frequency analysis of Part 2

Frequency analysis creates a summary of mean, minimum score and maximum score for each factor. N for all factors are 268, and no data were missing. *Table 5* showed the distribution of the sample, and if there were kurtosis and skewness.

Factor	Mean	Std. deviation	Skewness Statistic	Skewness Std. error	Kurtosis statistic	Kurtosis std. error
Sensitivity	6.95	1.601	-.927	.149	1.622	.297
Tyranny	3.77	1.650	.903	.149	.693	.297
Dedication	8.77	1.433	-2.891	.149	11.759	.297
Charisma	7.68	1.426	-1.535	.149	4.701	.297
Attractiveness	4.91	2.016	-.164	.149	-.606	.297
Masculinity	3.24	2.262	.708	.149	-.454	.297
Intelligence	7.90	1.506	-1.577	.149	4.749	.297
Strength	5.60	1.905	-.181	.149	-.370	.297

Table 5: Frequency analysis of the eight factors (excluding N, minimum, and maximum)

Table 5 demonstrates a very strong negative and very strong positive skewness. *Sensitivity*, *Dedication*, *Charisma*, and *Intelligence* show negative skewness which indicate that the majority of answers are on the higher end of the scale. *Strength* and *Attractiveness* have the lowest score of skewness and are closest to a normal distribution. *Tyranny* and *Masculinity* on the other hand, have a positive skewness which imply that most of the respondents who score on these factors are on the low end of the scale.

Sensitivity, *Tyranny*, *Dedication*, *Charisma*, and *Intelligence* have a positive kurtosis that indicate a flat distribution. *Dedication* in particular showed a very high positive kurtosis

implying an especially flat distribution. *Tyranny* has a closer to a 0 score, which implies a normal curve. *Strength*, *Attractiveness*, and *Masculinity* have negative kurtosis representing a peak in the distribution, which indicate that most of the respondents scored the factors similarly and variation was small.

Factor analysis

The forthcoming data analysis; Factor analysis, factor score, variance analysis (ANOVA), and correlation analysis are based on Part 2 of the study, which scores each factor on a Likert scale if it is a characteristic that belongs to an effective leader.

As 41 characteristics are difficult and inconvenient to investigate in a factor analysis, corresponding with research by Offermann et al. (1994) was used to reduce the dimensions. This step was also important to be able to compare this thesis to Offermann et al. (1994) and Furunes (2012). The first part of the factor analysis was to check the factorability of the scale. The first evidence that a factor analysis was in order, was the large sample on over 250 individuals, which was recommended by MacCallum et al. (1999). When inspecting the results from the principal component analysis, the correlation matrix revealed many coefficients of .3 and above, illustrating a possibility for factor analysis. Furthermore, the Kaiser-Meyer-Olkin measure should be .6 or above (Pallant, 2013), which was achieved here with a .901. According to the Barlett's Test of Sphericity, this is statistically significant on a .000 level, has an approximate Chi-square of 7235.770 and a df of 861. Factorability is achieved and therefore a factor analysis will be performed. See *Appendix IV* for an illustration of KMO and Bartlett's test.

The 41 characteristics for an effective leader in Offermann et al. (1994) scale were “subjected to principal components analysis using SPSS” (Pallant, 2013, p. 191). Explaining the Eigenvalue to explore the amount of total variance explained by that factor showed that eight components were extracted with Eigenvalue with over 1.0. These were extracted and explain 67.5 % of the variance. Component 1 explains 27.8 % of variance, component 2 explains 18.6 % of variance and component 3 explains 5.9 % of the variance. While the rest of the five components extracted had lower percentage of the variance. See *Appendix III* for a summary of the total variance explained.

Proceeding with this information a varimax analysis and an Oblimin rotation to retrieve the rotated component matrix was conducted, dividing the characteristics into the eight components that had a highest eigenvalue. Prior to the factor analysis, it was expected that the characteristics would load into similar factors as in Offermann et al. (1994) research. An inspection of the result showed a dissimilarity in the results from Offermann et al. (1994) research in how the factor loaded. The set level for an adequate factor analysis and too avoid many cross-loadings was .5. Rotated Component Matrix is illustrated in *Appendix IV*.

The characteristics in factors *Dedication* and *Intelligence* mainly loaded in component 1, and include *sincere* (S15), *inspiring* (C13), and *enthusiastic* (C14). In component 2, eight out of ten variables in the factor *Tyranny* loaded, disregarding *domineering* (T11), *dominant* (T13) and incorporating *masculine* (M12). *Male* (M11) scored under .5 in component 2 but did not load higher in any other components. The characteristics in *Sensitivity* loaded in component 3, with the exception of *sincere* (S15). In component 4, all characteristics in *Attractiveness* loaded. In component 5 the characteristics *strong* (B11) and *bold* (B12) in *Strength* loaded

highest in addition to *charismatic* (C12) and *dynamic* (C15). *Dominant* (T13) and *domineering* (T11) loaded with a higher score in component 6. The exclusion of these variables from the rest of the variables in *Tyranny* could suggest that they do not belong in this factor. *Domineering* cross-loaded into component 2. In component 7, none of the variables load in with the highest score, only as cross-loading. The only characteristics loading in component 8 was *energetic* (C11). If the score was under .5 the cross-loading was not included in the analysis, because higher than .5 is considered to load strong (Pallant, 2013). This decision was made on the ground that the thesis aimed to compare results Offermann et al. (1994) research article, and therefore seemed unnecessary to analyze further.

Factor score

Furthermore, based on the reliability and factor analysis, the characteristics were transformed into one factor by calculating the factor score (mean score), computing variables into eight factors see *Table 6 and Figure 2*. The mean score can be used to investigate at the differences between how the female participants and the male participants viewed each factor to fit an effective leader and compare the mean score with other studies.

Factor	All	Male	Female
Sensitivity	6.95	6.63	7.08
Dedication	8.77	8.58	8.85
Tyranny	3.77	4.04	3.65
Charisma	7.68	7.65	7.68
Attractiveness	4.91	4.83	4.94
Masculinity	3.24	3.69	3.02
Intelligence	7.90	7.60	8.02
Strength	5.60	5.69	5.55

