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**The influence of ethical climate and leadership on
basic psychological needs within the construction
industry**

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Abstract

During the last decades, the construction industry has struggled with negative press concerning an unethical work environment and inadequate management. The unethical work environment leads to unsatisfied employees, and both internal and external activities are rising to solve this problem. There are limited research understanding of how an ethical climate and ethical leadership are associated to the satisfaction of the basic psychological needs within self-determination theory. Therefore, the aim of this study was to examine the association between these variables and further examine if ethical leadership had a mediating effect on the associations between the criteria of ethical climate and the three basic psychological needs. With a cross-sectional design the data was collected from employees within an organization in the construction industry in Sweden. A digital survey was used as measurement and 171 employees participated in the study. The results indicated significant associations between ethical climate, ethical leadership and the basic psychological needs; autonomy, competence and relatedness. Of the ethical climate criteria, principle climate was not a significant predictor of the basic needs. Ethical leadership had a significant mediating effect on ethical climate and autonomy, and ethical climate and relatedness. The study contributes to the understanding of how ethical climate and ethical leadership are associated to our basic psychological needs and how organizations should give priority to ethical standards in the work environment to satisfy their employees.

Keywords: Ethical leadership, ethical climate, self-determination theory, basic psychological needs, construction industry.

The construction industry has for many years been dealing with negative press involving conflicts and disputes, poor collaboration or lack of customer focus (Vennström, 2008; Latham, 1994). According to Vennström, (2008), it is attitudinal barriers, such as lack of ethics and morality, and a conservative industry culture that are important contributing factors for the reputation of the industry. Employees within the construction industry report of a general unethical and tough working climate, where ethical standards are not prioritized and the leadership is inadequate (Arbetsliv, 2014; Sydsvenskan, 2016). To improve this issue both social actors within the industry, as well as external actors in the community, strive for a desire to achieve diversity. For instance, municipalities around Sweden have started to request that construction suppliers report activities linked to social consideration in public procurement (e.g. Göteborg kommun, 2016; Örebro kommun, 2017; Umeå kommun, 2016), in line with the EU Progress program for employment, social affairs and inclusion (European Commission, 2010). This means that procurement operations now take into account social considerations as employment opportunities for people with a distance to the labor market, which includes the construction industry.

Recruitment to gain diversity is a long-term solution to the attitudinal issues, but to keep the supplement of new employees within the organizations and to make them feel satisfied with their choice, organizations have a problem to solve; how to make the workplace more ethical and improve well-being among all their employees, and how to foster ethical behavior to change the norms and reputation of the industry in society? As Victor and Cullen (1988), developers of the typology ethical work climate, state, “Organizations are social actors responsible for the ethical and unethical behaviours of their employees” (p.101).

An ethical work climate refers to employees’ perceived sense of obligation to behave in an ethical manner (Choi, Ullah, & Kwak, 2015), and leads to high levels of organizational commitment and satisfaction, and general psychological well-being amongst employees (Martin & Cullen, 2006). Brown, Treviño and Harrison (2005) has further suggested that leaders should be the key source of ethical guidance for employees. Environmental aspects as well as the leadership style have shown to have an effect on the basic psychological needs on the basis of self-determination theory (SDT; Van den Broeck, Vansteenkiste, De Witte, Soenens & Lens, 2010; Hetland, Hetland, Andreassen, Pallesen & Notelaers, 2011). The existing research mainly focus on the work outcomes of ethical climate and ethical leadership, as well as general effects of leadership and work climate on the basic psychological needs in a working context, but there are still questions concerning whether ethical leadership and ethical climate directly satisfies the employees’ basic psychological needs. Especially

amongst construction workers who have shown a greater risk of mental illness compared to the general population (Boshman, van der Molen, Sluiter & Frings-Dresen, 2013).

The current study therefore intends to gain a deeper understanding about the effects of ethical climate and ethical leadership on the psychological basic needs amongst employees within the construction industry. The initiative to the topic derives from the challenge organizations are facing with recruiting and keeping employees with a diversity of backgrounds. Therefore, this study partly aims to promote the importance of ethical climate and ethical leadership to maintain an overall wellbeing within the organization.

Moral development and judgement

Organizations are influential because people often rely on others when they determine how to think about and act on an ethical dilemma (Treviño, 1986). This phenomenon highlights the importance of cognitive development theory (Kohlberg, 1969) for understanding organizational ethics. The theory suggests that individuals go through three stages when developing moral judgment, and each stage requires increased cognitive capacity. The starting point of the individual in this development is from an egoistic perspective, evaluating morality in terms of personal consequences (*preconvention level*). Then, the individual is moving to a stage where they identify right and wrong in terms of social relationships, where a correct behavior is expected by others (*conventional level*). At the highest level of moral development, individuals have their own view about the principles that underlies ethical decisions and rely on universalistic principles to guide their ethical decision-making (*post conventional level*). In an organizational setting, this explains the powerful influence of peers, leaders, significant others, all which can guide employees' ethical decision making.

Ethical climate

Ethical climate is a component of the organizations general work climate, which is constructed throughout norms and conventions within the organization, and is defined by actions of support and reward of the members' behaviours within the organization (Hung & Tsai, 2006). Organizational climate is not stable throughout the organization, but contains multiple work climate types (Schneider, 1975), due to differences in individuals, work groups, employment histories, and positions (Victor & Cullen, 1988). Ethical climate can be analysed to understand a group of perspectives within the organizational climate reflecting the organizational procedures, policies, and practices with moral consequences (Martin & Cullen, 2006). An ethical climate arises when ethical reasoning and behaviour are expected to be

standards or norms in the organisation (Cullen, Parboteeah & Victor, 2003).

Victor and Cullen (1988) developed a typology of ethical climates based on Kohlberg's theory of moral development. Their typology corresponds to two dimensions that creates a cross-tabulation, which results in nine theoretical ethical climate types, illustrated in Figure 1 (Victor & Cullen, 1988).

		LOCUS OF ANALYSIS		
		Individual	Local	Cosmopolitan
ETHICAL CRITERIA	Egoism	Self-Interest	Company Profit	Efficiency
	Benevolence	Friendship	Team Interest	Social Responsibility
	Principle	Personal morality	Company Rules and Procedures	Laws and Professional Codes

Figure 1. Theoretical strata of ethical climate (Victor & Cullen, 1988).

In the first dimension, Victor and Cullen (1988) created three constructs referring to the different referent groups that individuals utilize in decision making called *the locus of analysis*, which include *individual*, *local* and *cosmopolitan*. The individual refers to the self as referent of moral reasoning; the local relates to the more immediate social systems within which individuals are located (i.e. the organization); and the cosmopolitan refers to sources of moral reasoning outside of the organization or group (i.e. society or profession norms) (Victor & Cullen, 1988).

In addition to the locus of analysis, the second dimension represents ethical criteria used for organizational decision making (Victor & Cullen, 1988). The three basic criteria are *egoism*, *benevolent* and *principle*. Egoism refers to when organizational norms support the satisfaction of self-interest; benevolent refers to when organizational norms support the satisfaction of the interests of as many people as possible; and principle climates relates to

internalization of universal standards and beliefs by organizational members (Elci & Alpkan, 2008).

The egoistic climate is primarily based upon the maximization of self-interest at the personal, company, or social level, and ignoring the needs or interests of others (Cullen, et al., 2003). Decisions that are based at the individual level represent an individual's internalized values and beliefs, and decisions at the local level satisfy the organizations best interest (Upchurch, 1998). Decisions at the cosmopolitan level are affected by social or economic interests (Upchurch, 1998). When the organizational climate supports self-interested behaviors, it is expected that employees have less concern for others in the organization (Cullen et. al., 2003).

