Original Article

A Perceived Causal Relations Model for Social Control of Academic Transgressions Among Faculty Members

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Abstract

Introduction: Academic transgression (AT), as any behavior, belief, or condition that violates a social and academic norm, is a serious problem threatening academic integrity, especially when committed by faculty members, who are supposed to be educational role models. Societies employ social control means to respond to, prevent or reduce transgressive acts, to maintain social order and morality. The current study aimed to examine the perceived effects of self-control, job satisfaction, and life satisfaction, as social control means, on five types of interpersonal, educational, research, organizational, and sexual ATs among faculty members, and also to measure perceived prevalence of these transgressions in Iranian higher education.
Material & Methods: A modified version of "perceived causal relations" methodology was adopted to study the perceived relations between reciprocal pairs of the variables. Network analysis was employed to analyze the data gathered from faculty members via an online questionnaire.
Results: The results demonstrated that faculty member participants perceived high effects of their self-control, job satisfaction, and life satisfaction on decreasing ATs, particularly interpersonal, organizational, and educational ATs.
Conclusion: As faculty member participants perceived high prevalence of all types of ATs in Iranian academia, there is an urge to consider new policies to employ effective social control means suggested in this research, especially self-control, to reduce, and even restrain the perpetration of these transgressions. We also suggest perceived causal relations as a useful and strong methodology to conduct research on sensitive topics, especially, transgression and crime.
Keywords: Social Control; Academic Transgressions; Faculty Members; Perceived Causal Relations

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INTRODUCTION

Transgression, or in other words, deviance is an ever changing, culturally dependent, and temporally relative, social construct that is derived from norm-violating behaviors, identities, and beliefs [1]. Ordinary people are deviant in all realms of social life [2], and most people habitually violate laws and norms in their lifespan (i.e., the ubiquity of crime); Indeed, human beings are both maintainers and transgressors of the social norms they establish [3].

Transgressions can be categorized as social or criminal deviance [3, 4], and also can be defined as positive deviance (overconformity to norms) or negative deviance (underconformity to norms) [4, 5]. They are behaviors, beliefs, or conditions that violate norms beyond the tolerance of a group, and induce a probability of the application of negative sanctions [6],

and also various reactions from the mildly normative, to the brutally disciplining [7].

Societies employ social control means to respond to, prevent or reduce transgressive or deviant acts in an organized manner, encourage conformity to social norms and values, and consequently, maintain social order and morality [6, 8-10]. Social control reactions include positive and negative sanctions, and can be formal (criminal justice system), and informal (interpersonal pressures and sanctions) [11]. There are internal and external means of control, based on respectively personal internalized standards, or other people's responses to a person's behavior [8]. It can also be distinguished between controls with a "hard-edge" (i.e., using coercion), and controls with a "soft-edge" (i.e., employing "psychological and therapeutic forms of diagnosis, persuasion and intervention") [10].

"In explaining social order in complex societies, apparently everything was a possible mechanism of social control, from education to advertising" [6]. Higher education (HE) institutions are influential in that they are the places where citizens as future professionals are trained, hence, "alignment between academic honesty and workplace ethics is unquestionable" [12]. Moreover, faculty members play a significant role in internalizing integrity among students, and their own integrity will benefit the society as a whole.

Academic transgression (AT) or academic misconduct has come under the spotlight since 1980s, with an exclusive focus on plagiarism [13], but much of the research focuses on the behavior of university students [14], while many other factors also contribute to the climate of integrity on a campus including: faculty and administrative staff conducts, assessment validity, pedagogical practices, institutional processes, and campus norms [15]. In the current research, we conceptualized ATs as the five following variables:

1) Interpersonal AT: This type of transgression is researched under the incivility topic. Incivility as behaviors associated with bullying, "can include acts of rudeness, discourteous, belittling or humiliating behavior or interrupting, and demeaning or disregarding the opinions of others", in which "the victim becomes the routine target of negative practices from an individual or group of instigators" [16]. Incivility disrupts learning, and positive classroom environment, and can be observed in faculty-student, faculty-faculty, or student-student relations [17]. Researchers [17, 18] mentioned some forms of faculty-to-student incivility that consisted of both interpersonal transgressions, and what we have separated as educational transgression.