Table 6: Mean score for each unit

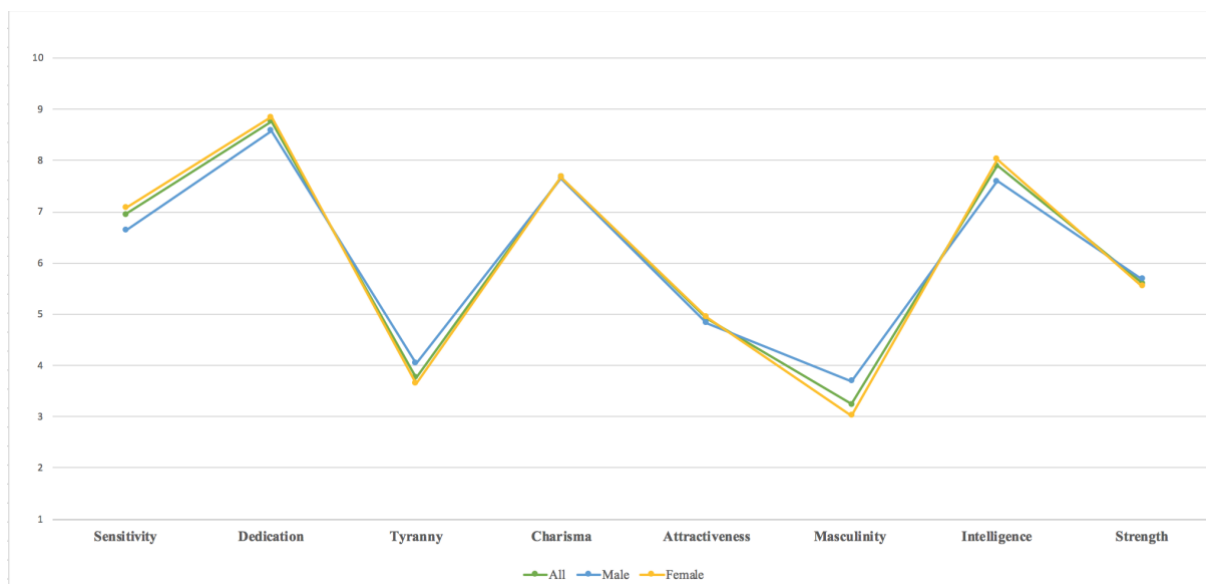


Figure 2: Scatter plot for mean score for each factor for all, female and male

Reviewing *Table 6* and *Figure 2*, an overview of the all responses have categorized the factor fit to an effective leader, and how each gender categorized each of the factors to an effective leader. This analysis gives an overview over which factors belong to an effective leader; clearly *Dedication*, *Charisma* and *Intelligence* are considered to belong to an effective leader. An effective leader is also perceived to have characteristics from *Sensitivity*. *Masculinity* and *Tyranny* on the other hand show that they clearly are not perceived to belong to an effective leader by students in Norway. *Attractiveness* and *Strength* scored mediocre on the scale, suggesting that they might not be as important for an effective leader. The interesting part in this analysis is the similarity between the female respondents and male respondents. Female and males respond very similar, but there are some minor differences in some of the factors. Therefore, further a One-way ANOVA analysis was conducted to review if the variance between how male characterize an effective leader differs from how a female leader characterize an effective leader.

The mean score for each factor was also calculated and could be found in *Appendix VII*. The characteristics will be discussed in the Interpretation and Discussion chapter as a part of finding the characteristics to an effective leader. Extending the research to each of the 41 characteristics in relation to leadership effectiveness results showed 18 out of 41 were on the higher end (over 7.0) of the Likert scale when scoring on how characteristic they were in regard to if the leadership characteristics was considered to belong to an efficient leader. To measure the most important characteristics, a mean score over 8.0 was set. Half of the communal characteristics had a high mean score *sympathetic* (7.10), *helpful* (8.03), *understanding* (7.79) and *sincere* (8.10). *Sensitivity* in total scored high on a characteristic an effective leader has, but was missing *sensitive*, *compassionate*, *warm* and *forgiving*. *Dedicated*, *Charisma* and *Intelligence* were the most important characteristics for an effective

leader to have. All the characteristics in *Intelligence* and *Dedication* scored over 7.0 on the Likert scale. The characteristics in factor *Charisma* score over 7.0 included all except *charismatic* (6.85).

On the other side of the scale, the characteristics with the lowest score, characteristics student find to not belong to an effective leader, were many of the agentic characteristics. The only characteristic with lower than 2.0 in mean score was *obnoxious* (1.83), indicating that this characteristic is definitely not a characteristic that belong to an effective leader. *Conceited* (2.45) and *manipulative* (2.99) score low. This is congruent with Part 1 of the analysis as neither male or female leaders is perceived to have these characteristics. Other agentic characteristics such as *loud* (3.62), *selfish* (3.01), and *power-hungry* (3.01), which are categorized as disassociated to leaders, score one the lower end of the Likert scale. *Male* (3.16) and *masculine* (3.31), are considered to belong to a male leader, but categorized low on the scale of effective leaders. *Pushy* and *bold* scored mediocre and is considered neutral to efficient leadership. However, *bold* is considered to not belong to either male or female leaders, implying that it is not an efficient leadership characteristic. Despite being considered a-typical as a leadership characteristic, *strong* is considered neutral when it comes to efficient leadership. Which only could indicate that this characteristic does not belong to describe leadership according to students in Norway. This however, was not further analyzed in a comparative analysis or a One-way ANOVA analysis.

One-way ANOVA analysis

The significance level was set on 0.05 % (95 % significance level), as mentioned previously.

The variance analysis compares two groups, males and females, and finds if the small

distinction between the two groups are significant (Pallant, 2013). In this analysis, the one person who specified their gender as “would rather not say” was excluded. It was meaningless to create a group for that respondent, as there were only one. If there were several there could be a point to creating a group, but that would have to be done in a future study.

Factor	Sig. Level
Sensitivity	.105
Tyranny	.195
Dedication	.251
Charisma	.260
Attractiveness	.738
Masculinity	.020*
Intelligence	.053
Strength	.104

*Sig. level at 0.05 **

Table 7: Significance of mean score for female and male

As shown in *Table 7*, the only significant difference was in how *Masculinity* in an effective leader is perceived, signifying that this result will most likely occur continuously. Thus, there must be another cause for the insignificant differences in the other factors, such as the imbalance in males and females that participated in the survey. See *Appendix VI* for an overview of the ANOVA analysis.

Comparative analysis

Further, a comparative analysis between the mean of the factors for this study, Furunes (2012) and Offermann et al. (1994) resulted in similar results. *Table 8* and *Figure 3* illustrates the difference in mean score for each study. The studies have difference timeframes which creates interesting findings to report. For each factor the mean score has very small difference. The combination of the three studies that retrieve similar results suggest they could be considered a longitudinal study as the findings appear persistent through various studies and contexts across more than one point of time (W. L. Neuman, 2014).

Factor	Offermann et al. (1994)	Furunes (2012)	Thesis (2018)
Sensitivity	7.26	7.09	6.95
Dedication	8.31	8.82	8.77
Tyranny	4.15	3.45	3.77
Charisma	7.79	7.65	7.68
Attractiveness	5.03	6.46	4.91
Masculinity	3.50	3.12	3.24
Intelligence	7.95	7.94	7.90
Strength	7.07	6.19	5.60

Table 8: Comparative analysis of mean score with Offermann et al. (1994) and Furunes (2012)