A benevolent climate is based on concern for others (Victor & Cullen, 1988). In this climate, employees seek alternatives to maximize joint interests, even if it means a less satisfaction of individual needs (Weber, 1995). Employees within these climates see their organization as having a sincere interest for the well-being of others (Wimbush & Shepard, 1994). Individuals using benevolent criteria develop friendships without regard to the perception of belongingness towards the organization, while the local referent level refer to a collective influence that exists within the work setting (e.g. work teams; Upchurch, 1998). From a cosmopolitan perspective, individuals make ethical decision based on external factors that guide socially responsible behaviour (Upchurch, 1998).

In a principle climate, employees who are faced with an ethical dilemma are referred to principles that are based on adherence to rules and codes (Cullen et al., 2003). At the individual level of analysis, decisions are based on individual rules and principles. At the local level, individuals are making decisions that are in alignment with their organizational rules and procedures. And at the cosmopolitan level, ethical decisions are affected by codes of ethics from outside the organization (Upchurch, 1998).

To maintain an ethical climate, the organization is suggested to take active steps that are custom to all the criteria presented above (Deshpane, 1996). For example, a code of ethics may be very effective in a principle climate, but not as effective in a benevolent climate. Therefore, different climate types require different ethics management strategies.

Ethical communication, in various forms, has shown to promote ethical decision making within the organization whereas the leader has shown to have key role (Koh & Boo, 2001; Victor & Cullen, 1988). The importance of the leaders' involvement and influence on ethical climate has been noted in other research concerning ethical climate (e.g. Cullen, et al., 2003; Elci & Alpkan, 2008; Hung & Tsai, 2016).

Ethical Leadership

According to moral development theory employees look outside themselves for ethical guidance (Kohlberg, 1969). This makes leadership in organizations crucial to maintain and develop an ethical climate. Ethical leadership has mainly been defined in normative terms amongst philosophers, where focus has been on moral principles and how leaders *ought* to behave (Brown, et al., 2005; Ciulla, 1998), but a descriptive definition of ethical leadership has recently started to emerge amongst organizational researchers (Brown & Treviño, 2006).

Treviño, Hartman and Brown (2000) were among the first to conduct a formal investigation that focused on defining ethical leadership from a descriptive perspective. The result from their qualitative research revealed that ethical leaders might be described along two dimensions: *moral person* and *moral manager* (Treviño, et al., 2000). The moral person dimension refers to observers' perceptions of the qualities of the ethical leader as a person, while the moral manager dimension refers to how the leader uses the tool of the position of leadership to promote ethical conduct in work and influence followers' ethical behavior (Treviño, et al., 2000). Building on this qualitative research Brown, et al. (2005) clarified a construct and formal definition of ethical leadership as “the demonstration of normativity appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making.” (p. 120).

To explain the antecedents and outcomes of ethical leadership, Brown and Treviño (2005) grounded their conceptualization of ethical leadership in social learning theory. According to this theory, individuals can learn standards of appropriate behavior by observing how role models behave (Bandura, 1977). Ethical leaders are likely the source of guidance because not only do they occupy powerful and visible positions in the organizational hierarchies that allow them to naturally capture their followers' attention (Brown & Mitchell, 2010), but also an ethical leader is characterized as attractive and credible role models and therefore draw followers' attention to their modeled behavior (Brown, et al., 2005). Attractiveness and credibility involves more attention than authority and status (Brown & Mitchell, 2010). As an attractive leader demonstrates care, concern, and fairness, which are factors that catches followers' attention, as well as are credible because they are trustworthy and practice what they preach (Brown & Treviño, 2006).

Social learning theory also assumes that much learning occurs vicariously, which means that organizational members are paying attention to how other members are rewarded or

disciplined, in which they learn and regulate their own behavior (Brown & Treviño, 2006). Engelbrecht, Van Aswegen and Theron (2017) suggested that an organization's ethical climate, because of its influence on members, should be representative of the leader's dedication to moral values and norms expressed in their daily effort to conduct themselves accordingly.

Ethical Leadership and Ethical Climate

According to Victor and Cullen (1988), an ethical climate is the current perceptions of typical organizational practices and procedures that have ethical content. This means that several organizational factors contribute to the member's ethics-related attitudes and behaviors, including leadership. According to Engelbrecht, et al. (2017) ethical leadership behavior can be seen as a critical factor of an organization's ethical climate. Brown and Treviño (2006) also proposes that an ethical climate supports the development and sustaining of ethical leadership within the organization. In an ethical climate, members desire an ethical leadership, which gives leaders chances to imitate models of ethical leadership (Engelbrecht, et al., 2017).

Researchers articulate different processes by which a leader's ethical approach affects an organizational ethical climate. For example, Treviño, et al., (2000) points out that values are the glue that holds things together, and that these must be conveyed from the top of the organization. Therefore, the reputation of an ethical leader is of importance. An ethical leader signals what is ethical by rewarding and punishing certain behaviors of the followers, and therefore consequently determines the organizational climate, through the development of policies and practices (Brown & Treviño, 2006; Engelbrecht, et al., 2017). Dickson, Smith, Grojean and Ehrhart (2001) suggest that the critical factor of ethical climate is the leader's ethical behavior. Despite different approaches to what predicts the relationship of ethical climate and ethical leadership, there is a consensus that leaders have substantial power to create and maintain ethical norms and processes within the organization.

From the assumptions and findings above, it can be predicted that ethical leadership is positively associated with ethical climate in an organizational context. Most of the research on leadership in the construction industry has concentrated on personal characteristics and technical skills, rather than quality of leadership style (Dulaimi & Langford, 1999; Tabassi, Ramli, Bakar & Pakir, 2013). In line with the increasing importance of human resources in construction management, researchers have shown more interest on leadership qualities during the last years (Toor & Ofori, 2007; Limsila & Ogunlana, 2008). For instance, Limsila

and Ogunlana (2008) revealed that work quality shows a positive association with inspirational motivation and idealized influence from the leader. In addition, Toor and Ofori (2007) discusses the importance of a leader's high levels of ethics and morality to bring well-being to their followers.

Self-determination theory

In addition to the ethical context within organizations, the present study examines the three basic psychological needs, which have their theoretical basis in Deci and Ryan's (2000, 2017) Self-Determination theory (SDT). Central to Self-determination theory is the distinction between intrinsic motivation and extrinsic motivation. Intrinsic motivation refers to when people engage in an activity because they find it interesting (e.g., I work because I enjoy it), while extrinsic motivation involves acting with a sense of external pressure (e.g., I work because I have to) (Gagne & Deci, 2005). Unlike other motivation theories, which assume that people strive to action and behaviors that will lead them to their desired outcome or goals, SDT has differentiated the concept of goal-directed behavior to the *content* of motivation, and the *regulatory process* through which the desired outcomes are pursued (Deci & Ryan, 2000). The concept of the three basic psychological needs is used as the basis for integrating the differentiations of goal contents and processes from those differentiations. According to SDT, the effects of goal pursuit concerns the degree to which people are able to satisfy their basic psychological needs as they attain their desired outcomes (Deci & Ryan, 2000).

Basic psychological needs

The satisfaction of the three psychological basic needs is just as essential for individuals as water, sunshine and minerals are for plants to thrive. Similar to the way individuals meet their physical needs for physical survival, satisfaction for psychological needs are critical for one's psychological functioning to achieve psychological growth, internalization, and well-being (Deci & Ryan, 2000; Van den Broeck, Vansteenkiste, De Witte & Lens, 2008).