2) Educational AT: Various factors induced many HE institutions to become self-serving, marketized institutions, prioritizing money and research, where students despite paying increasingly high fees become subject to increasingly poor teaching and quality standards [19]. Corrupt, unethical and questionable practices can be found in a variety of domains including: quality issues (such as poor teaching and assessment criteria); and in the domain of plagiarism and cheating, when faculty do not enforce codes of conduct [19]. Researchers [17, 18] also mentioned some forms of faculty-to-student incivility that we categorized under educational transgression, such as: improper pacing for lectures; tardiness, unannounced assessments, and pedagogical incompetence.

3) Research AT: Corrupt research practices may occur in journal and publication practices, and faculty research and funds [19, 20]. A study [21] examined to what extent criminological theories of high strain, low deterrence, low self-control, and social learning are perceived to explain research misconduct, and found that professional strains and stressors were most commonly perceived to cause misconduct, followed by the low chance of misconduct detection. A meta-analysis showed that around 40% of researchers were aware of others who had used at least one questionable research practice [22]. Previous studies showed that Iran had the first rank, and highest ratio of retracted articles (about 38% of its total publication on Web of Science journals) among other countries [23, 24].

4) Organizational AT: Corruption in HE that "involves any act by an individual to use company resources for personal gain" [25], can occur in different areas of HE including: regulation; credentials and qualifications; admissions and recruitment; teaching role; and student assessment [26]. In another categorization [19] cited academic corruption domains as follows: access; falsified grades and degrees; foreign student fees; and falsification of faculty records.

5) Sexual AT: "Sexual harassment in the workplace is an overt form of sexism" [26]. It is largely a misleading

term, because it mostly includes disrespect, and the most prevalent form of it is gender harassment [27]. HE is not immune to the epidemic of sexual harassment, particularly to harassment of graduate workers, due to power differentials [28]. Moreover, 50% to 90% of undergraduate women experience sexual harassment from peers, faculty and staff of HE institutions [29]. International studies showed a large variation in sexual harassment prevalence in HE, from 2% to 93%. More than half of the students and faculty who have experienced sexual harassment do not report it to management [30]. Faculty sexual misconduct, is also an ignored epidemic, a pervasive but underreported issue within academia. "At least 13% of women in academia experience sexual harassment by a faculty member". "Among graduate and professional students, 24% of the sexual harassment incidents experienced by women (18.2% for men) were perpetrated by a faculty member or instructor" [31]. Serial sexual harassment, and simultaneously "the so-called 'pass-the-harasser' phenomenon of serial sexual harassers relocating to new university positions" make the sexual AT issue more complicated [32].

Transcending academic integrity, most of all, necessitates prevention of, or reduction in ATs of faculty members by employing effective means of social control, especially internal means, to foster a fertile ground for students to socially learn and practice integrity. Various means of social control are suggested in the literature, such as self-control introduced by the Gottfredson and Hirschi's General Theory of Crime [4, 33], and subjective wellbeing and job satisfaction introduced by the Agnew's General Strain Theory [34].

General Theory of Crime has undergone significant, continued empirical testing and received consistent support through decades of research [35, 36]. It can be applied transculturally, and is relevant for any norm-violating behavior [37]. This theory proposes that low self-control, as a key personality trait that develops early in life, by age 10, and remains stable across individuals over time, explains all forms of crime and deviance [21, 37]. It is "the capacity to alter or override dominant response tendencies and to regulate behavior, thoughts, and emotions" [38]. This theory is used to explain a variety of deviant and criminal behaviors, such as: driver aggression; corporate

offending; alcohol and substance abuse; police misconduct; theft and delinquency [35], and problematic internet and smartphone use [39]. A study [40] also showed that low self-control increases online transgressive behaviors and transgressive content consumption, and mediates the effects of other examined predictor variables on both criterion variables. Research also found that self-control influences subjective well-being, because people with higher levels of self-control are more likely to achieve their goals in multiple life domains [38].