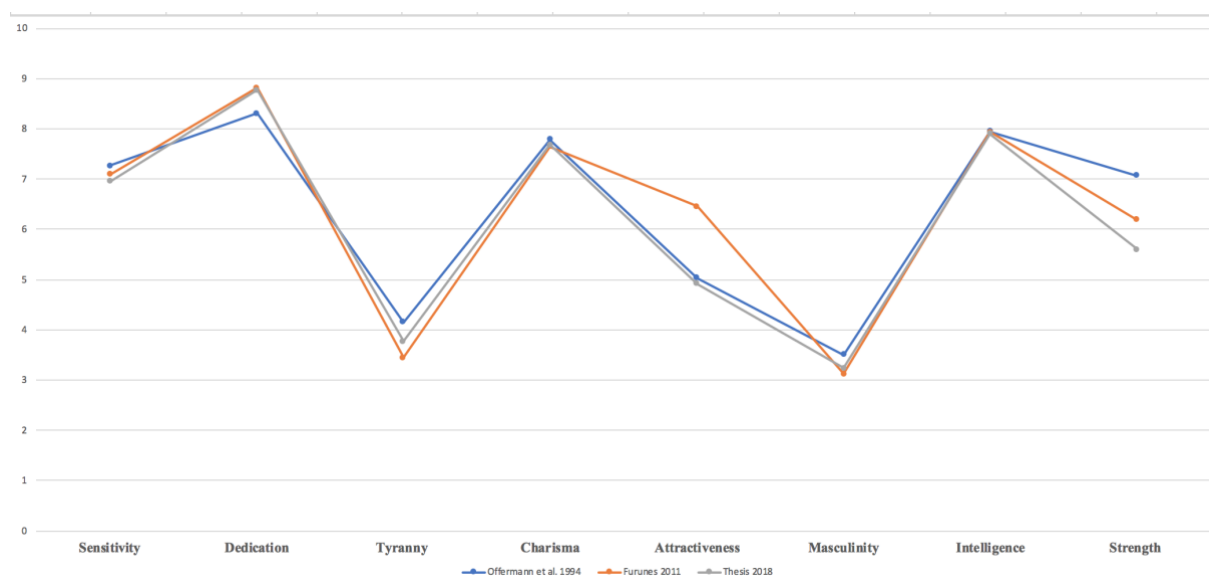


Figure 3: Scatter plot of the mean score for each factor in the three studies

Repetition of findings increase the validity and credibility. *Dedication*, *Charisma* and *Intelligence* are characteristics that are considered essential for a leader to be perceived as effective. *Dedication* is the single most important factor for an effective leader to have, according to these three studies. *Sensitivity* is also evident for an efficient leader. With confidence, one could say that an effective leader has *Dedication*, *Charisma* and *Intelligence*. *Strength* showed to have the biggest difference between all three studies, while the difference in the other factors showed that mostly two of the studies ended up with the same results. *Attractiveness* was considered as a factor that explains effective leaders in larger degree by Furunes (2012) than by this thesis and Offermann et al. (1994). Consistently, *Tyranny* and *Masculinity* are confirmed not belonging to an efficient leader. Some of the other differences could be caused by differences in context, sample or year of the study.

Correlation analysis

A correlation analysis based on Offermann et al. (1994) division of characteristics a correlation analysis was conducted to review if the factors are inter-correlated and find

patterns (Pallant, 2013). There were no observations missing in the total number, $N = 268$ for all correlations. Most of the correlations were significant, while a few revealed to be insignificant. The significance level was set on 95 % as throughout the whole thesis. *Table 9* is an overview of the correlation matrix.

	1	2	3	4	5	6	7	8
Sensitivity	1							
Tyranny	-.314**	1						
Dedication	.571**	-.174**	1					
Charisma	.590**	-.084	.726**	1				
Attractiveness	.171**	.510**	.105	.246**	1			
Masculinity	-.091	.620**	-.163**	-.034	.510**	1		
Intelligence	.632**	-.059	.742**	.685**	.326**	.048	1	
Strength	.231**	.297**	.317**	.401**	.408**	.351**	.379**	1

* Correlation is significant at the 0.05 level ** Correlation is significant at the 0.01 level

Table 9: Correlation matrix for eight factors

Strength correlates positively with all factors, all correlations are significant. If a respondent rates an effective leader as having strength, they will also rate the other factors positively.

Intelligence correlates highly with *Attractiveness* ($r=.326$), *Charisma* ($r=.685$), *Sensitivity* ($r=.632$) and *Dedication* ($r=.742$), all correlations were significant. *Intelligence* correlates negatively with *Tyranny* ($r=-.059$) and *Masculinity* ($r=-.048$). However, the results are

insignificant and there is no evidence for assuming any correlation. The correlation between *Masculinity* with *Tyranny* ($r=.620$) and *Attractiveness* ($r=.510$) are both positive and significant. On the contrary, *Masculinity* correlates negatively with *Dedication* ($r=-.163$) suggesting that if a respondent finds an effective leader with dedication, they will not find the leader with high masculinity. *Attractiveness* is strongly correlated with *Tyranny* ($r=.510$), and weak, but positively correlated to *Sensitivity* ($r=.171$) and *Charisma* ($r=.246$). The slight positive correlation with *Dedication* ($r=.105$) is insignificant. *Charisma* is strongly correlated to sensitivity and dedication. The correlation between *Charisma* and *Tyranny* ($r=-.084$) was insignificant. *Dedication* was strongly positively correlated with *Sensitivity* ($r=.571$) and somewhat negatively correlated to *Tyranny* ($r=-.174$), the correlation showed to be significant. The correlation between *Sensitivity* and *Tyranny* was strongly negative at $r=-.314$ and suggest a very strong relationship where if a respondent finds an effective leader having sensitivity, they would not be considered tyrannical. The correlation that showed to be insignificant indicate randomness.

Interpretation and discussion

Introduction

The purpose for this master thesis were to explore what characteristics describe an effective leader. To further investigate this, this thesis explores several corresponding research questions are explored. The perspective was construed from an implicit leadership perspective of students in Norway, and is partial replication of Offermann et al. (1994) research, which is also the main literature used in this thesis. Various secondary theory was reviewed as the foundation for the thesis such as Furunes (2012). Numerous theories were selected to explore the topic and appeared relevant to attain solution for the research questions. Through Leadership Categorization theory and Implicit Leadership Theory it was uncovered that an effective leader depends on the belief of the follower and achieving goals will be easier if the follower finds the leader effective as followers follow those who they perceive to be good leaders. Social Role Theory gave a review over the perception that people hold to females and males, which could be the cause for unequal perception of female leaders and male leaders, and their effectiveness. The examination of the research questions includes methods such as SPSS analysis to retrieve data from the survey. Other methods used include a validated scale survey to accumulate the data and other studies to compare findings with. This thesis will first discuss the findings from the data analysis in SPSS before answering the corresponding research questions before analyzing the main research question which is:

Which characteristics do students in Norway perceive an efficient leader possess?

The data analysis concluded with several interesting results. Through the reliability analysis it was found that all factors had a high Cronbach's alpha, excluding *Strength* ($\alpha = .492$).

Furunes (2012) revealed similar result as this thesis, which could be an indication that *Strength* should be excluded. If in future study conducted with a larger sample, the same results were uncovered and removing this factor, it could potentially give a more reliable scale. As mentioned earlier, including *Strength* in this thesis was essential to be able compare results with other studies. Several of other factors showed that some of the characteristics did not necessarily explain the factor as the Cronbach's alpha if Item Deleted was higher. This was the occurrence for *Sensitivity*, *Tyranny*, *Charisma*, *Attractiveness* and *Intelligence*.

However, the difference in the Cronbach's alpha for *Sensitivity*, *Tyranny* and *Charisma* was minimal and was decided not worth discussing. As for *Attractiveness*, removing *attractive* would cause for a higher Cronbach's alpha, was more interesting. The other characteristics in this factor explain a person's choice of attire, while *attractive* describe a person physical appearance. The three first mentioned characteristics are possible to change, suggesting that students in Norway find the attire more important than how the person actually physical appeared. This means if a person is perceived as *classy*, *well-groomed* and *well-dressed* they are perceived more as an effective leader. Similar results were uncovered for the factor *Intelligence*. *Intelligence* Cronbach's alpha would be higher if the characteristic *education* was deleted. An explanation for this could be that *education* does not equate intelligence, in the same way as one could be intelligent without having any formal education. This suggest that the characteristics perhaps does not belong in the factor they are distributed into.