The psychological needs specify the innate psychological nutrients as essential for *psychological growth, internalization* and *well-being* (Deci & Ryan, 2000). Psychological growth represents the exploratory engagement in activities that individuals find intrinsically interesting and enjoyable, and that are done even in the absence of external reinforcement (Deci & Ryan, 2000). Psychological internalization represents the natural tendency for individuals to transform external reasons for engaging in a behavior into personally endorsed values and self-regulations (Deci & Ryan, 2000). Deci and Ryan (2000) view well-being as

not simply a positive subjective experience, but also as an organismic function in which the person detects vitality, psychological flexibility and a deep inner sense of wellness.

SDT starts from the premise that humans thrive towards psychological growth, internalization and well-being, and that the psychological needs for *autonomy*, *competence* and *relatedness* are essential to achieve these goals (Deci & Ryan, 2000).

The need for autonomy involves the perception of being the origin of one's choices, and not feeling controlled by people in one's surrounding (Stenling & Tafvelin, 2013). This do not imply a need to act independently from the requirements of others, it rather implies the need to act with a sense of choice and decision, even if doing so means complying with the wishes of others (Van den Boreck et al., 2016). The need is fulfilled when individuals are provided with a choice and acknowledging feelings can enhance the sense of self-initiation (Deci & Ryan, 2000). In contrast, motivational strategies such as rewards and threats undermine autonomy, and can lead to decreased motivation (Deci & Ryan, 2000).

The SDT concept of autonomy is related, but yet different from the conceptualizations typically held in organizational psychology (Van den Broeck et al., 2010). Unlike SDT, which refers to the subjective experience of psychological freedom, other definitions refer to autonomy as a task characteristic (e.g., Karasek, 1979, Hackman & Oldham, 1976). Although this definition of autonomy is likely to contribute to feelings of psychological freedom, it excludes the experience of autonomy satisfaction when people are dependent on others and follow others' requests (Van den Boreck, et al., 2010).

The need for competence involves a feeling of mastery over the environment and need to engage in challenging tasks to extend one's skills (Van den Broeck, et al., 2010). Satisfaction of the need for competence allows people to adapt to complex and changing environments, while competence frustration rather results in helplessness and a lack of motivation (Deci & Ryan, 2000).

Earlier research on the need for competence (Deci & Ryan, 2000) linked the effect of feedback to the satisfaction of competence, when studies showed that positive feedback enhanced intrinsic motivation while negative feedback did the contrary. Today, SDT views the need for competence to our natural tendency to explore and manipulate the environment, as well as in our search for challenges (Van den Broeck, Ferris, Chang & Rosen, 2016).

The third need, relatedness, involves feelings of being respected, understood, and securely connected to others, that implies being a member of a group, to love and care, and be loved and cared for (Stenling & Tafvelin, 2013; Baumeister & Leary, 1995). The need is

fulfilled when individuals experience a sense of communion, and develop close and intimate relationships with others (Deci & Ryan, 2000).

This need is the most recent addition to the theory of basic psychological needs and was grounded in its evolutionary benefits in terms of survival and reproduction (Van den Broeck, et al., 2016). The idea that relatedness is important for intrinsic motivation is also implied in attachment theory (Bowlby, 1979). Attachment theorists suggest that intrinsic motivation is observable as exploratory behavior which is more robust when infants are securely attached to a parent (Bowlby, 1977; Frodi, Bridges & Grolnvick, 1985). It is also consistent with concepts in organizational psychology, such as social support (Viswesvaran, Sanchez & Fisher, 1999), and loneliness at work (Wright, Burt, & Strongman, 2006).

The empirical literature of the beneficial effects of need satisfaction is growing exponentially, both in general and in the domain of organizational research (Van den Boreck, et al., 2016). Deci, Conell & Ryan (1989) provided support for the propositions that a supportive (rather than controlling) work environment promote basic need satisfaction, intrinsic motivation, and internalization of extrinsic motivation. Gagne & Deci (2005) have further shown that satisfaction of the basic psychological needs leads to positive work outcomes such as persistence, effective performance, job satisfaction, positive work attitudes, organizational commitment, and psychological well-being.

Social contexts and internalization

One of the assumptions of SDT is that human beings are oriented towards growth and development, and the search toward the optimal social context in order to actualize their potentials (Deci & Ryan, 2000). Individuals tend to naturally internalize values and regulation in a social context (Deci & Ryan, 2000). This means that as much as the social context in an organization can contribute to psychological growth and health, and in turn contribute to satisfaction of the basic psychological needs, it can also result in the manifestation of maladaptive behavior (Randelovic & Stojiljkovic, 2015). An organization that strive to maintain an ethical context, including both ethical climate and ethical leadership, would likely satisfy employees' basic psychological needs.

The leader's use of inspirational motivation has shown to have a positive effect on the employees' psychological basic needs (Stenling & Tafvelin, 2013). For example, if the communication of a leader contains a sense of meaning of the organizations activity, as well as an attractive vision of the future, the employees identify with this vision and make it their own. This gives the employee a sense of being autonomous (Brown, et al., 2005; Stenling &

Tafvelin, 2013). An ethical leader acts as a role model for followers and is likely to internalize and integrate extrinsic motivation throughout this behavior.

Several studies have found that autonomy-support within the social context promotes internalization of extrinsic motivation, which in turn leads to positive outcomes for the basic psychological needs (e.g. Black & Deci, 2000, Williams & Deci, 1996). When employees experience autonomy-support, they are encouraged to be self-initiating rather than just acting under the control of supervisors (Williams & Deci, 1996). An ethical climate involves a social context of friendships and supportiveness of colleagues, as well as respect for one another (Victor & Cullen, 1988). It is likely that an ethical climate internalizes ethical values amongst the employees, which contains feelings of involvement rather than exclusion, and leads to higher levels of well-being.

Aim and hypothesis

The aim of the study is to examine the ethical climate and ethical leadership within the construction industry, and how these factors relate to the basic psychological needs of autonomy, competence and relatedness (see Figure 2). A mediator can be a potential mechanism by which an independent variable can produce changes on a dependent variable. For instance, a positive association between ethical climate and need satisfaction may be explained by how ethical the leadership is in that organization, which would be the mediating variable. So, besides testing for the hypothesized, the study will additionally examine the mediating role of ethical leadership explorative. The hypotheses are as follows:

H₁ Ethical leadership will be positively associated with employees' perceptions of benevolent climate and principle climate, and negatively associated to employees' perception of egoistic climate.

H₂ Employees' satisfaction of autonomy will be positively associated with the perception of ethical leadership, benevolent climate and principle climate, and negatively associated to employees' perception of egoistic climate.

H₃ Employees' satisfaction of competence will be positively associated with the perception of ethical leadership, benevolent climate and principle climate, and negatively associated to employees' perception of egoistic climate.

H₄ Employees' satisfaction of relatedness will be positively associated with the perception of ethical leadership, benevolent climate and principle climate, and negatively associated to employees' perception of egoistic climate.

