

Exchange variables, organizational culture and their relationship with constructive deviance

Exchange
variables

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Abstract

Purpose – Constructive deviance is a behavior that can contribute to the effectiveness of an organization despite its problematic nature. Too few studies have examined the correlates of this behavior. The purpose of this study is to examine variables that represent exchange and organizational culture and their relationship to supervisor-reported and self-reported constructive deviance.

Design/methodology/approach – The survey data were collected from 602 employees (a response rate of 67 per cent) in a large municipality in central Israel. Hierarchical linear modeling (HLM) analyses were performed for each of the dependent variables (three self-reported constructive deviances and three supervisor-reported constructive deviance) controlling for divisions and departments.

Findings – The findings showed that self-reported constructive deviance was explained much better by the independent variables than supervisor-reported deviance. Organizational justice and moral identity had a strong direct effect on constructive deviance (self-reported). The mediation effect showed that an organizational climate for innovation had the strongest mediation effect among the mediators. Psychological contract breach was found to have a limited effect on constructive deviance.

Practical implications – Organizations should encourage procedural justice to encourage their employees to act in support of the organization, whether openly (formal performance) or more secretly (constructive deviance). Also, organizations should support innovation climate if they want to increase constructive deviance of their employees.

Originality/value – In a time when innovation and creativity are gaining increasing importance as behaviors that contribute to organizational success, more research on constructive deviance is expected. This study increases our understanding of this important concept stimulates additional studies of it.

Keywords Psychological contract breach, Organizational commitment, Organizational justice, Moral identity, Other management-related topics, Constructive deviance, Organizational climate for innovation

Paper type Research paper

Introduction

As creativity and innovation are critical to successful performance in a knowledge-based society, recent studies have underscored the role of deviant behavior in organizations. Deviance can be viewed as a propitious basis of creativity and innovation rather than merely harmful behavior because creative and innovative processes often require



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individuals to deviate from existing norms and the status quo. By focusing on the positive side of deviant behavior, scholars have labeled the act of disregarding significant norms of the referent group to achieve socially desirable ends as positive deviance (Kim and Choi, 2018). Constructive deviance (or positive deviance) is defined as voluntary behavior that violates significant norms with the intent of improving the well-being of an organization, its members, or both (Galperin, 2002, 2012; Vadera *et al.*, 2013).

Constructive deviance involves actions that “depart from the norms of a referent group in honorable ways” (Spreitzer and Sonenshein, 2004, p. 828). It is understood that it includes the intention to do something positive, though the outcomes of such honorable actions do need not to always be functional (Cropanzano *et al.*, 2017). Such behaviors enable employees to influence their organization in an unconventional way with the knowledge that they would not be allowed to do so in any other way. In recent years, there has been growing interest in this kind of deviance because of the realization that it can lead to positive changes in organizations (Luthans and Church, 2002; Robbins and Galperin, 2010) and promote innovation (Seidman and McCauley, 2008).

Employees who act on constructive deviance can contribute to the effectiveness of their work, improve service and enrich organizational performance (Mertens *et al.*, 2016; Morrison, 2006). Additionally, employees who are involved in constructive deviance can be described as active change agents who assist the organization in adjusting to change and new environmental constraints in the dynamic world market (Vadera *et al.*, 2013). Constructively deviant employees can be found in any organization and occupation. They are characterized as employees who can find better solutions to problems despite the fact that they share the same resources, challenges, and obstacles as the other employees. Quite often, the reason for their success is simply that they do things differently and sometimes bend the rules and disobey procedures to get the work done faster, better, and cheaper (Pascale *et al.*, 2010). Therefore, it is imperative to study the determinants of constructive deviance (Grant and Mayer, 2009).

The goal of this study is to advance and examine a model focused on the determinants of constructive deviance. The model examined is based on variables that represent exchange (organizational justice and psychological contract breach) and organizational culture (innovative organizational culture and moral identity). The target population is employees of one of the largest municipalities in Israel. Data on constructive deviance were collected from both the employees and their supervisors based on the assumption that supervisors do not always know about or are not informed of instances of constructive deviance.

The study offers several contributions. First, constructive deviance is an under-researched area in management literature and this study responds to the call for more research on this important behavior (Kura *et al.*, 2016). Second, collecting data on constructive deviance from employees and supervisors provides us with important implications regarding the appropriate source for information on this construct (Bodankin and Tziner, 2009). Kura *et al.* (2016) contended that future research should use supervisor and peer rating of constructive deviance to control for the common method variance and social desirability bias. Third, the model of this study advances several explanations for constructive deviance and analyzing all of them in one design can provide us with information regarding the importance of these theories (Galperin, 2012). For example, Galperin (2012) contended that future researchers should explore both the individual and contextual variables that may serve as key mechanisms in workplace constructive deviance. Fourth, collecting data from a large sample in a non-North American culture provides a unique and interesting perspective on this important behavior. Studies in the field of

constructive deviant behaviors should use more diverse populations (Bodankin and Tziner, 2009).

Literature review and research hypotheses

The research model is presented in Figure 1. The model anticipates a relationship between organizational justice and moral identity on the one hand and constructive deviance on the other. However, the model expects that this relationship is mediated by two variables: psychological contract breach and organizational climate for innovation.

Constructive deviance is a bottom-up approach that identifies and learns from those who demonstrate exceptional performance on an outcome of interest. The approach assumes that problems can be overcome using solutions that already exist within the organization. This approach also assumes that innovations that address issues that are common to many organizations have already been developed and can be detected by studying positive outliers before being tested and disseminated (Chiou *et al.*, 2017). Despite facing the same constraints as others, constructive deviance identifies common solutions and succeeds by demonstrating uncommon or different behaviors. Solutions are internally generated rather than externally imposed, ensuring that they are feasible within current resources, acceptable to others and sustainable over time (Baxter *et al.*, 2016). Like extra-role behaviors, constructive deviance is a broad construct that includes a number of more specific phenomena (Cropanzano *et al.*, 2017).

Many good ideas are undeveloped in public organizations because they deviate from the standard ways of doing things. Public programs need to be pushed out of their safety zones – those places of mental and physical routine and normalcy – so that they can start to think differently. Typically, constructive deviance is an uncommon behavior in organizations, namely, a deviant behavior without the negative connotations that are usually attributed to such behaviors. Employees who demonstrate such unusual actions can be perceived as positive but atypical employees who do not conform to the existing organizational patterns (Cropanzano *et al.*, 2017; Spreitzer and Sonenshein, 2004).