The correlation analysis reveals patterns of the characterization of an effective leader. Factors such as *Sensitivity*, *Charisma*, *Dedication* and *Intelligence* had strong positive relationships. Suggesting that student in Norway characterizes one of them high in relation effective leader,

they will also characterize the other highly related to an effective leader. These factors correlated either weakly or mediocre with the other factors. The relationship between *Tyranny* and *Sensitivity* was strongly negative, signifying that if a student characterizes an effective leader as tyrannical, it will rate *Sensitivity* low. These characteristics contradict each other, which seems obvious. A person is usually not tyrannical if they have characteristics from *Sensitivity*, because assumingly they are more occupied with their relationship with others rather than having power over others as stated by Johnson et al. (2008). This is compatible with the perception that *Sensitivity* is related to communal characteristics and *Tyranny* is related to agentic characteristics (Johnson et al., 2008).. *Masculinity*, *Tyranny* and *Attractiveness* correlated highly with each other, which imply that if a student in Norway characterize one of these factors highly or low with an effective leader, they will also characterize the other highly or low. Several of the correlations were insignificant, suggesting that the results could be random in this specific case.

Dedication and *Intelligence* includes rather small groups of characteristics. All characteristics from *Intelligence* and *Dedication* loaded in the same component in the factor analysis, with three other characteristics signifying that this should be one factor. This could be considered to explore in a further study of leadership prototypes. Some of the characteristics loaded in similar groups as in Offermann et al. (1994). These were the characteristics in *Tyranny*, *Sensitivity* and *Attractiveness*. *Sensitivity* and *Tyranny* missed some characteristics to load precisely identical to Offermann et al. (1994). *Sincere*, *dominant* and *domineering* seem to belong in other factors. *Domineering* and *dominant* loaded in a separate component, which could indicate that they should be in a individual factor. Thus, *domineering* cross-loaded into component 2 with the other characteristics in *Tyranny*, which only supports that the characteristics could be in *Tyranny*. *Male* and *masculine* loaded in the same components as

the characteristics in *Tyranny*. Suggesting that *Masculinity* and *Tyranny* goes hand in hand and are perceived to belong together. This is supported by Johnson et al. (2008) that states that *Masculinity* and *Tyranny* are both agentic characteristics. *Male* though, loaded in component 2, was the only characteristics that did not load strongly, or above the set level, in any of the components suggesting that this characteristic seems to not belong when measuring characteristics for an effective leader. This indicates that students in Norway do not find an effective leader to necessarily be manly. It should be mentioned that when translating male in Norwegian the word is manly and not a male, which could cause for misunderstanding for what the word is supposed to mean. *Energetic*, which is a characteristic in *Charisma*, loaded in its own component. *Energetic* does not necessarily indicate that a person has charisma, which could explain why this characteristic loaded in a separate component. It seems that the characteristics in *Charisma* clearly do not belong in one factor as they were spread between several components. *Charismatic* and *dynamic* loaded in the same component as *bold* and *strong* meaning that students in Norway perceive that these belong somewhat together.

Eight factors were extracted with an Eigenvalue over 1. However, none of the characteristics loaded with the highest score in component 7, which could be an indication that it should only be seven factors instead of eight. This could also be something to consider in a future study. In accordance with Furunes (2012), the factor analysis exposed some dissimilar results than Offermann et al. (1994) which could be caused by numerous causes such as cultural difference, timespan, or that this thesis was missing representative sample. Offermann et al. (1994) research was conducted 24 years ago, much have changed during this time. Norway has increased that nation's overall gender equality and is striving for complete egalitarianism. Signifying that the leadership characteristics are perceived differently now.

RQ1: Which characteristics fit to male leaders and for female leaders?

There were 30 out of 41 characteristics that scored a higher percentage with in the unit “both” female and male leaders. Leaving three characteristics that strongly associated to either male leaders or female leaders, and eight characteristics that were not related to either gender according to most students. *Sensitive* was substantially more related to female leaders than men with 46.3 % to 6.0 %. And *male* (54.9 % to 2.6 %) and *masculine* (58.6 % to 2.6 %) were considerably more related to male leaders. This indicates that there are almost no different in the perception of how students perceive male leaders and female leaders in relation to characteristics. This thesis shows a positive change from previous research, presenting more equal perception of leaders.

All characteristics in *Dedication*, *Intelligence*, and *Charismatic* are considered to fit both gender as leaders. The characteristics that were rated with the highest percentage to fitting both female and male gender are *knowledgeable*, *goal-oriented*, *enthusiastic*, *hard-working*, *intelligent*, *wise*, *dedicated*, *motivated*, *clever*, *educated*, and *strong*. Most of these correspond with the characteristics that are perceived from an effective leader. Demonstrating that both women and men as leaders are perceived very similar when it comes to effective leaders. There were several characteristics that were listed as not fitting to either male leader or female leaders: *attractive*, *obnoxious*, *conceited*, *power-hungry*, *bold*, *manipulative*, *loud*, and *selfish*. This implies that these are a-typical leader characteristics, contradicting the findings in Offermann et al. (1994) research which could be caused by cultural differences or possibly because there is a large time difference between when the studies were conducted. The stereotypical Norwegian is not very “bold, conceited, obnoxious and loud,” according to the well-known “janteloven”, which are rules that instructs people to be modest and uncomplacent (Bromgard, Trafimow, & Linn, 2014). The cultural difference between US and

Norway might have an impact on how a leader is perceived. This could indicate that the leadership characteristics found in Offermann et al. (1994), does not necessarily describe an leader in Norway.

RQ2: Is a female leader connected with communal characteristics, and a male leader associated with agentic characteristics?

Previous theory has divided characteristics into communal, agentic and neutral. Neutral means being related with gender neutral characteristics that do not strongly associate with either gender. Agentic characteristics have previously been correlated with male and male leadership, and communal with females. After analyzing what characteristics were perceived to belong to either men, women, both or neither, the results ended up showing that most of the characteristics are reviewed as gender neutral.

However, most of the agentic characteristics were stronger linked with male leaders, regardless of the higher percentage of association with both or neither. There were some exceptions. *Demanding*, *conceited*, and *manipulative* were rated as more fitting to a female leader, even though they were rated as not fitting to either gender, which also contradicts previous research that states that the female role is conflicting with the leader role. One of the eight communal characteristics actually was proven to score higher with male leaders. By a small percentage, male leaders are considered more *sincere* than female leaders. This characteristic was also, according to the factor analysis, not belonging to Sensitivity, suggesting that this characteristic is not communal. Nevertheless, the remaining characteristics in *Sensitivity* were more strongly related to female leaders, although rated the highest to fit both suggesting that there still are some associations with female leaders and

communal characteristics and male leaders and agentic characteristics. This argues that there remain a stronger association of communal characteristics to female leaders, and agentic to male leaders. However, for the most part leaders are perceived equally belonging to the leadership characteristics.