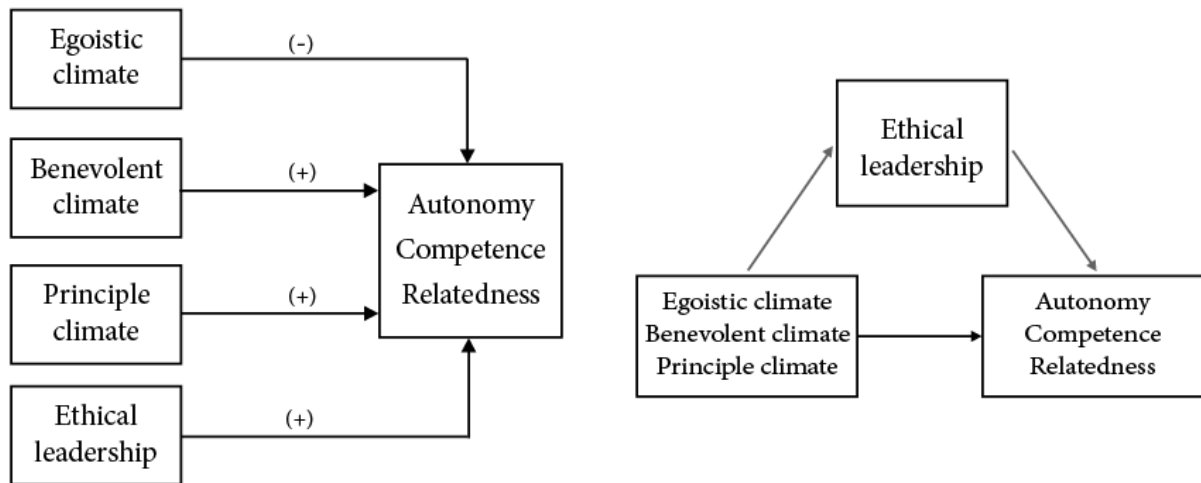


Figure 2. The theoretical model (left) and explorative model (right)

Method and design

Participants and procedure

A digital survey was sent to 847 employees working in the production within an organization in the construction industry. A reminder was sent out three times during the three weeks that the survey was available online. 171 employees completed the survey, which gives a response rate of 20%.

Amongst the participants, 0.5 % were women, 98% men, and 1.5% did not want to categorize as neither a woman nor man. Their age ranged from 18 to 65 years and most of the participants were 36-45 years (18,7%). The most frequent interval of time of employment within the organization was 1-5 years (34,5%), and 40% has worked more than 10 years within the organization.

Measurement

The measuring instrument was a digital survey. The survey consisted of three scales and demographic data. All together the survey consisted of 47 items: Background information, Ethical Climate Questionnaire, Ethical Leadership Scale, and Work-related Basic Need Scale (see Appendix). The scales were not available in Swedish and was therefore translated from English using a back-translation procedure, where the scales first were translated to Swedish by the author and then back-translated into English by the supervisor. The back-translation was compared with the original scales to confirm that the items reflected the same content. Back translation is an established and well-used translation method (University of North Dakota [UND], 2017)

Ethical climate. The perceived ethical climate was measured with the Ethical Climate Questionnaire (ECQ) developed by Victor and Cullen (1988). In the questionnaire, the respondents are asked to act as observers to report organizational expectations and not their personal beliefs or affective evaluations. The present study only measured the individual and local referent group and has excluded the cosmopolitan for several reasons. First, the subscale aims to measure the organization as a whole or as external systems, which do not predict to have any relevance to the organizational structure since the organization used in the present study is geographically decentralized. As the departments are located in different areas in the country, the culture may differ and, in turn, so would external moral reasoning. Second, since many of the departments started as family businesses, the organization acquisition process may differ, this means that the employees may be on different levels concerning the knowledge of the organization as a whole. And third, this is also due to practical reasons as to keep the questionnaire as short as possible to get as many participants as possible to answer without losing focus. Because of these factors, the cosmopolitan dimension has been excluded in the present research.

Except for the exclusion of the cosmopolitan dimension, one item was deleted to improvement reliability within the scale, so at the end 18 items (out of 26 items) were included in the statistical analysis. The questionnaire consists of three subscales or ethical dimensions: egoistic climate (6 items; e.g., “there is no room for one’s own personal morals or ethics in this company”), benevolent climate (4 items; e.g., “our major consideration is always what is best for the other person”) and principle climate (8 items; e.g., “everyone is expected to stick by company rules and procedures”). The items were measured on a five point Likert-type scale where 1 = strongly disagree and 5 = strongly agree.

Cronbach’s alpha was calculated for all three dimensions together as $\alpha=.82$ and for the three dimensions separately where $\alpha=.78$ for egoistic climate, $\alpha=.88$ for benevolent climate, and $\alpha=.73$ for principle climate.

Ethical leadership. The Ethical Leadership Scale (ELS), developed by Brown et al. (2005), was used to measure ethical leadership. Respondents were asked to evaluate their supervisor’s behavior on 10 items (e.g., “listens to what employees has to say”, “can be trusted” or “make fair and balanced decisions”). The items were measured on a five point Likert-type scale where 1 = strongly disagree and 5 = strongly agree. In the present study, the Cronbach’s alpha was .94.

Brown et al. (2005) conducted multiple studies to examine validity and internal coherence of the ethical leadership measure. The results from the research demonstrated high

reliability, stable dimensionality, and predictable relationships with variables in the nomological network of ethical leadership. Additionally, they found an agreement among members of a work group regarding the ethical leadership of their supervisor.

Basic psychological needs. Basic psychological needs were measured using Work-related Basic Need Scale (W-BNS; Van den Broeck et al, 2010). The scale consists of 16 items and aims to measure the participant's satisfaction of the three basic needs in a working context on the basis of Deci and Ryan's theoretical framework (2000). The scale consists of three subscales; autonomy (6 items; e.g. "I feel free to express my ideas and opinions in this job"), competence (4 items; e.g. "I really master my tasks at my job") and relatedness (6 items; e.g. "Some people I work with are close friends of mine"). The items were rated on a 7-point scale where 1=very true and 7=not at all true. In the present study, Cronbach's alphas were $\alpha=.81$ for autonomy, $\alpha=.89$ for competence, and $\alpha=.69$ for relatedness.

Data analysis

To test the hypotheses, Pearson's correlation coefficients, multiple hierarchy regression analyses, and mediation analyses were calculated.

The statistical power of the correlations was reported on the basis of Cohen's (1988) guidelines; $r=.10$ is weak, $r=.30$ is moderate, and $r=.50$ is strong. The correlations would also reveal if multicollinearity exists for the variables that are predictors in the multiple hierarchy regression analyses. According to Pallant (2016) the correlation between predictors in the same regression analysis cannot exceed $r=.90$.

To examine hypothesis 2, 3 and 4, three multiple hierarchy regressions were conducted where autonomy, competence and relatedness were the criterion variables. In each model, the three criteria of ethical climate and ethical leadership were the predictors.

Finally, mediation analyses tested the significance of the indirect effect between the criteria of ethical climate (only variables which had shown to be significant predictors in the regression analyses) and autonomy, competence and relatedness, through ethical leadership as a mediator. Using Preacher and Hayes' (2008) SPSS macro with a CI of 95% and 5000 bootstrap samples, it was possible to estimate the significance of the mediators. Indirect effect was considered significant when the corrected bias and accelerated confidence interval did not include zero (Preacher and Hayes, 2008). As for the multiple regression analyses, the mediation models were calculated separately for autonomy, competence and relatedness.

Ethical considerations

The cover letter that was sent to the participants informed about the purpose of the study and that participation was anonymous and voluntary, and that they had the right to drop out of the study if desired. The information also explained that the answers only would be used for statistical purposes. Particular caution was made regarding the ability to identify the participants in the collection of demographical data, and the results of the study was presented at a group level. Since data was collected within an organization, extra consideration was made when collection personal data to not be in the risk of secondary identification.

Results

The following section presents the results of the study. Initially, the correlations of the variables linked to the hypotheses are presented, followed by three multiple hierarchical regression and mediation analysis, one for each psychological need.

Correlation

Table 1 shows the intercorrelations of all variables. All of the variables, except for the correlations between principle climate and egoistic climate and principle climate and competence, were significant ($p \leq 0,01$). There was no multicollinearity between any of the variables, which were used in the multiple regression analyses. Ethical climate showed a strong positive correlation to ethical leadership ($r=.62$) and the need for autonomy ($r=.53$), a weak positive correlation to competence ($r=.27$), and a moderate positive correlation to relatedness ($r=.38$). Ethical leadership showed a strong positive correlation to the need for autonomy ($r=.57$), a weak positive correlation to competence ($r=.23$) and a moderate positive correlation to relatedness ($r=.32$).