Several theories can be used to explain employees' decisions to act in a manner that constitutes constructive deviance. According to social exchange theory, constructive deviance is one way that employees can contribute to their organization in response to the positive exchange relationship they experience with the organization (Eisenberg *et al.*, 1990).

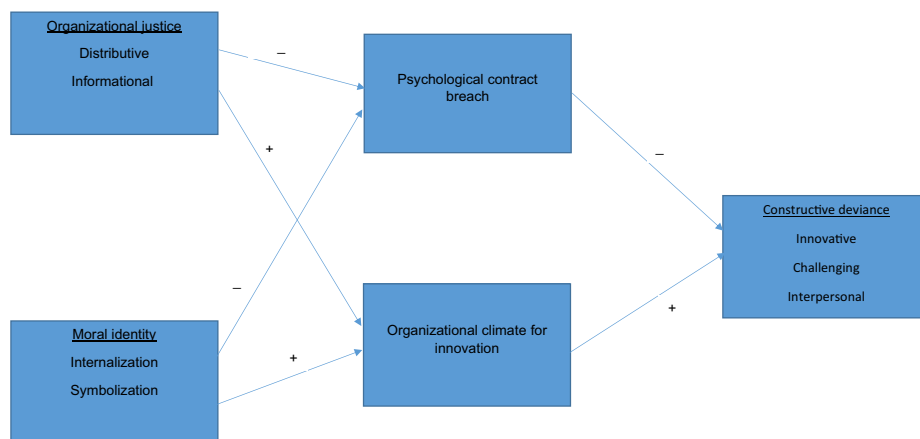


Figure 1.
Research model

Self-determination theory provides another possible explanation for constructive deviance. According to this theory, the type or quality of a person's motivation is more important than the amount of motivation for predicting outcomes such as effective performance and creative problem-solving. Employees that have higher levels of autonomous motivation are led by both intrinsic motivation and the types of extrinsic motivation they have identified with an activity's value and ideally will have integrated it into their sense of self. When employees are autonomously motivated, they experience volition or a self-endorsement of their actions, as is the case with constructive deviance.

Galperin and Burke (2006) group constructive deviant behaviors into three types of behaviors. *Innovative organizational constructive deviance* reflects the innovative practices and unconventional ways that help an organization. These behaviors include searching for innovative ways to perform day-to-day tasks and developing creative solutions to problems. *Challenging organizational constructive deviance* describes behaviors that outwardly challenge the existing norms of the organization and break the rules to help the organization. Examples of such behaviors include breaking and bending the rules to perform a job and violating company procedures to solve a customer's problem. *Interpersonal constructive deviance* includes acts that are directed toward individuals, such as disobeying orders or reporting wrongdoings to coworkers when doing so brings about a positive organizational change.

Organizational justice and constructive deviance

We first present the hypotheses for the direct and mediated relationship between organizational justice and constructive deviance. One possible explanation of constructive deviance is the quality of existing exchange relationships between employees and their managers (Tziner *et al.*, 2010). Following exchange theory (Blau, 1964), employees who receive fair treatment from their organization will reciprocate by performing activities on behalf of the organization even if these activities violate formal rules and procedures. According to Yildiz *et al.* (2015), if employees' perception of fairness is to their satisfaction, they might have some positive attitudes and exhibit some positive behaviors accordingly. Although past studies have indicated that poor levels of organizational justice (in other words, injustice) is associated with the negative outcomes, high levels of justice is also associated with some positive outcomes such as job satisfaction, organizational commitment, organizational citizenship behavior, positive work outcomes, and constructive deviance. In this respect, it can be said that people having high levels of justice perception against their organizations may exhibit constructive deviant behaviors (Yildiz *et al.*, 2015).

Despite the fact that constructive deviance conflicts with an organization's norms, it is nonetheless a voluntary behavior that is often aimed at enhancing the organization's well-being. In other words, it may be expected that subordinates who enjoy a high level of positive exchange will "pay back" their managers by engaging in discretionary behaviors that benefits their managers and organization, even though it defies the organization's rules and norms (which are perceived as hampering its functioning and effectiveness) (Kura *et al.*, 2016; Tziner *et al.*, 2010; Yildiz *et al.*, 2015).

In addition, when employees have favorable cognitions and attitudes of trust in their professional relationships, they will not be concerned with compensation for a specific behavior and consequently will engage in constructive deviance (Galperin and Burke, 2006). Such employees will emphasize a willingness to contribute to the organization in any possible way, including constructive deviance (Kura *et al.*, 2016). For example, Tziner *et al.* (2010) found that leader member exchange (LMX), a variable that represents an important aspect of interpersonal justice, was positively related to constructive deviance. More

specifically, [Chung and Kim \(2013\)](#) found a positive relationship between procedural justice and innovative constructive deviance among Korean employees. Using the above, it can be hypothesized that employees who perceive a high level of justice within their organizations may exhibit constructive deviant behaviors:

H1. Organizational justice is related positively to constructive deviance.

Psychological contract breach as a mediator between organizational justice and constructive deviance. The following hypothesis expects a suppression effect in the mediation model. Within a mediation model, a suppression effect would be present when the direct and mediated effects of an independent variable on a dependent variable have opposite signs ([Tzelgov and Henik, 1991](#)). Such models are known as inconsistent mediation models ([Davis, 1985](#)), as contrasted with consistent mediation models in which the direct and mediated effects have the same sign.

Social exchange theory implies that groups will respond to fair or unfair treatment in kind, in that their behavioral responses are proportionate to their experiences. Thus, group experiences of fairness engender social exchange with the organization that motivates the groups to engage in a variety of discretionary, pro-organizational behaviors as either a way to maintain that relationship or reciprocate their fair treatment ([Thornton and Rupp, 2016](#)). We contend that employees who perceive higher levels of organizational justice are more likely to perform their tasks and fulfill their responsibilities according to the employment agreement. They would consider their psychological contract with the organization fulfilled and feel that they are being treated with dignity and respect and believe that the psychological contract has not been breached.