The social roles of females and males have revealed distinction from previous research. The diminutive difference found in this thesis argues for a resolution of social roles that have been expected from each gender. Consequently, the prospect that a male or female have certain characteristics is disproved by this thesis. The difference has definitely decreased from previous research. Most students find the leadership characteristics to fit to either both leaders or none of them. Only three of 41 characteristics scored higher with one of the genders as already mentioned, and these three are either communal or agentic characteristics. But all the other characteristics that are said to be agentic or communal are rated with no difference.

RQ3: Does the respondents gender influence the perception of an effective leader?

Analyzing if there were any variance in how female and male respondent rated which characteristics fitted to an effective leader, a minimal difference was discovered. Generally, the ratings were very similar, between male and female respondents. Nevertheless, a small difference in *Masculinity* was detected and displayed to be significant, suggesting that it would occur even if another sample was used. The other factors showed that the difference was insignificant, implying that it could be caused by something else such as selection bias. There was severe variation in the ratio, male to female in the sample. This proves that the perception of the students in Norway are very equal. This is a great development as previous studies have stated that females and males rate effective leader differently (Chemers, 2000).

The transformation in gender perception has evolved over the years, which is proven by the data from Seo et al. (2017). Norway sits as the second most gender equal country in the world while US is 49th Leopold (2017). Even in 2006, over a decade later than 1994, Norway was number 2 and US 23. US gender gap has increased over the years (Greig, 2006). This is far down on the list, showing a much less gender equal view, and could therefore influence greater difference than found in Norway through this thesis. As mentioned have theory suggested that there is a difference in people perception depending on gender, this theory is conversely conducted in US. The respondents' gender does not influence the expectation and perception of an effective leader according to this thesis and could contradict previous research because of cultural differences.

RQ4: Are there differences between perceived characteristics of effective leadership in earlier studies in different contexts and different countries?

As stated in House et al. (2002) the expectation of an effective leader could be different depending on the country. A comparative analysis between the mean score of the factors for this study, Furunes (2012) and Offermann et al. (1994) explores differences in perception on effective leadership. The comparative analysis reveals that the studies have similar results for an effective leader. With the year span and different context, grounds to believe that these are indeed the characteristics that are expected from an effective leader is revealed. The results create credibility and validity.

With the different context and culture, it is not expected that the means will line up completely identical. There were some slight differences in each of the factors, the only noteworthy dissimilarities were in *Strength* and *Attractiveness*. Of the three studies, this thesis

concluded that *Strength* were less important which was backed up in the frequency analysis. The analysis revealed that *bold* were not considered a leader characteristic. *Strength* was perceived most important by Offermann et al. (1994), suggesting that there could be some cultural difference in the perception of *Strength* and leadership. Furunes (2012) study concluded that *attractiveness* was important, in a larger degree than the two others, and contemplating that in the hospitality context appearance is important. As the sample for Furunes (2012) and two other differed, this could be cause for the differential results. However, as mentioned they were very small. The studies, nonetheless, describe an effective leader with the same factors. This could be a cause to state that the studies contribute to one longitudinal study with similar results of what characteristics an effective leader have (W. L. Neuman, 2014).

Characteristics of an Effective Leader

The main research questions were “which characteristics do students in Norway perceive an efficient leader possess?”. Through examining the corresponding research questions and data retrieved from various analysis, the characteristics of an effective leader were uncovered. This thesis explored which characteristics an effective leader has in two ways, first by exploring which factors are considered to fit to an effective leader. Through calculating the mean score it was shown that *Dedicated*, *Intelligence* and *Charisma* were important. Conger (1999) suggested that *Charisma* is the most important characteristic for effective leadership, which is somewhat confirmed by this thesis. However, *Dedication* scored highest as the most characteristic of an effective leader, where all the characteristics was included as the most important characteristics for an effective leader. *Intelligence* was second highest *Charisma* the third. The fourth most important factor for an effective leader was *Sensitivity*, contradicting previous research suggesting masculine characteristics are more imperative for a leader

(Ayman & Korabik, 2010). This perception was similar for female and male raters, in addition to remaining similar through several studies.

Furthermore, the second way to explore the characteristics effective leader a more in-depth overview over the characteristics that scored highest to fit to an effective leader. This thesis disagrees with most of the previous research when there was found very similar perception about leaders and females and with leaders and males which among others Eagly and Johannesen-Schmidt (2001) suggested. This thesis supported Seo et al. (2017) findings with more resemblance than differences in the students perceptions of female and male leaders. It was found that *knowledgeable, goal-oriented, enthusiastic, hard-working, intelligence, wise, dedicated, motivated, helpful, sincere* and *inspiring* were immensely associated with an effective leader. These are perceived as most important characteristics of an effective leader with a mean score over 8.0. This revelation revealed that that masculine and agentic characteristics do not belong with efficient leadership any longer. Masculine or agentic characteristics are perceived as the characteristics of an ideal effective leader. Later research has shown to an effective leader also needs “feminine” or communal characteristics which verified when researching which of the 41 characteristics are viewed as most characteristic to an efficient leader in this thesis. *Tyranny* and *Masculinity* were seen as least applicable characteristics for an effective leader. “Think-leader—think-male” reasoning (Hoyt, 2005, p. 2) seems to be non-existent with students in Norway. The mindset is a primitive way of thinking, and now with the rise in females, the definition of ‘thinking like a leader’ innately changes’. The results obtained from the analysis, it is clearly a more equal perception of what an effective leader is.

The indication of what effective leadership characteristics consists of, are the gender-neutral characteristics. As the results show to be consequently similar it could be safe to say that to be an effective leader one must have *Dedication*, *Charisma* and *Intelligence* disregarding which gender the leader is. The interaction between a leader and a follower is a common way to explore effective leadership (Yukl, 1999). If the follower believes the leader is effective, the follower will be motivated to and committed to attain goal. This means, when the characteristics people perceive an effective leader withhold, businesses should employ leaders with these characteristics to ensure effectiveness and committing the followers/subordinates to work for the organizations or businesses goals.

Limitations and Implications

Limitations

There are many leadership studies that have contributed to a number of empirical findings and publications. In this thesis it was not possible to review all of them. The author tried to review as many articles found as possible, in addition to other literature from books. The most relevant articles and literature was reviewed for this thesis to implement a good foundation for furthering the research. For a holistic representation of an efficient leader, all characteristics should be investigated. In this case the scale was validated, but as there is not possible for full validity, one could not be sure other characteristics should be included.

The lack of representative sample is an implication thus there is some uncertainty that these results are reproducible. For a factor analysis, 250 is a satisfactory number for the survey, while if the results are to be generalized the sample size is calculated from the whole population. In this case, this would mean all students in Norway. The sample size in this survey showed to be not adequate enough with only 268, which harm the external validity. There were no missing data in the fulfilled data, but there were 38 excluded because of the control question that excluded people who are not a student.

As there were an uneven ratio of female to male, selection bias could be an implication and influence the results, which is hard to detect. A more even ratio could prevent selection bias. The results and analysis conducted is only analyzed by the author of this one side analysis. The results are presented in the thesis and are hard to avoid, as researcher bias is eluded. Measurement bias could be stated as avoided as the scale was validated beforehand (Smith & Noble, 2014). Interview bias was avoided as the survey was online and the author did not

have any influence on the respondent's answers. Social desirability bias is always an issue as the author of the survey, when it is online, can never know if the respondent answer truthfully, or if the respondents answer what they think the answer should be (W. L. Neuman, 2014).