Table 1. Means, standard deviation, and correlations.

Variables	Mean	SD	1	2	3	4	5	6	7
1. Ethical climate	3.42	0.56	1						
2. Egoistic climate	2.26	0.73	-.54**	1					
3. Benevolent climate	3.50	0.96	.83**	-.38**	1				
4. Principle climate	3.09	0.63	.80**	-.08	.46**	1			
5. Ethical leadership	3.30	0.98	.62**	-.44**	.52**	.42**	1		
6. Autonomy	4.90	1.19	.53**	-.51**	.52**	.22**	.57**	1	
7. Competence	5.73	1.05	.27**	-.26**	.24**	.13	.23**	.47**	1
8. Relatedness	5.30	1.26	.38**	-.30**	.34**	.22**	.32**	.47**	.49**

** Correlation significant at the 0.01 level (2-tailed). Note. Egoistic climate, Benevolent climate, and Principle climate are subscales in Ethical climate. (The Egoistic climate subscale is reversed in Ethical climate.)

Multiple regression and ethical leadership as mediating effect

Autonomy. Hypothesis 2 was partly confirmed as egoistic climate, benevolent climate, and ethical leadership were significant predictors of autonomy (Table 2). Model 1 explained 39% of the variance in autonomy, $F(3,166)=34.87, p<.001$. When ethical leadership was added in Model 2, the explained variance in autonomy increased to 46%, $F(4,165)=34.64, p<.001$. A positive significant beta value indicates that the higher levels of benevolent climate ($\beta=.28$) and ethical leadership ($\beta=.34$), the more satisfaction of the need for autonomy. In addition, the beta value indicates that the lower the levels of egoistic climate ($\beta=-.27$), the more satisfaction of the need for autonomy.

Table 2. Result from regression analysis with autonomy as dependent variable.

Variables	R ²	B	SE b	β	t	F
Prediction of autonomy on the basis of the dimensions of ethical climate and ethical leadership						
Model 1	.39					34.87***
Egoistic		-0.60	0.11	-.37***	-5.57	
Benevolent		0.46	0.09	.38***	5.08	
Principled		0.04	0.13	.02	0.28	
Model 2	.46					34.64***
Egoistic		-0.43	0.11	-.27***	-4.01	
Benevolent		0.34	0.09	.28***	3.80	
Principle		-0.13	0.128	-.07	-1.03	
Ethical Leadership		0.41	0.09	.34***	4.61	

*** $p \leq 0.001$.

The mediation analysis investigated if ethical leadership had a mediating effect on the association between egoistic climate and autonomy (Figure 3), and benevolent climate and autonomy (Figure 4). The results presented a significant direct effect between egoistic climate and autonomy ($c' = -.53, p < .001$), and a significant indirect effect between egoistic climate and autonomy ($axb = .30, 95\% \text{ CI: } -0.45 \text{ to } -0.17, p < .001$), which indicated a mediation of ethical leadership between egoistic climate and autonomy. Ethical leadership explained 36% of the variance in autonomy.

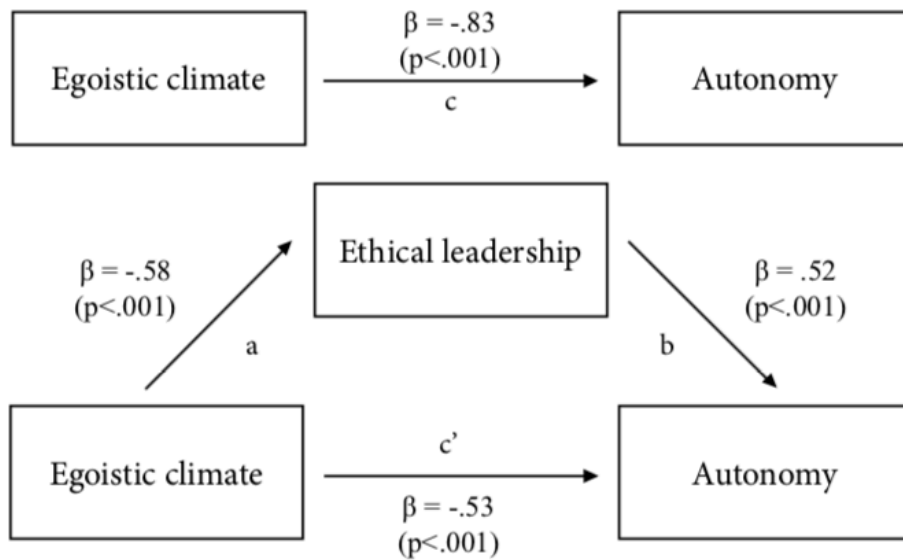


Figure 3. Direct path between egoistic climate and autonomy, and mediated path of ethical leadership.

The results also presented a significant direct effect between benevolent climate and autonomy ($c'=.38, p<.001$), and a significant indirect effect between benevolent climate and autonomy ($axb=.26, 95\% \text{ CI: } 0.15 \text{ to } 0.39, p<.001$), which indicated a mediation of ethical leadership between benevolent and autonomy. Ethical leadership explained 40 % of the variance in autonomy.

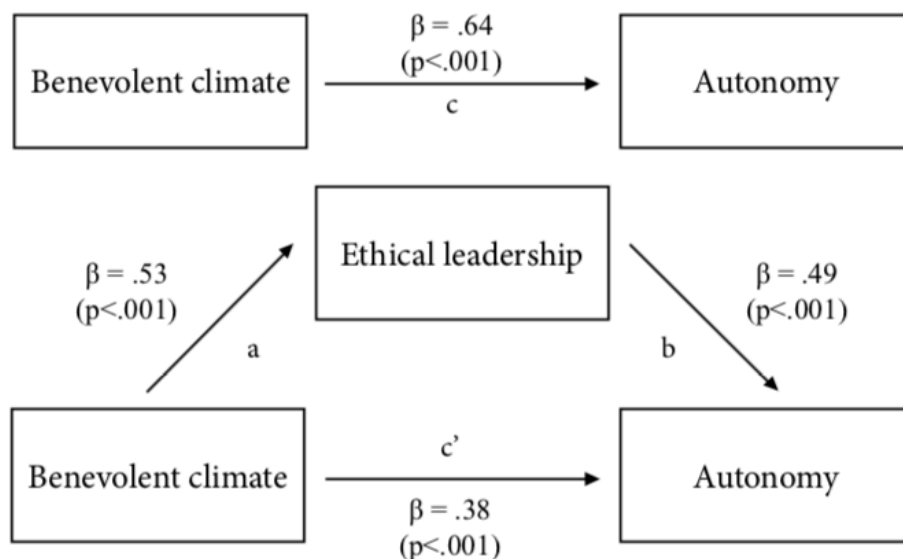


Figure 4. Direct path between benevolent climate and autonomy, and mediated path of ethical leadership.

Competence. As for hypothesis 3, of the four variables only egoistic climate was a significant predictor of competence (Table 3). Model 1 explained 9% of the variance in competence, $F(3,166)=5.556, p<.01$. When ethical leadership was added in Model 2, the

explained variance in competence increased to 10%, $F(4,165)=4.35, p<.01$. A negative significant beta value ($\beta=-.20$) indicated that the lower the levels of egoistic climate the more satisfaction of the need for competence.

Table 3. Result from regression analysis with competence as dependent variable.