Regarding the relationship between psychological contract breach and constructive deviance, a strong argument can be made that when an organization fails to provide the promised returns (i.e. commits a psychological contract breach), employees may withhold their contributions to the organization ([Restubog et al., 2006](#)), perhaps by not engaging in constructive deviance. Another explanation based on cognitive dissonance theory argues that psychological contract breach can arouse cognitive dissonance about one's organization that can stimulate employees to take actions, such as reducing their level of identification with their organizations, to remedy their cognitive dissonance ([Wang and Hsieh, 2014](#)). If there is a breach in the psychological contract between an employee and the employer, employees are likely to display undesirable outcomes. Consequently, such employees cannot perform successfully in the workplace ([Thornton and Rupp, 2016](#)). An employee's perceived contract breach represents an unmet expectation of the benefits promised by their employers. An immediate action that may be taken to decrease the cognitive dissonance due to psychological contract breach is to reduce job input by not engaging in constructive deviance:

H2. Psychological contract breach mediates the relationship between organizational justice and constructive deviance. Organizational justice is negatively related to contract breach, and psychological contract breach is negatively related to constructive deviance.

Organizational climate for innovation as a mediator between organizational justice and constructive deviance. [Moolenaar et al. \(2010\)](#) defined an innovative climate as a shared perception of organizational members concerning practices, procedures, and behaviors that promote the generation of new knowledge and practices. In innovative organizations, the values and norms of the organization emphasize innovation ([King et al., 2007](#)). A climate for

innovation is an indicator of the capacity of organizations to become innovative. That is, the degree of support and encouragement an organization provides its employees to take initiative and explore innovative approaches is predicted to influence the degree of actual innovation in that organization (Sarros *et al.*, 2008). To foster innovation, it is particularly important to create an organizational environment that is non-threatening psychologically, supports risk-taking, and motivates employees to apply initiative (Sönmez and Yıldırım, 2019). Organizations with climates that are open to innovation, in which members are willing to take risks and continuously learn to improve the organization, are more successful at implementing actual innovations than organizations with less innovative climates (Moolenaar *et al.*, 2010). An organizational culture that welcomes divergent thinking is essential to constructive deviance (Cropanzano *et al.*, 2017).

A positive feeling toward organizational procedures and processes as well as good relationships with superiors and coworkers are likely to create a workplace conducive to loyalty and a sense of belonging. This environment will, in turn, reflect positively on organizational outcomes, including productivity and a readiness to innovate. Therefore, one can expect that all organizational justice components – procedural, distributive, and interactional justice – play a significant role in explaining the variance in employees' perceptions of how innovative the environment is (Suliman, 2013; Dadich *et al.*, 2018). The more satisfied the employees are with the methods, procedures, and policies of the organization, as well as the quality of the relationships that they have with their superiors, the more prepared they will be to create and innovate. In addition, communication, sharing information and ideas, and opportunities to engage in discussion and decision-making are critical for an open orientation toward innovation (Moolenaar *et al.*, 2010). All of the above are reflected, for example, in informational justice.

Innovation climate is a major strategic lever to ensure the exploration of innovation outcomes (Zuraik and Kelly, 2019). A climate for innovation, as reflected in norms and practices, encourages employees to be flexible, expressive, and willing to learn. In a highly creative team environment, team members tend to offer their opinions regarding improvements and modifications, carefully selecting the optimal method of realizing such changes and discarding useless ideas. Moreover, employees in a highly creative climate make a concerted effort to accomplish their goals and maximize their abilities. They strive to overcome challenges that occur when actualizing creative ideas into substantially improved products, procedures, and scientific knowledge. (Chen and Hou, 2016). Receiving rewards or positive acknowledgements for constructive deviant behavior or, on the opposing side, being punished for breaking the rules, is of utmost importance within today's corporate entities. The social learning concept stresses that positions of organizational authority will often determine how workers react to situations that have ethical implications (Appelbaum *et al.*, 2007). Because the organizational climate for innovation provides a non-threatening psychological environment and supports risk-taking, employees will be more inclined to perform constructive deviance:

- H3.* An organizational climate for innovation mediates the relationship between organizational justice and constructive deviance. Organizational justice is positively related to organizational climate, and organizational climate is positively related to constructive deviance.

Moral identity and constructive deviance. In the following sections, we present the hypotheses for the direct and mediated relationships between moral identity and constructive deviance. Moral identity is defined as the mental representation of an individuals' moral character held internally as a cognitive self-schema and expressed to

others externally through their actions (Aquino and Reed, 2002). According to Aquino and Reed (2002), moral identity has two dimensions – one private, the other public – internalization and symbolization. Internalization reflects the degree to which a set of moral traits is central to an individual's self-concept, whereas symbolization represents the extent to which moral traits are expressed through the individual's actions (Qin *et al.*, 2018). Moral identity reflects the individual differences to the extent in which being moral is a central or essential characteristic of the sense of self (Blasi, 1983). As mentioned in Hardy and Carlo (2005), Blasi suggested that there is a natural human tendency to want to live consistently with one's sense of self; hence, when one's self is centered on moral concerns, this inclination serves as a key motivating force for moral action (Blasi, 1984).

How and why should moral identity be related to constructive deviance? An individual's moral identity acts as a catalyst for subsequent moral actions such that the more central the identity, the more compelled one is to behave in accordance with said identity. As such, employees with high moral identity respect and maintain their own moral identity even when their leaders' tolerance of his/her or colleagues' deviance is lowered, resulting in less moral disengagement (Kong and Yuan, 2018). An important mechanism explaining this link is that moral identity centrality promotes a principled, ethical ideology in which moral ideologies exist, are important to one's self-definition, and should direct personal behavior. Such actions include promotive extra-role behaviors such as helping or constructive deviance (Matherne *et al.*, 2018).

According to Wang *et al.* (2018), moral identity involves a set of morally relevant personality traits – such as being caring, honest, kind, compassionate and friendly – that are valued by individuals. Individuals with high levels of moral identity place more emphasis on moral reasoning and moral actions, so they are more likely to have higher levels of moral awareness of the moral implications of a situation. Specifically, people who have high moral identities not only care about the benefits and well-being of their in-group members but are also concerned with the interests of a larger set of out-group members or the organization itself. Thus, compared to employees with low moral identities, employees with high moral identities are less likely to perform unethical behaviors that would damage the organization's interests.