Happy-making criminology emphasizes that making people happy is the best crime prevention method [41]. General Strain Theory (GST) argues that if people cannot cope effectively with strain and stress, the resultant negative emotions create pressure for corrective action, and it may lead some people to respond by breaking rules. For example, in an academic context, GST holds that research misconduct is the product of workplace stress and strain brought about by different factors such as "publication expectations, grant requirements, promotion and annual review criteria, and pressure to establish a reputation as an eminent scholar" [21].

In their research on happiness, Diener and his colleagues proposed that subjective well-being or human happiness has one cognitive component (i.e., life satisfaction (LS)), and two affective components (i.e., positive affect (PA), and negative affect (NA)), and later also included domain satisfaction (DS) (i.e., satisfaction in specific life domains) component [38, 42, 43]. It is noteworthy that there is a main distinction between bottom-up theories of subjective well-being (i.e., DS causes LS) and top-down theories (i.e., LS causes DS) [43]. In the current research we have eliminated positive and negative affect variables from the study, and retained the life satisfaction, and job satisfaction (as domain satisfaction), to feasibly limit the number of examined perceived causal relations.

"Satisfaction with life (SWL) [that] is sometimes interchangeably referred to as 'subjective wellbeing' (SWB), 'life satisfaction', or 'quality of life' in the happiness literature", is "the extent to which a person feels satisfaction with the conditions of their life" [42]. Recently, researchers are studying the link between SWL (pleasure), and crime and deviance, including: The General Strain Theory; the Risk-Needs-Responsivity Model; the Good Lives Model; and work

on resilience [42]. Researchers [42] found that "higher satisfaction with life was significantly associated with less involvement in acts of crimes and deviance, at least until measures of strain interacted with measures of SWL".

Job Satisfaction is the most widely investigated job attitude, and may be the most extensively researched topic in the history of industrial or organizational psychology, and management literature [44, 45]. Job satisfaction is defined as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" and includes multidimensional psychological responses to one's job, with cognitive (evaluative), affective (or emotional), and behavioral components [45]. Job satisfaction is strongly and consistently related to subjective well-being (reported correlations ranged from .19 to .49), and significant reciprocal relationships are found between job satisfaction and life satisfaction [45]. Previous studies showed a negative association between job satisfaction and counterproductive work behaviors [46]. Wang et al. [47] found that job satisfaction can mediate the inverse and direct effects of self-control on counterproductive work behaviors, and organizational citizenship behaviors, respectively.

To wrap up the introduction section, it should be mentioned that sociology of deviance is a field that studies nonnormative beliefs, behaviors, and identities [4], and many theories of deviance are developed to explain both deviance and crime [46]. Several criminological theories such as strain, deterrence, low self-control, and social learning have been applied to white-collar crime (workplace fraud), which attribute structural or individual characteristics as causes of misbehavior (i.e., "bad barrels" vs. "bad apples" approach to deviance). Indeed, ATs such as research misconduct are similar to white-collar crimes [21], and their reduction and prevention have a high significance for every society. To the best knowledge of the authors, there are no studies in the literature that directly employ psychological variables of social control theories to examine transgressions of faculty members. Hence, the current research, quantitatively studied perceived effects of self-control, life satisfaction (a component of subjective wellbeing), and job satisfaction on ATs of tenured and non-tenured Iranian faculty members, and also

investigated the perceived prevalence of these transgressions in Iranian academia.

MATERIAL AND METHODS

A perceived causal relations (PCR) methodology, adopted from Frewen et al. [48]; Muncer et al. [49]; Gillen & Muncer [50]; and also, Deserno et al. [51] was employed to conduct research on social control means for ATs among faculty members. This methodology "provides simple yet promising tools to assess PCR between variables" [51], especially, when conducting a self-report, correlational research design on sensitive topics such as commission of different, particularly serious transgressions does not seem feasible. Muncer et al. [49] and Gillen & Muncer [50] called this methodology as a version of network analysis. Deserno et al. [51] used this methodology by eliciting judgements of clinicians on the structure of causal relations between symptoms in a psychological research.