Variables	R ²	B	SE b	β	t	F
Prediction of competence on the basis of the dimensions of ethical climate and ethical leadership						
Model 1	.09					5.56**
Egoistic		-0.29	0.12	-.20*	-2.50	
Benevolent		0.15	0.10	.14	1.53	
Principled		0.09	0.14	.06	0.66	
Model 2	.10					4.35**
Egoistic		-0.25	0.12	-.18*	-2.06	
Benevolent		0.124	0.10	.11	1.21	
Principled		0.06	0.15	.03	0.39	
Ethical Leadership		0.09	0.10	.08	0.86	

* $p \leq 0.05$, ** $p \leq 0.01$.

The mediation analysis investigated if ethical leadership had a mediating effect on the association between egoistic climate and competence (Figure 5). The results presented a significant direct effect between egoistic climate and competence ($c' = -.28, p < .001$), and a significant indirect effect between egoistic climate and competence ($axb = -.09, 95\% \text{ CI: } -0.21 \text{ to } 0.01, p < .001$). Since the confidence interval included zero the indirect effect was not significant, which indicated that ethical leadership does not have a mediating effect on the association between egoistic climate and competence.

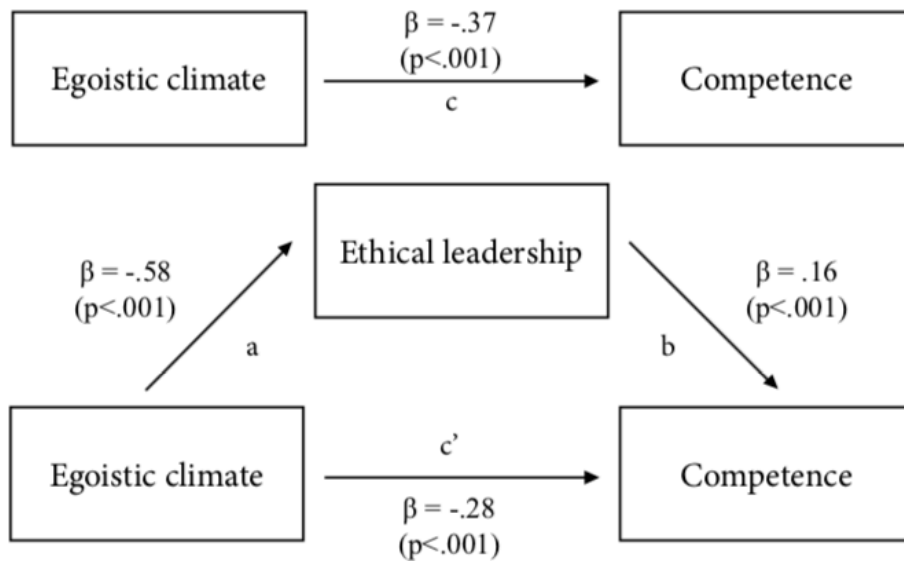


Figure 5. Direct path between egoistic climate and competence, and mediated path of ethical leadership.

Relatedness. Testing for hypothesis 4, the results indicated that egoistic climate and benevolent climate were significant predictors of relatedness (Table 4). Model 1 explained 16% of the variance in relatedness, $F(3,166)=10.54, p<.001$. When ethical leadership was added in Model 2, the explained variance in competence increases to 17%, $F(4,165)=8.35, p<.001$. A negative significant beta value ($\beta=-.21$) indicated that the lower the levels of egoistic climate the more satisfaction of the need for relatedness. In addition, the beta value of benevolent climate indicates that the higher the levels of benevolent climate ($\beta=.22$), the more satisfaction of the need for relatedness.

Table 4. Result from regression analysis with relatedness as dependent variable.

Variables	R ²	B	SE b	β	t	F
Prediction of relatedness on the basis of the three dimensions of ethical climate and ethical leadership						
Model 1	.16					10.54***
Egoistic		-0.37	0.13	-.21**	-2.78	
Benevolent		0.28	0.11	.22*	2.49	
Principled		0.20	0.16	.10	1.25	
Model 2	.17					8.35***
Egoistic		-0.31	0.14	-.18*	-2.19	
Benevolent		0.24	0.12	.18*	2.01	
Principled		-0.14	0.17	.07	0.83	
Ethical Leadership		0.15	0.12	.12	1.29	

* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$.

The mediation analysis investigated if ethical leadership had a mediating effect on the association between egoistic climate and relatedness (Figure 6), and between benevolent climate and relatedness (Figure 7). The results presented a significant and negative direct effect between egoistic climate and relatedness ($c' = -.35, p < .001$), and a significant indirect effect between benevolent climate and relatedness ($axb = -.17, 95\% \text{ CI: } -0.34 \text{ to } -0.04, p < .001$), which indicated a mediation of ethical leadership between egoistic climate and relatedness. Ethical leadership explained 32 % of the variance in relatedness.

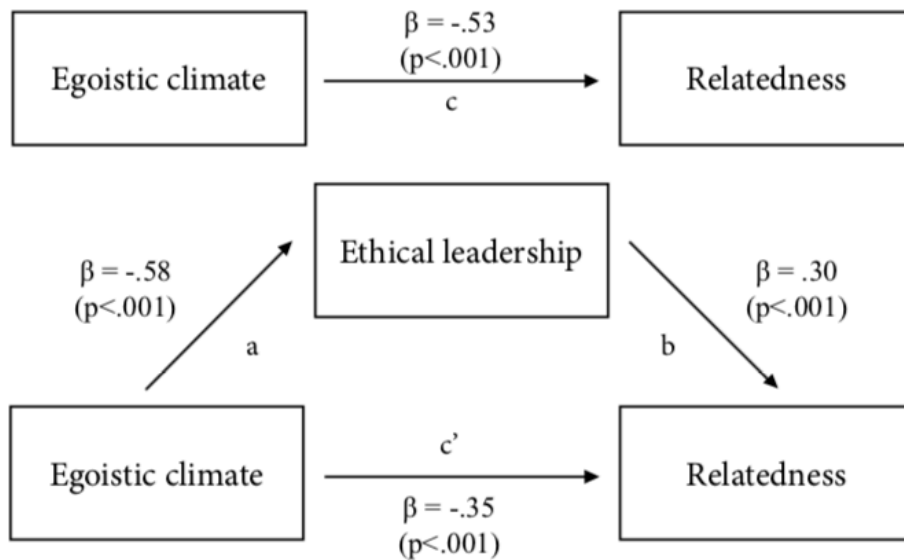


Figure 6. Direct path between egoistic climate and relatedness, and mediated path of ethical leadership.

The results presented a significant direct effect between benevolent climate and relatedness ($c' = .32, p < .001$), and a significant and negative indirect effect between benevolent climate and relatedness ($axb = .13, 95\% \text{ CI: } 0.01 \text{ to } 0.28, p < .001$), which indicated a mediation of ethical leadership between benevolent climate and relatedness. Ethical leadership explained 29 % of the variance in relatedness.

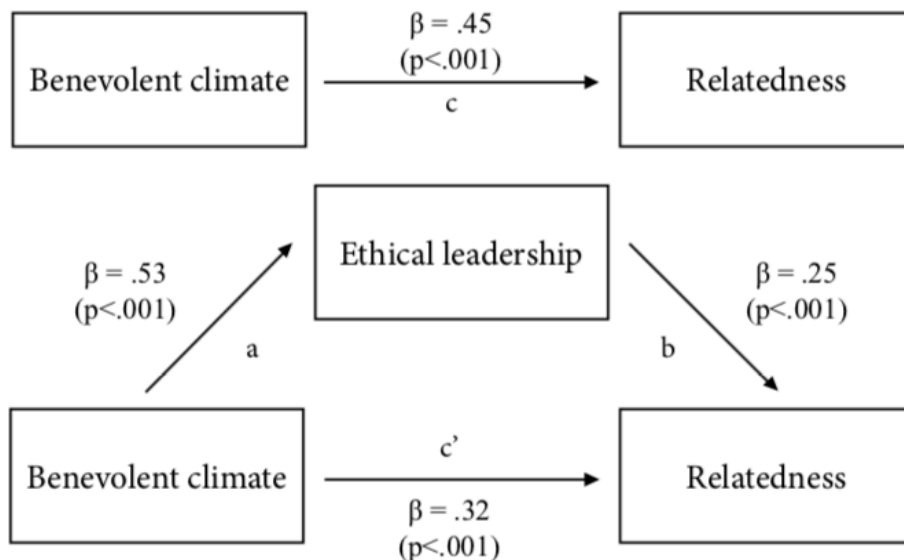


Figure 7. Direct path between benevolent climate and relatedness, and mediated path of ethical leadership.