Another explanation was proposed by Winterich *et al.* (2013), who based their explanation on Blasi (1984). They proposed that an important source of motivation for people high in moral identity is the desire to maintain self-consistency. Thus, people who experience moral identity as important to the self are likely to act pro-socially because doing so is consistent with their understanding of what it means to be a moral person. More importantly, people high in moral identity internalization should experience a motivation to act prosocially regardless of the anticipated public or private nature of their acts because moral traits, goals, and behavioral scripts are chronically available to them in working memory. As a result, the need to maintain self-consistency between their behavior and their moral identity should be a highly salient goal for people high in moral identity internalization. If such individuals do not act prosocially, they can experience psychological distress because they will recognize a discrepancy between how they view themselves and how they are behaving. People high in moral identity internalization will be internally motivated to engage in prosocial behavior such as constructive deviance.

Drawing on the above theoretical arguments, we expect that those with high moral identity would violate the organization rules and regulations only if they believe that the organization would benefit from their behavior (Winterich *et al.*, 2013). Sakhdari and Bidakhvidi (2016) found in their qualitative study that ethics and religion are important in

constructive deviance because they put pressure on those who perform such activities to reveal their hidden ideas and avoid destructive deviance:

H4. Moral identity is positively related to constructive deviance.

Psychological contract breach as a mediator between moral identity and constructive deviance. Group members with a high moral identity consider being moral as central to their sense of self (Thornton and Rupp, 2016). People who care about moral principles may become upset when other people violate them (Folger et al., 2005). Folger et al. (2005) argued, citing Blau (1986), that some versions of social exchange theory hold that “fairness is a social norm that prescribes just treatment as a moral principle.” If a moral social norm is violated, the victim might feel exploited and oppressed. In turn, this feeling may lead to a “desire to retaliate [...] [which] may well become an end-in-itself in the pursuit of which people ignore other considerations” (Blau, 1986). This intrinsic desire for justice can create a motivation to punish transgressors. From the above, we can conclude that employees with a high moral identity will be more sensitive to psychological contract breaches and will retaliate more aggressively when they feel that their employer has breached the contract. This sensitivity will lead them to, among other things, engage in fewer constructive deviance activities for the organization:

H5. Psychological contract breach mediates the relationship between moral identity and constructive deviance. Moral identity is positively related to contract breach, and psychological contract breach is negatively related to constructive deviance.

Organizational climate for innovation as a mediator between moral identity and constructive deviance. Despite interest in the field of innovation, much of the research concerning management practices in innovation cultures and creative climates remains unsystematic and anecdotal (Ahmed, 1998). Highly innovative companies behave as focused communities, whereas less innovative companies behave more like traditional bureaucratic departments. Innovative companies appear to rely heavily on personalized intrinsic awards for both individuals and groups. We contend that employees with a high moral identity will be more tolerant and supportive of innovation because they will be more inclined to see its value. Identity enactment also takes place within the context of social relationships (Wry and York, 2017).

The organizational climate is a factor that affects individual behavior by influencing employees to develop an optimistic or pessimistic forecast about the outcomes of their behavior (Park and Jo, 2018). A climate that encourages innovation in an organization should be cutting-edge, exhibit a forward-thinking atmosphere and offer psychological safety to employees to encourage experimentation and possibly constructive deviance (Chou et al., 2019). According to previous research, much of human behavior is driven by habits and reactions to context-specific cues (Aldrich and Martinez, 2015). Work environments differ in their innovative climates and in the way norms are enforced by managers or colleagues. At one extreme, work environments may prioritize conformity to norms and rules so that the ways in which their goals are achieved becomes more important than the goals themselves. In such environments, employees who engage in constructive deviance may receive little support for their activities or may encounter hostility. At the other extreme are work environments that emphasize the pursuit of creative goals while compromising the enforcement of normative behavior. In environments such as these, employees who engage in constructive deviance may receive support and encouragement for their activities.

Thus, we argue that organizations with a climate that is conducive to higher levels of innovation will have relatively lower levels of normative enforcement and will help individuals innovate through constructive deviance. By contrast, increased formalization and expectations of adherence to organizational norms will make it more difficult for those who are prone to constructive deviance to realize its advantages (Criscuolo *et al.*, 2013):

- H6. The climate for innovation mediates the relationship between moral identity and constructive deviance. Moral identity is positively related to climate for innovation, and climate for innovation is positively related to constructive deviance.

Methods

Subjects and procedure

The data were collected from employees in a large municipality in central Israel. Questionnaires were distributed to employees working in four divisions, each focusing on a different area and comprising 31 departments. Completed paper and pencil questionnaires were collected from 602 employees with a response rate of 67 per cent. The supervisors of these employees provided data on constructive deviance in addition to the employees' self-reported information on the dependent variable. No compensation was provided to the employees for participation. The questionnaires were in Hebrew, and the translation was checked using a translation and back-translation process. Most of the respondents were female (74 per cent), married (70 per cent) and held non-managerial positions (79 per cent). The average age of the respondents was 36.7 years ($SD = 8.7$), the average tenure in the municipality was 9 years ($SD = 7.5$) and the average tenure in their jobs was 5.5 years ($SD = 5.4$).

Scales

Constructive deviance. The dependent variable (counterproductive work behaviors [CWBs]) was reported by the employees and their supervisors. We applied the scale by Galperin (2002), which included 16 items and is three-dimensional. The first dimension represents innovative organizational deviance (five items) (sample item: "Developed creative solutions to problems"), the second represents challenging organizational deviance (six items) (sample item: "Sought to bend or break the rules in order to perform your job") and the third represents interpersonal constructive deviance (five items) (sample item: "Disagreed with others in your workgroup in order to improve the current work procedures").

Independent variables. Organizational justice was measured by two scales created by Colquitt (2001). Procedural justice included seven items, and informational justice included five items. Moral identity was measured by the scales developed by Aquino and Reed (2002). The two dimensions of this scale, internalization and symbolization, each include five items.

Mediators. Psychological contract breach was measured using the five-item scale developed by Robinson and Morrison (2000). The scale is considered a leading instrument for measuring this construct, as demonstrated by the numerous studies that have used it. The organizational climate for innovation was measured by the 14-item scale developed by Kivimaki and Elovainio (1999). For all the questionnaires, responses were given on a scale from 1 (strongly disagree) to 7 (strongly agree). The full scales are presented in the Appendix.

Control variables. Gender (1 = male; 2 = female) and marital status (0 = not married; 1 = married) were measured as dichotomous variables. Age was measured as a ratio variable.