For this questionnaire it was discovered that it would be easier to analyze Part 1 and Part 2 if in part 1 the characteristics was measured in the factors instead. There were several other weaknesses in the survey. There is the possibility that some of the respondents answer untruthfully, or that someone takes it several times. It seems unlikely that someone would take it several times as it was very long. Since the survey was very long, which could cause for people to be "tired" of the survey and start answering without thinking. It was hard to collect enough answers for a valid sample size, which could be because it was both in English and very long. Some of the participants have claimed that it was tiresome, repetitive and irritating to take. This could have been avoided to some degree if Part 1 was only asked to label the eight factors to either both gender, female leader, male leader or neither. All characteristics were stated in English and Norwegian, but a Norwegian translation for the questions was not included. Thus, some could misinterpret the question and answer wrongly. With further inspection the questions should have been in both languages as some of the students might struggle with understanding English. Another defect is that one could not be sure that the respondents know what each characteristic mean, since there was no definition. Some examples were *male*, *domineering* and *dominant*, which could implicate how the respondent answer if misunderstood. Another weakness was that the survey was not distributed on every higher education institutes website in Norway. This was because the author was not granted access to every webpage, in addition to not being able to find every page.

Furthermore, there was some limitation in the data analysis. The explore analysis showed many outliers, which could potentially affect the results as they could be measurement errors. Future research could evaluate if the outliers should be removed. The factor analysis did not confirm Offermann et al. (1994) division of the characteristics. This thesis could not support the factor *Strength*, as it was not reliable. In the scale there were included 41 leadership characteristics, and the scale was validated, still this does not indicate that there are no other characteristics that might describe an effective leader better to students in Norway.

To sum up some of the most significant limitations for this thesis was the missing representative sample, and that the first part of the questionnaire should have been presented as eight factors instead of the 41 characteristics. The limitations could harm the findings as they could not be considered completely accurate. However, further studies could use the weaknesses to improve the study to ensure good quality of the findings and create representative results.

Implications

There are both implications for research and practice. This thesis has confirmed that the characteristics for an effective leader are *Dedication*, *Intelligence* and *Charisma*. The results from this thesis, and other previous studies have shown remarkable similar results. This indicate that the context, age or situation of the respondents does not matter, the perceived characteristics of an effective leader remain the same.

Unfortunately, this thesis did not confirm how Offermann et al. (1994) research characteristics was distributed in factors, and suggest that the characteristics should be

distributed into other factors. This thesis proposed that there should only be 7 factors, this could be further investigated in a future study. A subsequent research could build on this study and researched in-depth if the leadership characteristics should be allocated differently, and if some of them do not belong as a leadership prototype. There was some difference in the part where the thesis investigated how the characteristics fitted to either a female leader, male leader, both or neither from previous research. Those characteristics that what categorized as fit for neither gender, suggest that there could be some cultural difference in how student review a leader in compare to how people in US review a leader. The cultural difference is not explored further in this thesis but could be interesting to research for a future study.

Additionally, an equal perception between males and females was presented.

The information retrieved from this thesis could have an implication on practical matter for businesses. When there is a very defined picture of what an effective leader is according to people in different stages in life, sector and cultural context in a large year period. An effective leader could influence the followers to make self-sacrifices and exert exceptional effort (Yukl, 1999). Businesses that are recruiting leaders could look for these characteristics to employ a leader that the followers find effective. This could affect how the followers perceive the leader and are willing and motivated to work to attain a goal. It seems obvious that businesses and organizations is interested in hiring a person with qualities perceived as efficient. Effective leadership can help with the progress in business by being *motivated, hard-working, inspiring* and *dedicated*. By being *goal-oriented, intelligent* and *wise* it is clear that the leader will make efficient choices, which seem to be an important part of being a leader. An *enthusiastic, sincere, helpful* and *inspiring* leader could help have the followers on board with the business mission. To sum up, finding a leader with these characteristics could improve the business growth and goal achievement.

Future research should focus on getting a larger sample that represent the whole student population in Norway. It could be equivalent to go forward with the result found in this thesis, because the variances in findings could stem from dissimilarities in perception of leaders since the research is done in different countries. The factor analysis showed some different results that could be interesting to review, as there could be a different way leadership are characterized today, then 24 years ago. Following research should considered have the first part included the eight factors instead of all 41 characteristics, hence it will be possible to compare Part 1 and Part 2.

Conclusion

This thesis conducted a descriptive research on the characteristics of an effective leader and was somewhat a replication of a research by Offermann et al. (1994). Researching this was done from students' in Norway implicit leadership perceptiveness on effective leadership characteristics. Comparing this thesis to other research has supported the finding that these are the characteristics perceived belonging to an effective leader, suggesting certainty for causation. In addition, the thesis determined to investigate whether the gender of the respondent impacted the results, which was proven that gender did not impact how an effective leader was perceived. The thesis did not confirm the findings in Offermann et al. (1994) analysis. The factor analysis concluded with another layout of the characteristics. Even suggested that there might only be seven factors as none of the characteristics loaded in one of the components. The factor *Strength* was not reliable,

Furthermore, another purpose for the thesis was to explore 41 leadership characteristics and how students in Norway find them to describe a female, male, both or neither. This was to get an overview if there are slight, some or considerable gender inequalities or gender equality in the perception of the students. Results in the research for this thesis showed that there is very little difference in whether a characteristic fits better to a female leader than a male leader. Some of these characteristics were labeled as not fitting either of the genders which could be because these characteristics are atypical for Norwegians. To answer the main research question "which characteristics do students in Norway perceive an effective leader possess" the answer is *Dedication*, *Charisma* and *Intelligence*. Proposing that the results could be applied in a global context as the findings are remarkably consistent.

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Appendix I – Questionnaire

This is an anonymous survey for my master thesis to explore effective leader and gender issues in leadership!

Please fulfill all questions. After finishing the questionnaire, you can join the voluntary contest to win two movie tickets to any movie theater in Norway. Press "finish" when you are done, and you will be transferred to a different site to enter you email for the contest, just press X if you do not wish to participate. By using a different site, the email cannot be connected to your responses.

Thank you so much for participating, it is greatly appreciated!

Degree

- (1) Bachelor
- (2) Master
- (3) Doctor
- (6) Other
- (5) Not a student

Gender

- (2) Female

- (1) Male
- (3) Would rather not say

Year of birth (e.g. 1999)

Have you previous or current experience with a leader?

- (1) Yes
- (2) No

Do you have experience with more than one leader?

- (1) Yes
- (2) No

Work experience

	Years	Months
Full-time	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>
Part-time	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>

PART 1

What characteristic do you find fitting for a leader; enter either Both gender, Female, Male or None. Please do not be alarmed that it looks overwhelming, it is quick to go through.