Discussion and conclusion

The study aimed to examine the three criteria of ethical climate (benevolent, egoistic, and principle) and ethical leadership within the construction industry, and investigate how these factors are related to the need for autonomy, competence and relatedness. The initially posed hypotheses were partly supported in this study.

First, it was hypothesized that ethical climate would be positively associated to ethical leadership, based on earlier research of Choi et al., (2015), and Dickson et al., (2001). The results of the present study supported earlier research and found a positive association between these variables.

Ethical leadership further showed a strong association to benevolent climate, compared to the association to egoistic and principle climate, which were moderate. An ethical leader acts as an inspirational source of guidance, listens to employees and acts in their best interests (Brown et al., 2005). The ethical leaders' commitment to the employees may be the key factor for the strong association to benevolent climate which involves collective influence (Upchurch, 1998). The moderate association between egoistic climate and ethical leadership may have occurred when employees acting with a sense of self-interest in the individual level, but this interest is in line with the inspiration or conviction of the ethical leader. Therefore, it is likely that the scale in some cases might be reversed. However, at the higher levels of reference (local and cosmopolitan), self-interest refers to company profit as strategic advantage and corporate profit, and efficiency as social or economic interests (Victor & Cullen, 1988), which may reduce the impact of individual self-interest and a potential ethical consideration. The moderate association to principle climate may be because different types of climate require different ethics management strategies (Deshpane, 1996) and for a principle climate type, code of conduct or organization values may have a stronger association than the actual leadership. According to Brown and Treviño (2006) an ethical leader disciplines employees who violates ethical principles, but if the employees are well aware of the consequences of unethical behavior the leader oneself may not be directly associated with the actual consequences of an unethical act. Overall the result indicates the importance of ethical leadership to maintain an ethical climate in line with research of Engelbretch, et al. (2017), and an ethical climate to maintain an ethical leadership in line with research of Brown and Treviño (2006).

Second, it was hypothesized that the need for autonomy would have a positive association with ethical leadership and ethical climate. This assumption was based on earlier

research by Black and Deci (2000), and Williams and Deci (1996). In their research, they found that an autonomy supportive leader and a social context promote internalization of extrinsic motivation, which leads to positive outcomes for the need for autonomy. The results from the present study indicates of a positive association of ethical climate and ethical leadership with the need for autonomy. Of the three criteria of ethical climate, principle climate showed a weaker association compared to egoistic climate which showed a strong negative association and benevolent climate which showed a strong positive association with the need for autonomy.

Principle climate consist of rules and codes that employees are expected to follow in order to maintain an ethical climate (Cullen, et al., 2003). According to Deci and Ryan (2000), rewards and threats undermine autonomy. Rules and codes may be the foundation to which rewards and threats are built upon, and therefore strengthen the feeling of being controlled which will inhibit the satisfaction of autonomy. When employees have rules that they are expected to relate to and follow, the environment become controlling which undermines intrinsic motivation, an important factor for autonomy (Ryan & Deci, 2000). However, the correlations from the present study did not indicate a negative association between principle climate and autonomy. Except for company rules, principle climate contains of personal morality, which indicates independence - where principles are self-chosen and guided by personal ethics (Elci & Alpan, 2008). Therefore, the feeling of being controlled by external rules and codes, may not be as strong as the feeling of independence and guidance of own personal principles. Depending on of reference in principle climate, whether individual (referring to the self for moral reasoning) or local (referring to the organization), the feeling of autonomy might differ. This would explain the weak, yet positive, association between principle climate and autonomy in the present study.

Ethical leadership explained most of the variance in autonomy, compared to the other significant predictors; benevolent and egoistic climate. However, the climate criteria together explained more variance than the ethical leadership. In the mediation analysis, it was found that ethical leadership had a mediating effect on these climate criteria. Employees in a benevolent climate see their organization as having a sincere interest for their members (Wimbush & Shepard, 1994), and according to Treviño, et al., (2000), the leaders convey the values as the glue that holds things together. An ethical leader also acts as an inspirational source and makes employees identify with their vision of the future (Stenling & Tafvelin, 2013), and it is therefore likely that an ethical leader internalizes employees engaging in their

behaviors. The leader may symbolize an ethical climate with the actions of care and support, which satisfies the employees' need for autonomy.

Finally, it was hypothesized that competence and relatedness would be positively associated with the criteria of ethical climate and ethical leadership. This hypothesis was built upon earlier research by Deci and Ryan (2000) that argued that individuals search toward optimal social contexts in order to actualize potentials, and Cullen et al. (2003) who discuss the importance of ethical climate to satisfy joint interests amongst employees within the organization. In addition, according to research of Brown and Treviño (2006) ethical leaders provide care, concern and fairness towards their followers and throughout a modeling behavior they foster the organizational climate. The results from the present study indicate that ethical climate and ethical leadership have a weak positive association with competence, and a moderate positive association with relatedness.

The need for competence is not necessarily linked to intrinsic motivation as the need for autonomy and are not as socially founded as the need for autonomy and relatedness (Deci & Ryan, 2000). This indicates that competence in some manner differ from autonomy and relatedness and can explain the weak association to ethical climate and ethical leadership in the present study. In addition, according to Deci and Ryan (2000) it is important that employees feel responsible for their performance for satisfying the need for competence. It is likely that the individual performance does not get the main attention in the construction industry, but employees instead are being evaluated on the basis of group performance. This could explain the non-existing mediating effect of ethical leadership which mainly promotes a general ethical climate amongst the employees and act as a source of ethical guidance, not observing specific individual performance unless it violates ethical principles (Brown & Treviño, 2006).

The egoistic working climate explained most of the variance in competence, and was the only significant predictor of the variables. This means that the lower the levels of egoistic climate are, the higher the levels of the satisfaction of competence will be. In an egoistic climate employees act in line with self-interest and ignore the needs of others (Cullen et al., 2003). When colleagues act in line with self-interests it is likely that they are not encouraging one another, or diminish the achievements of others. An environment that characterizes negative feedback or comments thwarts the need for competence and intrinsic motivation (Deci & Ryan, 2000). On the other hand, an egoistic climate referring to the individual local of analysis, can probably be reversed if the individual's self-interest consists of ethical

principles as discussed earlier. This might explain that the weak negative association between egoistic climate and competence.

Relatedness and ethical working context both involve feelings of being respected and understood, both by the organization and the leader, as well as by colleagues (Stenling & Tafvelin, 2013; Wimbush & Shepard, 1994; Victor & Cullen, 1988; Brown & Treviño, 2006). However, the association was moderate for egoistic and benevolent ethical climate and ethical leadership, and weak for principle climate. Perhaps the moderate correlation may be due to differences in the way these feelings appear in connection to others. As for relatedness, the feeling of being part of a group is a central aspect for satisfaction (Baumeister & Leary, 1995; Deci & Ryan, 2000), while ethical climate specifies the importance of belongingness towards the organization at the same time it is controlled by ethical standards, which aim to influence the behaviors of the employees to be ethical towards one another (Upchurch, 1998; Cullen et al., 2003). Because of these differences, the association may have stayed moderate. Future research is necessary, to confirm this hypothesis.