Data analysis

To test the measurement models of the study scales, confirmatory factor analysis was performed using the SAS structural equation-modeling program following the procedure outlined by Brooke *et al.* (1988) and Mathieu and Farr (1991). To test for common method variance, Harman's one-factor test (Harman, 1967; Podsakoff and Organ, 1986) and the common latent variable approach (Jakobsen and Jensen, 2015) were performed. Hierarchical linear modeling (HLM) analyses were performed for each of the dependent variables (three self-reported constructive deviances and three supervisor-reported constructive deviance) controlling for divisions and departments. Because the study used four variables as mediators, we used the multiple mediator approach proposed by Preacher and Hayes (2008), including a bootstrapping procedure for testing the indirect effects. We ran 1,000 bootstrapping resamples using 95 per cent confidence intervals.

Findings

Table I presents the basic statistics of the research variables and the intercorrelations between them. The results show the acceptable reliability of the variables. Of the intercorrelations, only one of the independent variables and mediators exceeded 0.70, and only a few exceeded 0.60, thus reducing the possibility of multicollinearity.

Three tests were applied to examine the possibility of common method variance. First, we performed a confirmatory factor analysis (CFA) of the variables. We compared the fit of a nine-factor model for the attitudinal variables reported by the participants to the alternative fit of a single, one-factor model. The results for the nine-factor model revealed the following fit indices: χ^2 636.3 ($DF = 288$); $\chi^2/df = 2.2$; CFI = 0.95; IFI = 0.94; NFI = 0.92; and RMSEA = 0.048. In the second model tested, all items were loaded onto a single factor, producing $\chi^2 = 4413.7$ ($DF = 324$); $\chi^2/df = 13.6$; CFI = 0.45; IFI = 0.38; NFI = 0.43; and RMSEA = 0.15. The chi-square difference test indicated that the ten-factor model fit significantly better than the one-factor model (Chi-square difference = 3777.5; $DF = 36$; $p \leq 0.001$). Altogether, the findings support the superiority of the ten-factor model over the one-factor model, despite the somewhat low fit indices of the former.

In the second analysis, we performed Harman's one-factor test (Harman, 1967; Podsakoff and Organ, 1986). All the items of the ten attitudinal variables were entered into a principal components factor analysis with Varimax rotation. According to this technique, if a single factor emerges from the factor analysis or one "general" factor accounts for most of the variance, common method variance is deemed present. However, the results of the analysis revealed 14 factors (explaining 63 per cent of the variance) with eigenvalues greater than one. While one factor accounted for 21 per cent of the variance, all the others accounted for less than 6.5 per cent. These results are consistent with the absence of common method variance.

In the third test, we performed the common latent variable approach (Jakobsen and Jensen, 2015). A single loading parameter on the common factor (F_{general}) was set for all the manifest variables in the model. The estimated value of the loading parameter on the common factor was 0.2638. Common Method Variance (CMV) = $0.2638^2 = 0.0696$ ($P < 0.5$) which is the threshold of the Common Latent Factor technique. Therefore, we can conclude that there is no severe common method bias in these data.

Organizational justice and constructive deviance

Table II presents the results of the HLM analysis for both self-reported and supervisor-reported constructive deviance. *H1* postulated that organizational justice is positively related to constructive deviance. This hypothesis was partly supported for procedural

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Gender	1.74	0.44															
2. Marital status	0.67	0.47	0.37														
3. Age	36.8	8.7	0.05	0.13**													
4. Moral identity-internalization	6.14	0.84	0.04	-0.01	-0.14***	0.75											
5. Moral identity-symbolization	4.05	1.2	0.01	0.02	0.05	0.33***	0.72										
6. Organizational climate for innovation	5.37	0.99	0.04	0.06	-0.03	0.27***	0.18***	0.86									
7. Psychological contract breach	2.67	1.28	0.01	-0.01	0.20***	-0.23***	-0.06	-0.57***	0.87								
8. Organizational justice-procedural	4.68	0.97	-0.00	-0.00	-0.08	0.22***	0.19***	0.64***	-0.53***	0.77							
9. Organizational justice-informational	5.11	1.15	-0.05	-0.05	0.09*	0.26***	0.11**	0.66***	-0.66***	0.67***	0.87						
10. Constructive deviance-innovative	3.24	1.48	-0.11**	0.11**	0.00	-0.04	-0.01	0.06	-0.07	0.03	0.00	0.93					
11. Constructive deviance-challenging	1.88	0.99	-0.08*	0.10*	0.01	-0.04	-0.00	0.05	0.03	-0.04	-0.03	0.51***	0.91				
12. Constructive deviance-interpersonal	2.19	1.00	-0.09*	0.07	0.02	-0.04	0.00	-0.01	0.04	-0.06	-0.08	0.52***	0.64***	0.80			
13. Constructive deviance-innovative	4.00	1.38	-0.15**	0.07	0.01	0.05	0.21***	0.19***	-0.03	0.18***	0.04	0.30***	0.18***	0.19***	0.85		
14. Constructive deviance-challenging	2.03	1.19	-0.07	-0.04	0.03	-0.07	0.11**	-0.09*	0.15***	-0.09*	-0.16***	0.08	0.14***	0.19***	0.30***	0.87	
15. Constructive deviance-interpersonal	2.20	0.97	-0.05	0.01	-0.03	-0.00	0.17***	-0.11**	0.19***	-0.07	-0.20***	0.20***	0.13**	0.25***	0.40***	0.54***	0.74

Notes: * $P \leq 0.05$; ** $P \leq 0.01$; *** $P \leq 0.001$; $N = 562$ -598; gender: 1 = male, 2 = female; marital status: 0 = not married, 1 = married

Table I.
Descriptive statistics, reliabilities (in parentheses), and intercorrelations among research variables

Table II. HLM analyses (estimates) of demographic variables, organizational justice, organizational support and psychological contracts on organizational citizenship behavior and in-role performance