We modified the methodology according to our research question, and also due to the limitation of Google Forms platform in presenting grids as is suggested in the original methodology. To conduct our research feasibly, we selected 3 independent variables, i.e., self-control (SC), life satisfaction (LS), and job satisfaction (JS), and 5 dependent variables, including interpersonal (InterP), educational (Edu), research (Res), organizational (Org), and sexual (Sex) academic transgressions (AT). According to studies [48, 50], we determined 56 probable mutual relations among these variables. We also modified the methodology by asking participants to indicate if they perceive No relationship, a Direct (positive), or Inverse (negative) relationship between each pair of variables, and also to rate the perceived effect size between these pairs from 0 (No relationship) to 10 (A very large effect size). We included the mean scores of the PCR in our analysis, if the relations were endorsed by at least 70% of all participants. Adopted from other

studies [51], we visualized these relationships by conducting network analysis.

We made an online questionnaire on Google Forms, and sent its link via social media apps (including WhatsApp, Telegram, and Instagram) directly to faculty members, or to online groups available to the authors. The questionnaire was consisted of 10 open- and close-ended socio-demographic questions; 56 items showing the relationships among variables (e.g., Life Satisfaction--> Job Satisfaction), asking participants to indicate the type of relationship via a 3-choice item (No relationship, Direct, Inverse), and then, rate the perceived effect size between these pairs; and 5 questions for rating the perceived existence of ATs in the universities the participants work in, from 0 (Not at all) to 10 (Extremely). The participants were provided with instructions on how to answer the questionnaire, and also with operational definitions of variables. Twenty tenured and non-tenured university professors participated in the study (see Table 1).

Table 1: Socio-Demographic Characteristics

Gender	Female= 9; Male= 11
Tenured Faculty Members	35% (1 full and 6 assistant professors)
University Type	Public Universities= 25%; Azad University= 40%; University of Applied Science and Technology= 35%; Non-profit HE Institutions= 25%; Payame Noor University= 5% *
Teaching Experience (Years)	1-2= 10%; 3-10= 60%; 11-30= 30%
Age (Years)	35-39= 15%; 40-50= 65%; 51-60= 15%; Over 70= 5%.
Degree	PhD= 65%; PhD Student= 35%
Field of Study	Social Sciences/ Humanities= 75%; Art= 20%; Engineering= 5%
Marital and Parental Status	Married= 75%; Parent= 60%

* The total percentage is more than 100%, because non-tenured instructors teach in different university types concurrently.

RESULTS

To initially analyze the data, we employed IBM SPSS Statistics 22. First of all, we calculated endorsement or consensus on the type of the perceived effect between pairs of variables (i.e., Direct/ positive; Inverse/ negative; and No relationship/ none). In the first instance, almost all of the 56 mutual pairs of relations were perceived by more than 55% of participants to have a type of direct or inverse relationship (except for the 2 pairs of variables i.e., Edu→ Sex and Res→ Sex that were perceived to have no relationship; and also, two pairs with 50%, and one with 40% endorsement). The highest percent of endorsement for relationships was 90%. To take into account the chance or random agreement [52], and increase reliability, we chose a cutoff of 70% to include the agreed-upon relationships in our final model. Hence, we included 25 perceived relations to calculate their perceived strengths or effect sizes.

We used a rating scale for measuring effect sizes of perceived relations, with 11 numeric points. Previous research showed "that 9-point scales may have interval properties when the ends are anchored adjectively, as in semantic differential scales" [53]. It is appropriate to use discrete rating scales when presenting simple descriptive statistics such as frequency or mean values of the data [54]. Hence, we calculated mean score (as the perceived effect size), and standard deviation to analyze our data. Although it is suggested to use median rather than mean to prevent outliers from pulling the mean unrealistically, or using a trimmed mean that excludes these extreme values [53], we decided to keep all of the rated data

(including outliers) that were agreed upon by more than 70% of participants, and also, to use mean rather than median to have variations in the mean scores to make PCR visually more distinguishable in the model. All effect sizes were rated higher than 6 out of 10.