Part 1

	Both	Female	Male	None
Dominant (dominerende)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Attractive (attraktiv)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Knowledgeable (kunnskapsrik)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Sympathetic (sympatisk)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Helpful (hjelpsom)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Goal-oriented (målrettet)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Obnoxious (ufyselig)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Clever (smart)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Sensitive (sensitiv)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Domineering (dominerende)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Demanding (krevende)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Dynamic (dynamisk)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>

	Both	Female	Male	None
Enthusiastic (engasjert)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Understanding (forstående)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Hard-working (hardtarbeidende)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Conceited (innbilsk)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Energetic (energisk)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Inspiring (inspirerende)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Power-hungry (maktsyk)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Educated (utdannet)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Male (mandig)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Bold (dristig)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Forgiving (tilgivende)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Intelligent (klok)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Classy (elegant)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Compassionate (medfølende)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Well-groomed (velstelt)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Masculine (maskulin)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Wise (kunnskapsrik)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Pushy (pågående)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Intellectual (intellektuell)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Dedicated (dedikert)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Sincere (oppriktig)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Motivated (motivert)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>

	Both	Female	Male	None
Manipulative (manipulerende)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Loud (høylydt)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Well-dressed (velkledd)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Strong (sterk)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Warm (varm/koselig)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Selfish (egoistisk)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Charismatic (karismatisk)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>

PART 2

What do you think typical characterize an effective leader? The measurement scale goes from 1 not at all characteristic to 10 - extremely characteristics for the traits.

Part 2

	1	2	3	4	5	6	7	8	9	10
Dominant (dominerende)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>	(6) <input type="checkbox"/>	(7) <input type="checkbox"/>	(8) <input type="checkbox"/>	(9) <input type="checkbox"/>	(10) <input type="checkbox"/>

	1	2	3	4	5	6	7	8	9	10
Attractive (attraktiv)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Knowledgeable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
(kunnskapsrik)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Sympathetic (sympatisk)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Helpful (hjelpsom)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Goal-oriented (mårettet)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Obnoxious (ufyselig)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Clever (smart)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Sensitive (sensitiv)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Domineering	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
(dominerende)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Demanding (krevende)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Dynamic (dynamisk)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Enthusiastic (engasjert)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>

	1	2	3	4	5	6	7	8	9	10
Understanding (forstående)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Hard-working	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
(hardtarbeidende)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Conceited (innbilsk)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Energetic (energisk)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Inspiring (inspirerende)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Power-hungry (maktsyk)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Educated (utdannet)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Male (mandig)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Bold (dristig)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Forgiving (tilgivende)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Intelligent (klok)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Classy (elegant)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>

	1	2	3	4	5	6	7	8	9	10
Compassionate	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
(medfølende)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Well-groomed (velstelt)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Masculine (maskulin)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Wise (kunnskapsrik)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Pushy (pågående)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Intellectual (intellektuell)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Dedicated (dedikert)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Sincere (oppriktig)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Motivated (motivert)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Manipulative	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
(manipulerende)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Loud (høylydt)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Well-dressed (velkledd)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>

	1	2	3	4	5	6	7	8	9	10
Strong (sterk)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Warm (varm/koselig)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Selfish (egoistisk)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>
Charismatic (karismatisk)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>) <input type="checkbox"/>

Thank you so much for participating in my survey!

Please press finish and enter you email to join the contest!

Appendix II - NSD

As no sensitive information or any information that can identify the respondent in any way was possible to retrieve there was no Not necessary to notify project

RESULTAT: IKKE MELDEPLIKTIG

Du har oppgitt at hverken direkte eller indirekte personopplysninger skal registreres i prosjektet.

Når det ikke registreres personopplysninger, omfattes ikke prosjektet av meldeplikt, og du trenger ikke sende inn meldeskjema til oss.

Vi gjør oppmerksom på at dette er en veiledning basert på hvilke svar du selv har gitt i meldeplikttesten og ikke en formell vurdering. Vil du ha en formell vurdering av ditt prosjekt, må du sende inn [meldeskjema](#) med vedlegg.

[Last ned resultat som PDF](#)

Appendix III - Reliability analysis

Reliability score for factor *Tyranny*

Case Processing Summary

		N	%
Cases	Valid	268	87,6
	Excluded ^a	38	12,4
	Total	306	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,901	10

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
T13	32,53	228,093	,567	,553	,897
T19	35,84	232,540	,723	,618	,890
T11	32,88	218,398	,669	,619	,890
T20	31,91	232,089	,472	,259	,903
T15	34,66	211,777	,773	,659	,883
T12	32,59	226,429	,586	,405	,896
T17	34,05	225,248	,620	,439	,893
T14	34,68	214,258	,753	,622	,884
T18	34,66	217,633	,725	,591	,886
T16	35,22	223,863	,693	,591	,889

Reliability score for factor *Sensitivity*

Case Processing Summary

		N	%
Cases	Valid	268	87,6
	Excluded ^a	38	12,4
	Total	306	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,897	8

Item–Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item–Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
S11	48,47	126,378	,748	,626	,878
S12	50,22	134,105	,498	,294	,902
S14	47,79	125,352	,779	,628	,876
S17	48,85	131,705	,646	,468	,888
S13	49,02	122,116	,777	,625	,875
S15	47,47	130,228	,627	,438	,889
S16	49,65	128,227	,655	,445	,887
S18	47,54	127,605	,739	,643	,879

Reliability score for factor *Dedication*

Case Processing Summary

		N	%
Cases	Valid	268	87,6
	Excluded ^a	38	12,4
	Total	306	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,844	4

Item–Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item–Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
D14	26,25	19,883	,637	,414	,821
D13	26,19	20,469	,666	,451	,809
D11	26,50	18,775	,694	,513	,796
D12	26,30	18,622	,724	,547	,782

Reliability score for factor *Charisma*

Case Processing Summary

		N	%
Cases	Valid	268	87,6
	Excluded ^a	38	12,4
	Total	306	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,771	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
C15	31,15	35,860	,451	,222	,761
C14	29,71	34,050	,668	,530	,692
C11	31,25	34,535	,548	,380	,728
C13	29,95	32,582	,667	,520	,687
C12	31,55	34,885	,425	,192	,776

Reliability score for factor *Attractiveness*

Case Processing Summary

		N	%
Cases	Valid	268	87,6
	Excluded ^a	38	12,4
	Total	306	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,835	,834	4

Item–Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item–Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
A14	15,16	39,094	,689	,488	,781
A11	13,66	35,887	,728	,638	,762
A13	14,45	35,844	,767	,682	,744
A12	15,60	43,513	,490	,257	,864

Reliability score for factor *Masculinity*

Case Processing Summary

		N	%
Cases	Valid	268	87,6
	Excluded ^a	38	12,4
	Total	306	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,853	2

Item–Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item–Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
M11	3,31	5,892	,743	,552	.
M12	3,16	5,851	,743	,552	.

Reliability score for factor *Intelligence*

Case Processing Summary

		N	%
Cases	Valid	268	87,6
	Excluded ^a	38	12,4
	Total	306	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,877	,882	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
I15	38,83	60,268	,679	,519	,857
I16	39,45	59,447	,655	,454	,860
I12	40,23	59,607	,527	,289	,885
I13	39,35	57,046	,794	,656	,838
I14	39,23	56,838	,790	,676	,838
I11	39,86	55,408	,695	,513	,854

Reliability score for factor *Strength*

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	268	87,6
	Excluded ^a	38	12,4
	Total	306	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,492	2

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
B11	5,62	6,146	,329	,108	.
B12	5,58	4,798	,329	,108	.