Dependent variables independent variables	<i>Constructive deviance: self-reported</i>			<i>Constructive deviance: supervisor-reported</i>		
	Constructive deviance-innovative	Constructive deviance-challenging	Constructive deviance-interpersonal	Constructive deviance-innovative	Constructive deviance-challenging	Constructive deviance-interpersonal
1. Gender	-0.41**	-0.23*	-0.12	-0.16	-0.04	-0.02
2. Marital status	0.10	-0.12	-0.06	0.22	0.16	0.08
3. Age	-0.00	0.00	-0.01*	-0.00	0.00	0.00
4. Moral identity-internalization	-0.01	-0.10	-0.02	-0.05	-0.01	-0.03
5. Moral identity-symbolization	0.19***	0.14***	0.15***	0.03	0.01	0.01
6. Organizational climate for innovation	0.29***	0.04	-0.03	0.12	0.20**	0.08
7. Psychological contract breach	0.10	0.07	0.11**	-0.12	0.04	-0.02
8. Organizational justice-procedural	0.28***	0.05	0.13*	0.05	-0.06	-0.01
9. Organizational justice-informational	-0.21**	-0.17**	-0.18***	-0.11	-0.04	-0.11*
Random variance of divisions	0.07	0.01	0.01	0.13	0.02	0.06
Random variance of departments	0.05	0.05	0.01	0.36**	0.19**	0.19**
Residuals	1.59***	1.27***	0.81***	1.82***	0.84***	0.83***

Notes: * $P \leq 0.05$; ** $P \leq 0.01$; *** $P \leq .001$. $N = 562-598$; gender: 1 = male, 2 = female; marital status: 0 = not married, 1 = married

justice and was not supported for informational justice. As expected, procedural justice was positively related to self-reported innovative and interpersonal constructive deviance. It was not related to any of the dimensions of supervisor-reported constructive deviance. Unexpectedly, informational organizational justice was negatively related to the three dimensions of self-reported constructive deviance and negatively related to supervisor-reported interpersonal constructive deviance. This relationship shows an opposite direction to that predicted by *H1*.

H2 stated that psychological contract breach mediates the relationship between organizational justice and constructive deviance. The hypothesis was partly supported. Psychological contract breach was the mediator for 3 of the 20 significant mediation effects for self-reported constructive deviance (numbers 1, 5, and 13 in [Table III](#)). In all three significant mediation effects, procedural justice was negatively and significantly related to psychological contract breach, as expected. However, in all three mediation effects there was a significant but positive path between psychological contract breach and forms of constructive deviance, while *H2* predicted a negative relationship. In effect number 5 there was a positive and significant path between psychological contract breach and innovative constructive deviance, while *H2* predicted a negative path. Of the four significant mediation effects for supervisor-reported constructive deviance, one supported *H2* ([Table IV](#), number 1). Informational justice was negatively related to psychological contract breach as expected, and psychological contract breach was negatively related to innovative constructive deviance as expected.

Paths statistics	The mediation path	X → M a path	X M → Y b path	X → Y c path	M X → Y c* path	The mediation effect	Monte-Carlo simulations (95% CI)	
							Lower limit	
							Upper limit	
1	Procedural justice → psychological contract breach → CD-challenging	-0.66***	0.15**	-0.10	0.20	-0.10***	-0.16	-0.04
2	Moral identity-internalization → psychological contract breach → CD-challenging	-0.30***	0.14	-0.05	-0.02	-0.05***	-0.09	-0.02
3	Moral identity-symbolization → organizational climate → CD-challenging	0.13***	-0.16**	0.13***	0.13**	-0.02***	-0.04	-0.01
4	Procedural justice → psychological contract breach → CD-innovative	-0.66***	0.12*	0.34***	0.35***	-0.08*	-0.16	-0.02
5	Informational justice → organizational climate → CD-innovative	0.50***	0.42***	-0.19***	-0.16*	0.23***	0.14	0.32
6	Moral identity-internalization → organizational climate → CD-innovative	0.27***	0.26***	-0.01	0.06	0.09***	0.04	0.14
7	Moral identity-symbolization → organizational climate → CD-innovative	0.13***	0.22***	0.21***	0.21***	0.03	0.01	0.06
8	Procedural justice → organizational climate → CD-innovative	0.56***	0.15	0.15	0.18*	0.10*	0.01	0.2
9	Procedural justice → psychological contract breach → CD-interpersonal	-0.66***	0.19***	0.05	0.07	-0.12***	-0.17	-0.07
10	Moral identity-internalization → psychological contract breach → CD-interpersonal	-0.30***	0.17***	0.04	0.06	-0.06***	-0.09	-0.03
11	Moral identity-symbolization → organizational climate → CD-interpersonal	0.13***	-0.18***	0.15***	0.16***	-0.02***	-0.04	-0.01
12	Moral identity-internalization → organizational climate → CD-interpersonal	0.27***	-0.14**	0.03	0.04	-0.04***	-0.07	-0.01
13	Procedural justice → organizational climate → CD-interpersonal	0.56***	-0.16**	0.01	0.04	-0.08*	-0.15	-0.02

Notes: CD = constructive deviance; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; $N = 562$ -598

Table III.
 Bootstrapped point estimate and confidence intervals for the significant indirect effects: self-reported (1000 simulations)

Table IV.
Bootstrapped point estimate and confidence intervals for the significant indirect effects: supervisor-reported (1,000 simulations)

Paths statistics	The mediation path	X → M a path	X M → Y b path	X → Y c path	MX → Y c' path	The mediation effect	Monte-Carlo simulations (95% CI) Lower limit	Upper limit
1	Informational justice → psychological contract breach → CD-innovative	-0.72***	-0.14*	-0.12	-0.04	0.11*	0.02	0.21
2	Informational justice → organizational climate → CD-innovative	0.50***	0.16	-0.11	-0.03	0.11*	0.02	0.21
3	Procedural justice → organizational climate → CD-challenging	0.56***	0.16**	0.13*	-0.09	0.09*	0.02	0.17
4	Informational justice → organizational climate → CD-challenging	0.50***	0.16*	-0.11*	-0.07	0.08*	0.02	0.15

Notes: CD = constructive deviance. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; $N = 562.598$

H3 postulated that organizational climate for innovation mediates the relationship between organizational justice and constructive deviance. This hypothesis was supported. For self-reported constructive deviance, three significant mediation effects were found (Table III, numbers 6, 9, and 17). In one of them (number 6), informational justice was positively related to organizational climate, and climate was positively related to innovative constructive deviance (Table III). In the second (number 9), there was a significant and positive path between procedural justice and organizational climate but no significant path between the mediator and innovative constructive deviance. In the third, there was a significant path between procedural justice and organizational climate but a negative path between the mediator and interpersonal constructive deviance, while the hypothesis predicted a positive direction (see Table III, number 17). Stronger support for this hypothesis was found in the supervisor-reported constructive deviance (Table IV). In three of the four significant mediation effects, organizational climate mediated the relationship between organizational justice and constructive deviance. In two of them (numbers 3 and 4), there were significant and positive paths between the independent variable and the mediator and between the mediator and the dependent variable, as expected. In one of them, the path between the mediator and the dependent variable was not significant (Table IV, path 2).