Table 1: Findings

PCR	Perceived Effect Sizes	Std. Deviations	Number of Endorsements
LS increases JS.	8.00	1.363	15
LS and SC reciprocally increase each other.	7.94 & 7.29	1.519 & 2.673	17 & 14
LS and Interpersonal AT reciprocally decrease each other.	-7.06 & -7.36	2.407 & 2.134	16 & 14
LS decreases Organizational AT.	-7.27	2.374	15
JS increases SC.	7.00	2.062	17
JS and Interpersonal AT reciprocally decrease each other.	-7.00 & -7.50	3.038 & 1.951	14
JS and Research AT reciprocally decrease each other.	-6.81 & -6.71	2.562 & 2.494	16 & 14
JS decreases Educational and Organizational ATs.	-7.19 & -7.38	2.786 & 2.335	16
SC and Sexual AT reciprocally decrease each other.	-7.47 & -7.50	2.748 & 1.829	15 & 14
SC and Organizational AT reciprocally decrease each other.	-7.28 & -6.07	2.396 & 2.464	18 & 14
SC decreases Interpersonal, Educational, and Research ATs.	-7.12, -7.56 & -7.25	2.705, 1.896 & 2.352	16
Educational AT decreases LS.	-6.57	2.709	14
Organizational AT increases Interpersonal, and Educational ATs.	7.21 & 7.29	2.190 & 1.939	14
Sexual AT increases Interpersonal, and Organizational ATs.	7.31 & 6.50	2.387 & 2.767	16 & 14

To analyze the PCR among variables, we employed Gephi 0.10.1 to visually conduct network analysis. In the following models, each variable is represented by a node in the network, and the associations among nodes are shown with lines that are referred to as edges [55]. Due to the nature of our data, we used directed edges. The thickness of the edges conveys the strength of the tie (connection) between nodes [56]. To show the strength of the effects, we employed the absolute value of the mean scores as the weights of the edges in the models.

We analyzed our data using centrality measures, including: degree centrality, out-degree and in-degree centralities, betweenness, closeness and harmonic closeness centralities, and eccentricity and eigenvector centralities. The resultant models are presented in the figures 2 and 3.

Degree centrality is a network characteristic that refers to the number and strength of in- or out-going connections each factor (node) has (i.e., the number of edges connected to a node) [51, 56-58]. Nodes with high centrality have many and strong unique associations with other nodes in the network [55]. As it is shown in the degree centrality graph, SC variable had the highest centrality among other variables, and after that, JS did. Afterwards, life satisfaction, organizational and interpersonal ATs had a similar, but high centrality score.