The regression analysis showed that egoistic and benevolent climate both predicted satisfaction of relatedness while ethical leadership and principle climate were not significant predictors. In the mediation analysis however, ethical leadership showed to have a mediating effect both between egoistic climate and relatedness, and benevolent climate and relatedness. The mediating effect of ethical leadership could be referred to the discussion in the section above, as for the relatedness being more connected to social interaction than for benevolent climate and egoistic climate. An ethical leader may perhaps be the variable that holds the group members together and creates a community defined by sharing values and interests.

Taken together the results point towards that an ethical working context, containing ethical leadership and ethical climate, are positively associated to the three basic psychological needs of autonomy, competence and relatedness, amongst employees' in the construction industry.

Implications

The study extends previous research by presenting that ethical climate and ethical leadership influence on employee well-being in a context in which the application of ethical factors is still inadequate; the construction industry. Both ethical climate and ethical leadership have mostly been applied in professional work settings where the degree of education has been higher than amongst the respondents of the present study (e.g. Choi et al., 2015; Cullen, et al., 2003). The present study demonstrates the usefulness of ethical climate

and ethical leadership in a working context where the educational degree is lower compared to previous research, which contributes to external validity of ethical climate, ethical leadership and SDT.

The results of the present study points towards the importance for organizations to prioritize actions to improve ethical climate for which in turn provides satisfaction for the basic psychological needs amongst their employees. According to the results in the present study, the egoistic and benevolent climate explained more of the variance than principle climate and should therefore be the priority focus to gain a healthy environment in organizations.

The results of the mediation analysis indicated that ethical leadership had a mediating role in the association between egoistic climate and benevolent climate, and autonomy and relatedness. This highlights the importance of the leadership to be ethical in order to improve satisfaction through an ethical climate. Therefore, organizations should prioritize ethical characteristics such as inspirational motivation, intellectual stimulation and individualized consideration, when recruiting new leaders and focus on ethical principles when educating current leaders.

Limitation and future direction

The measurements for ethical climate and ethical leadership are based on the employees' subjective perceptions (Brown, et al., 2005; Victor & Cullen, 1988). Since a vast majority of the participants identified themselves as men, the current results are views ethical climate and ethical leadership from a male perspective. Women may have had different approaches to the ethical climate and ethical leadership that exists in the construction industry. Therefore, perception from a more equal selection would likely have shown different results. The participants in the present study were employees working close to the production, none of them in a manager position. An equal representation in the selection would be interesting to investigate further in future research as well as from the managers point of view.

The data was collected through self-report measures, which can cause risks for errors, such as low self-awareness, social desirability, or that participants do not answer truthfully. Despite the added definition of ethics in the beginning of the survey, it is also possible that participants did not understand the meaning of the concept and therefore the answer could have been affected. Self-report is well used when collecting a large amount of data. Although, for future directions, it would be interesting to use an observational method to combine with

self-reports, to avoid possible errors. Another method would be to ask the leaders to estimate their ethical leadership and perceived ethical climate, and analyze these results to the employees' estimation of perceived ethical climate and satisfaction of the basic psychological needs.

A cross-sectional design was used in this study when analyzing the variables. It is possible that personal traits, stress or other confounding variables, has had an effect on the results. Therefore, for future research, a longitudinal study would be interesting to use for investigating the associations between the variables further. Since the current method design cannot draw conclusions about causality, future research is necessary to determine the direction of causation.

The study took place within an organization in the construction industry. The results of the study therefore are limited in generalizing to a wider context. However, since the organization is geographically decentralized in Sweden and the sample appears to be representative of the population construction workers in Sweden, it is possible to generalize the results to the Swedish construction industry.

Conclusion

The study presents a positive association between ethical climate, ethical leadership and the basic psychological needs within the construction industry. The benevolent climate was a positive predictor, while egoistic climate was a negative predictor, to the three basic psychological needs; autonomy, competence and relatedness. Principle climate showed no significance as a predictor in neither of the basic psychological needs. Ethical leadership had a mediating effect on benevolent and egoistic climate, and their relationship to the basic needs for autonomy and relatedness, but not to the need for competence. The results support earlier research but further contribute to new approaches within the field since the ethical dimension has not been directly linked to the basic psychological needs. It also clarifies the associations between the different ethical climate criteria and the basic psychological needs, and the important role of the ethical leadership within these associations. Overall, an ethical climate and ethical leadership should be taken into account when discussing activities to improve the working environment within the construction industry.

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Appendix.

Ethical climate

Egoistic climate

I det här företaget värnar personer om sina egna intressen framför allt annat.

I det här företaget är personer mestadels för sig själva.

Det finns inget utrymme för sin egna personliga moral eller etik i det här företaget.

Personer förväntas att göra vad som helst för att gynna företagets intresse, oavsett konsekvenserna.

Personer här engagerar sig så för företagets intressen och utesluter därmed allt annat.

Arbetet anses under standard när det skadar företagets intresse.

Benevolent climate

Det som är bäst för alla i företaget är av största betydelse här.

Det viktigaste är att alla anställda i företaget som helhet trivs.

Vår största angelägenhet är alltid vad som är bäst för den andra personen.

I det här företaget ser man till varandras bästa.

Principle climate

I det här företaget förväntas personer att följa sina egna personliga och moraliska övertygelser.

Varje person i det här företaget bestämmer själv vad som är rätt och fel.

Den största angelägenheten i det här företaget är varje persons känsla av rätt och fel.

I det här företaget vägleds personer av sin egna personliga etik.

Det är väldigt viktigt att följa företagsregler och arbetssätt.

Alla förväntas följa företagsregler och arbetssätt.

Framgångsrika personer i det här företaget agerar enligt ”bokens alla regler”.

Personer i det här företaget lyder strikt företagets policys.

Ethical leadership

Lyssnar på vad anställda har att säga.

Tillrättavisar anställda som bryter mot etiska principer.

Lever sitt personliga liv på ett etiskt sätt

Har de anställdas bästa intresse i åtanke.

Gör rättvisa och balanserade beslut.

Kan lita på.

Samtalar om företagsetik eller värderingar med anställda.

Föregår med gott exempel när det gäller etik.

Definierar framgång, inte bara utifrån resultat, utan också på vilket sätt det uppnås.

Frågar sig ”vad är det rätta att göra?”, när beslut tas.

Basic psychological needs

The need for autonomy

Jag känner att jag kan vara mig själv på mitt jobb.

På jobbet känns det ofta som att jag måste följa andras kommandon.

Om jag kunde välja, skulle jag göra saker på jobbet annorlunda.

De uppgifter jag måste göra på jobbet går i linje med vad jag verkligen vill göra.

Jag känner mig fri att göra mitt jobb på det sätt jag tycker är bäst.

I mitt jobb känner jag mig tvungen att göra saker jag inte vill.

The need for competence

Jag bemästrar verkligen mina uppgifter i mitt jobb.

Jag känner mig kompetent på jobbet.

Jag är bra på de saker jag gör i mitt jobb.

Jag har en känsla av att jag till och med kan utföra de svåraste uppgifterna på jobbet.

The need for relatedness

Jag umgås inte med andra personer på jobbet.

På jobbet känner jag mig som en del av gruppen.

Jag känner inte att jag passar in bland kollegorna på mitt jobb

På jobbet kan jag prata med personer om saker som verkligen betyder något för mig.

Vissa personer jag jobbar med är nära vänner till mig.

Jag känner mig ofta ensam när jag är med mina kollegor.