Moral identity and constructive deviance

H4 claimed that moral identity is positively related to constructive deviance. The findings in Table II provide partial support for this hypothesis. The two dimensions of moral identity were not related to supervisor-reported constructive deviance. As for self-reported constructive deviance, moral identity symbolization was positively and significantly associated with the three forms of constructive deviance, as expected. However, moral identity internalization was not related to any of the forms of self-reported constructive deviance, contrary to the predictions of *H4* (Table II).

H5 postulated that psychological contract breach mediates the relationship between moral identity and constructive deviance. Moderate support was found for this hypothesis. Two mediation effects were found, as reported in Table IV. Moral identity internalization was negatively related to contract breach, and contract breach was negatively related to interpersonal constructive deviance (self-reported), which was expected (Table III, number 14). Moral identity symbolization was negatively related to contract breach, as expected, but contract breach was not significantly related to self-reported challenging constructive deviance (Table III, number 2). No mediation effect was found for supervisor-reported constructive deviance.

H6 stated that an organizational climate for innovation mediates the relationship between moral identity and constructive deviance. This hypothesis received some support. Five mediation effects were found (Table III, numbers 3, 7, 8, 15, and 16). Organizational climate mediated the relationship between the two dimensions of organizational climate and innovative constructive deviance. As expected, the relations between the independent variables, the mediators, and the dependent variable (self-reported) were positive (Table III, numbers 7 and 8). However, the other three mediation effects were more complex. Moral identity symbolization was positively related to organizational climate, as expected, but climate was negatively related to challenging constructive deviance, which is in the opposite direction to that predicted by the hypothesis (Table III, number 3). A similar pattern of effects was found for interpersonal constructive deviance (Table III, number 15). Moral identity internalization was positively related to organizational climate, as expected, but climate was negatively related to interpersonal constructive deviance, which is in the

opposite direction than the hypothesis prediction (Table III, number 3). Finally, no mediation effect was found for supervisor-reported constructive deviance.

Discussion

The primary reason for researching constructive deviance is that this voluntary behavior which violates significant norms can improve the well-being of an organization, its members or both (Galperin, 2002, 2012, Vadera *et al.*, 2013). In a time when innovation and creativity are gaining increasing importance as behaviors that contribute to organizational success, more research on constructive deviance is expected. This study attempts to increase our understanding of this important concept and to stimulate additional studies of it. Considering the relevance of this phenomenon to understanding the behavior of individuals in work organizations, further studies should be devoted to analyzing the concept and the factors that contribute to positive deviances (Ferreira *et al.*, 2017). The main contribution of this study is to advance our knowledge toward a better understanding of constructive deviance.

The findings of this research have some important contributions for the continuation of research on this behavior. First, the findings suggest that one cannot ignore the difference in the results between self-reported and supervisor-reported constructive deviance. It seems that self-reported constructive deviance had a much stronger explanatory power than supervisor-reported deviance based on the more significant independent variables and more significant mediation effects of the latter compared with the former. One way to explain this substantial difference is to look at a phenomenon that occurs on a similar scale, CWB, which is also measured using self-reported and supervisor-reported data. A meta-analysis that compared the two sources of data for CWB (Berry *et al.*, 2012) concluded that for such a highly sensitive, complex, and even intimidating variable, it seems that self-reported measurement is the best way to obtain valid information.

Berry *et al.* (2012) specifically argued, based on their comprehensive meta-analysis, that “[. . .] the use of other-report CWB entails a focus on a narrower subset of employees’ CWB. Especially if researchers take multiple careful steps to assure participants of the anonymity of their responses, the value added by collecting other reports of CWB is not clear in many instances [. . .]” We believe that at this point in time, the conclusion regarding self-reported CWB can be generalized to constructive deviance. It seems that self-reported constructive deviance provides a more accurate report on this behavior because employees generally do not report that they performed any kind of deviant behavior to their supervisors, including constructive deviance. It is recommended that future research continues measuring constructive deviance using self-reported and supervisor-reported sources. Such designs will enable more solid conclusions to be drawn regarding the benefits and limitations of the two data sources.

Some of the specific findings have also important contributions. Of the two dimensions of moral identity, only symbolization was related to all three dimensions of constructive deviance (self-reported). According to Winterich *et al.* (2013), a person who is high in moral identity symbolization tends to engage in visible activities that can convey to others his or her commitment to certain moral goals and ideals. Employees high in moral identity symbolization should be more sensitive to recognition of their prosocial behaviors when making decisions about whether to act pro-socially than employees with low moral identity symbolization. Our findings support Winterich *et al.*'s (2013) argument that moral identity symbolization is a more reliable predictor of prosocial behavior when the would-be performers of such acts expect to be recognized than when they do not. More studies are needed to further clarify this issue.

As expected, procedural organizational justice positively predicted two dimensions of constructive deviance (self-reported innovative and interpersonal). However, the negative direction of the relationship between informational organizational justice and the three dimensions of self-report constructive deviance and supervisor-reported interpersonal constructive deviance was unexpected. However, this finding demonstrates the nature of constructive deviance. Because such behavior violates the rules and procedures of the organization, employees will not inform their supervisors of their direct involvement in constructive deviance. The above findings and conclusions provide strong support for exchange and justice theories as important determinants of constructive deviance (Yildiz *et al.*, 2015). However, more studies are needed to validate this conclusion. These findings have also practical implications. Organizations should encourage procedural justice to encourage their employees to act in support of the organization, whether openly (formal performance) or more secretly (constructive deviance).

The role of an organizational climate for innovation should also be mentioned because the findings show that it increases innovative (self-reported) and interpersonal (supervisor-reported) constructive deviance. Organizations should therefore do their best to create a supportive climate that will increase innovation and creativity formally and openly or more secretly by way of constructive deviance. The importance of an organizational climate for innovation is also emphasized in the mediation models. An organizational climate for innovation was the mediator in three of the four significant mediation effects for supervisor-reported constructive deviance. The three relevant paths showed that organizational justice increases the organizational climate for innovation, resulting in higher levels of constructive deviance.