Appendix IV - Factor analysis

KMO and Barlett's Test

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,921
Bartlett's Test of Sphericity	Approx. Chi-Square	7197,358
	df	820
	Sig.	,000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared	
	Total	% of Variance	Cumulative %	Total	% of Variance
1	11,661	27,765	27,765	11,661	27,765
2	7,804	18,580	46,346	7,804	18,580
3	2,467	5,874	52,219	2,467	5,874
4	1,395	3,323	55,542	1,395	3,323
5	1,373	3,268	58,810	1,373	3,268
6	1,116	2,658	61,468	1,116	2,658
7	1,067	2,541	64,010	1,067	2,541
8	1,037	2,468	66,478	1,037	2,468
9	,900	2,142	68,619		
10	,845	2,013	70,632		
11	,797	1,897	72,530		
12	,784	1,866	74,396		
13	,732	1,743	76,139		
14	,703	1,674	77,813		
15	,652	1,552	79,366		
16	,608	1,448	80,813		
17	,574	1,367	82,180		
18	,522	1,242	83,423		
19	,497	1,183	84,606		
20	,466	1,109	85,714		
21	,453	1,077	86,792		
22	,401	,954	87,746		
23	,395	,941	88,687		
24	,386	,918	89,605		
25	,360	,858	90,463		
26	,343	,816	91,279		
27	,337	,802	92,081		
28	,333	,792	92,874		
29	,302	,720	93,593		
30	,294	,701	94,294		
31	,279	,663	94,957		
32	,257	,612	95,569		
33	,256	,611	96,180		
34	,237	,564	96,743		
35	,216	,514	97,257		
36	,198	,472	97,729		
37	,184	,439	98,168		
38	,180	,427	98,595		
39	,167	,397	98,993		

Rotated Component Matrix

Rotated Component Matrix ^a								
	Component							
	1	2	3	4	5	6	7	8
I14	,820							
I13	,788							
I15	,754							
D13	,734							
D11	,701							
I11	,701							
I16	,686							
D12	,685							,320
D14	,670						-,450	
C14	,668							,394
C13	,569		,326					,422
I12	,540			,382			,307	
S15	,501	-,371	,422					
T14		,811						
T15		,775						
T19		,772						
T18		,747						
T16		,727						
T17		,714						
T12		,667						
T20		,602						
M12		,565		,321			,370	
M11		,498					,445	
S16			,737					
S13	,362		,734					
S11	,360		,705					
S12			,703					
S17	,376		,658					
S14	,484		,632					

S18	,480		,586				-,309	
A11				,838				
A13				,825				
A14		,345		,675				
A12		,405		,450		,381		
C12					,653			
C15	,357				,607			
B12				,437	,524			
B11		,344			,500			,312
T13		,440				,741		
T11		,529				,646		
C11	,439							,682

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 13 iterations.

Appendix V - Frequency analysis for Part 1

Characteristics	Both	Female	Male	Neither
1. Dominant	49.3	12.7	23.9	14.2
2. Attractive	32.1	17.2	8.2	42.5
3. Knowledgeable	82.5	8.2	6.0	3.4
4. Sympathetic	47.4	40.3	8.2	4.1
5. Helpful	66.8	21.3	7.8	4.1
6. Goal-oriented	71.3	7.5	18.7	2.6
7. Obnoxious	22.8	9.3	14.9	53.0
8. Clever	79.5	7.5	7.5	5.6
9. Sensitive	23.9	46.3	6.0	23.9
10. Domineering	38.8	11.9	25.4	23.9
11. Demanding	51.1	15.7	14.6	18.7
12. Dynamic	62.3	10.1	10.1	17.5
13. Enthusiastic	70.5	16.4	9.0	4.1
14. Understanding	60.8	28.7	7.1	3.4
15. Hard-working	82.5	9.0	5.2	3.4
16. Conceited	15.7	12.7	10.8	60.8
17. Energetic	60.1	11.9	12.3	15.7

18. Inspiring	59.0	12.7	14.2	14.2
19. Power-hungry	17.5	12.7	23.9	45.9
20. Educated	76.5	7.8	6.0	9.7
21. Male	17.9	2.6	54.9	24.6
22. Bold	33.6	9.3	20.9	36.2
23. Forgiving	57.5	17.9	11.2	13.4
24. Intelligent	81.3	9.0	5.6	4.1
25. Classy	35.1	31.0	4.9	29.1
26. Compassionate	52.6	30.6	6.3	10.4
27. Well-groomed	68.7	14.9	9.3	7.1
28. Masculine	17.9	2.6	58.6	20.9
29. Wise	80.2	7.1	7.8	4.9
30. Pushy	32.8	20.1	17.2	29.9
31. Intellectual	75.7	5.2	5.6	13.4
32. Dedicated	82.8	9.0	5.6	2.6
33. Sincere	66.0	11.6	11.9	10.4
34. Motivated	81.0	7.8	8.2	3.0
35. Manipulative	18.7	18.3	12.3	50.7
36. Loud	17.5	18.7	21.6	42.2

37. Well-dressed	64.2	13.8	8.2	13.8
38. Strong	70.1	4.5	13.4	11.9
39. Warm	42.5	28.7	9.7	19.0
40. Selfish	23.9	10.8	16.0	49.3
41. Charismatic	62.3	7.8	11.2	18.7

Appendix VI - Variance analysis - ANOVA

ANOVA

Sensitivity

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	11,590	2	5,795	2,269	,105
Within Groups	676,964	265	2,555		
Total	688,555	267			

ANOVA

Tyranny

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8,872	2	4,436	1,636	,197
Within Groups	718,323	265	2,711		
Total	727,194	267			

ANOVA

Dedication

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5,681	2	2,840	1,388	,251
Within Groups	542,456	265	2,047		
Total	548,137	267			

ANOVA

Charisma

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5,482	2	2,741	1,352	,260
Within Groups	537,257	265	2,027		
Total	542,739	267			

ANOVA

Attractiveness

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2,483	2	1,241	,304	,738
Within Groups	1082,435	265	4,085		
Total	1084,918	267			

ANOVA

Masculinity

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	39,759	2	19,879	3,972	,020
Within Groups	1326,431	265	5,005		
Total	1366,190	267			

ANOVA

Intelligence

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	13,317	2	6,659	2,979	,053
Within Groups	592,290	265	2,235		
Total	605,607	267			

ANOVA

Strenght

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	16,377	2	8,189	2,278	,104
Within Groups	952,551	265	3,595		
Total	968,928	267			

Appendix VII – Mean score for characteristics

Characteristic	Mean score	Characteristic	Mean score
Dominant	5.14	Well-groomed	5.96
Attractive	4.02	Masculine	3.31
Knowledgeable	8.56	Wise	8.16
Sympathetic	7.10	Pushy	5.07
Helpful	8.03	Intellectual	7.53
Goal-oriented	8.83	Dedicated	8.58
Obnoxious	1.83	Sincere	8.10
Clever	7.94	Motivated	8.78
Sensitive	5.35	Manipulative	2.99
Domineering	4.79	Loud	3.62
Demanding	5.76	Well-dressed	5.18
Dynamic	7.25	Strong	5.62
Enthusiastic	8.69	Warm	5.92
Understanding	7.79	Selfish	3.01
Hard-working	8.89	Charismatic	6.85
Conceited	2.45		
Energetic	7.15		
Inspiring	8.46		
Power-hungry	3.01		
Educated	7.16		
Male	3.16		
Bold	5.58		
Forgiving	6.72		
Intelligent	8.04		
Classy	4.47		
Compassionate	6.56		