An organizational climate for innovation was the mediator in 8 of the 13 significant mediation effects for self-reported constructive deviance. On the whole, the above findings demonstrate the importance of a supportive setting for increasing constructive deviance (Ahmed, 1998). When employees perceive their work environment as positive, friendly, and productive, they feel obligated to reciprocate this context by engaging in positive deviant behavior to benefit the group and the organization (Ferreira *et al.*, 2017). In light of the few studies of this relationship, there is a need for more studies in a variety of settings. From a practical point of view, organizations should support innovation climate if they want to increase constructive deviance of their employees.

Psychological contract breach had a much more limited effect on constructive deviance. It was only related to self-reported interpersonal constructive deviance. It was also a mediator in five significant self-reported mediation effects and one significant supervisor-reported effect. The positive direction of psychological contract breach on self-reported constructive deviance is worth mentioning and raises some interesting questions for future research. Why and how do employees who feel that their organization breached the psychological contract with them contribute to the organization by breaking its rules and procedures?

There is a strong need for more research on this topic to provide us with more theory and data. First, it is suggested that future research should explore constructive deviance using a social constructionism approach (Pittaway *et al.*, 2018). According to this approach, every individual's subjective reality, which exists inside them, in social constructionism is considered to be unique. An individual's unique experience have an impact on their values, beliefs, and motivations and affect the way they interpret and react to a given situation. This is also dependent on their collective workgroup beliefs. Thus, what an individual perceives as the potential outcomes of certain behaviors will have weight in their choice of behavior. All of these findings lead to several possible avenues for future research on constructive deviance: How do different individuals interpret constructive deviance and how their unique

interpretations affect their behavior? How does the social context in each workgroup affect the interpretation and the performance of constructive deviance? Do individuals perceive constructive deviance as deviance at all? These are only some of the issues that a social constructionism approach can pose on future research.

Future research could also benefit from including other potential determinants of constructive deviance such as leadership style or personal psychological variables. Perceived insufficiency of organizational policies and practices and identity security may also present potential antecedents of constructive deviance (Dahling and Gutworth, 2017). Finally, additional work is also needed to better understand the obstacles and consequences of constructive deviance (Vadera *et al.*, 2013). Constructive deviance has the potential to yield a variety of desirable outcomes, such as enhanced efficiency and constructive organizational change. However, constructive deviance may yield unintended, negative consequences as well; rules sometimes exist for valid reasons that employees do not understand, and breaking those rules may cause broader problems despite good intentions (Dahling and Gutworth, 2017).

As a final comment, this study is not without limitations. For the self-reported analysis, data were collected from the same source, leading to potential common method errors. The findings here can be generalized only to the Israeli public sector setting and need replication in other settings, including other occupations and cultures. However, in light of the highly limited research on constructive deviance, this study provides important directions and stimulations for the continuation of research on what might be important and valuable behavior that contributes to the effectiveness of organizations.

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Appendix. Research scales

Constructive deviance (Galperin, 2002)

Innovative organizational deviance

- Developed creative solutions to problems
- Searched for innovative ways to perform day-to-day procedures.
- Decided on unconventional ways to achieve work goals
- Departed from accepted tradition to solve problems
- Introduced a change to improve the performance of your work group

Challenging organizational deviance

- Sought to bend or break the rules to perform your job
- Violated company procedures to solve a problem
- Departed from organizational procedures to solve a customer's problem
- Bent a rule to satisfy customer's needs
- Departed from dysfunctional organizational policies or procedures to solve a problem
- Departed from organizational requirements to increase the quality of services or products

Interpersonal constructive deviance

- Reported a wrongdoing to co-workers to bring about a private organizational change
- Did not follow the orders of your supervisor to improve work procedures
- Disagreed with others in your work group to improve the current work procedure
- Disobeyed your supervisor's instructions to perform more efficiently

- Reported a wrongdoing to another person in your company to bring about a positive organizational change

Procedural justice (Colquitt, 2001)

To what extent:

- Have you been able to express your views and feelings during those procedures?
- Have you had influence over the (outcome) arrived at by those procedures?
- Have those procedures been applied consistently?
- Have those procedures been free of bias?
- Have those procedures been based on accurate information?
- Have you been able to appeal the (outcome) arrived at by those procedures?
- Have those procedures upheld ethical and moral standards?

Informational justice (Colquitt, 2001)

To what extent:

- Has (he/she) been candid in (his/her) communications with you?
- Has (he/she) explained the procedures thoroughly?
- Were (his/her) explanations regarding the procedures reasonable?
- Has (he/she) communicated details in a timely manner?
- Has (he/she) seemed to tailor (his/her) communications to individuals' specific needs?

Moral identity: internalization (Aquino and Reed, 2002)

Participants presented a list of the nine moral traits (caring; compassionate; fair; friendly; generous; hardworking; helpful; honest; kind) and were asked to indicate on a scale ranging from 1 (absolutely unnecessary) to 7 (absolutely necessary) the extent to which they believed it is necessary for someone to possess each of the characteristics to be considered a moral person.

- It would make me feel good to be a person who has these characteristics.
- Being someone who has these characteristics is an important part of who I am.
- I would be ashamed to be a person who has these characteristics. (R)
- Having these characteristics is not really important to me. (R)
- I strongly desire to have these characteristics.

Moral identity: symbolization (Aquino and Reed, 2002)

- The types of things I do in my spare time (e.g. hobbies) clearly identify me as having these characteristics.
- The kinds of books and magazines that I read identify me as having these characteristics.
- I am actively involved in activities that communicate to others that I have these characteristics.
- The fact that I have these characteristics is communicated to others by my membership in certain organizations.
- I often wear clothes that identify me as having these characteristics.

Psychological contract breach (Robinson and Morrison, 2000)

- So far my employer has done an excellent job of fulfilling its promises to me (reversed).
- My employer has broken many of its promises to me even though I've upheld my side of the deal.

- Almost all the promises made by my employer during recruitment have been kept so far (reversed).
- I have not received everything promised to me in exchange for my contributions.
- I feel that my employer has come through in fulfilling the promises made to me when I was hired (reversed).

Organizational climate for innovation (Kivimäki and Elovainio, 1999)

- agreement with the objectives
- team's objectives clearly understood
- team's objectives achievable
- worth of the objectives to the organization
- participatory safety "We are together" attitude
- people keep each other informed
- people feel understood and accepted
- real attempts to share information
- task orientation preparedness to basic questions
- critical appraisal of weaknesses
- building on each other's ideas
- support for innovation search for new ways of looking at problems
- time taken to develop ideas
- cooperation in developing and applying ideas.

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