Out-degree centrality refers to the number of nodes pointing to other nodes (i.e., number of edges directed away from a node) or the sum of the weights of the outgoing edges [51, 55, 56, 58]. Edges are perceived as causal influence of a factor (node) on other factors, and factors are considered as both the effect (in-degree) versus cause (out-degree) in all factor pairings [51]. As we can see in the out-degree centrality model, SC had the highest causal effect among other variables, and after that, JS, and LS had high causal effects on other variables, in descending order. After them, sexual, and organizational ATs had high causal effect, and then interpersonal AT did.
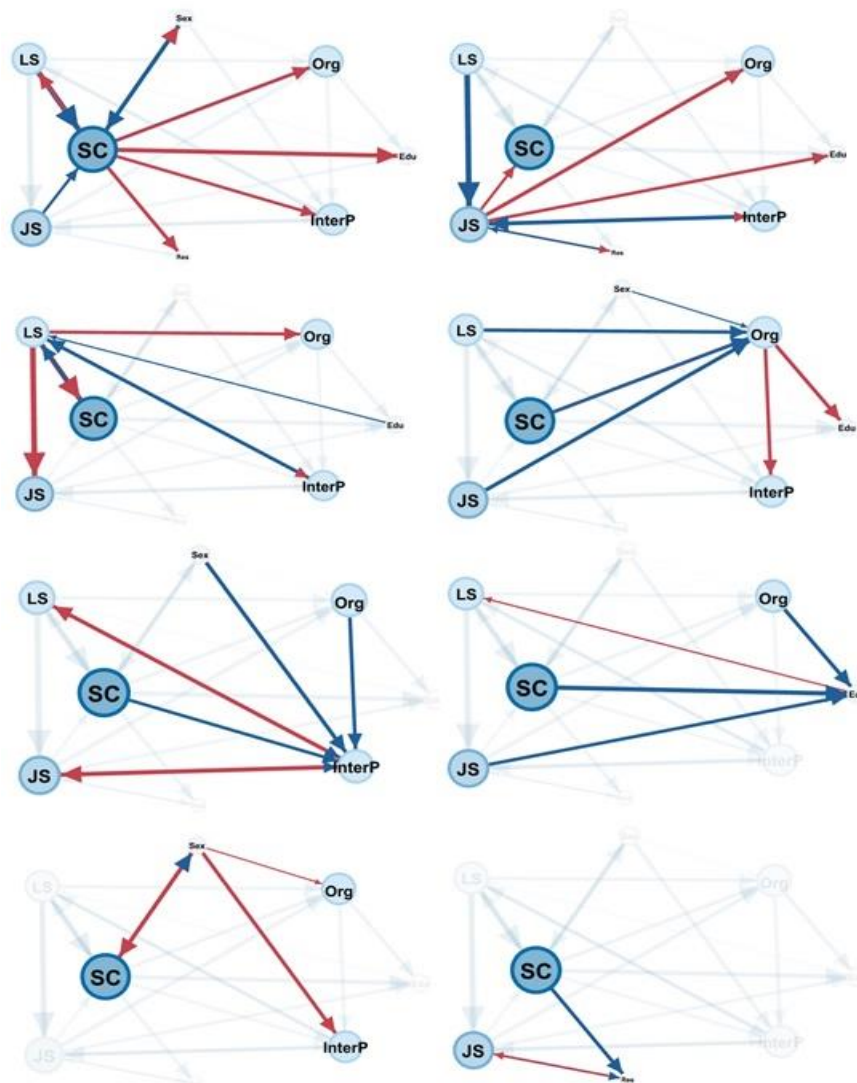
Figure 1: Degree Centrality and PCR for Each Variable

In-degree reflects the number of other nodes pointing to the node (i.e., number of edges directed towards a node), or the sum of the weights of the edges arriving at a node [51, 56, 58]. As it is shown in the in-degree centrality graph, interpersonal AT had the highest score as an effect variable. After that, were organizational AT, and SC with the same score, and then were JS, LS and educational AT that had the same in-degree centrality score.

 "Betweenness centrality indicates how central a node is in a network", and "[q]uantifies the number of times a node lies along the shortest path between two other nodes in the network" [57]. Betweenness centrality measures one node mediation role in a network [59]. A high betweenness centrality might suggest that the node is connecting various parts of the network together [60], hence, is likely to be a mediator [61]. Betweenness centrality for sexual AT is 0.0. As shown in the Figure 2, SC, JS, LS, and farther, interpersonal AT were central nodes in the perceived network.

Closeness centrality is a "centrality measure based on the shortest path length between a node and other nodes in the network" [57]. Closeness

centrality basically shows how close a node is to others in a given network [56]. "A high closeness centrality means that there is a large average distance to other nodes in the network" [60]. Harmonic closeness centrality is a variant of closeness centrality that was developed to solve the problem of the original formula in dealing with unconnected graphs [60]. It "is the sum of the inverted distances between nodes, in a not necessarily connected graph" [62]. SC, JS, LS, then sexual and organizational ATs with the same score, and then interpersonal AT had high closeness and harmonic closeness centrality scores.
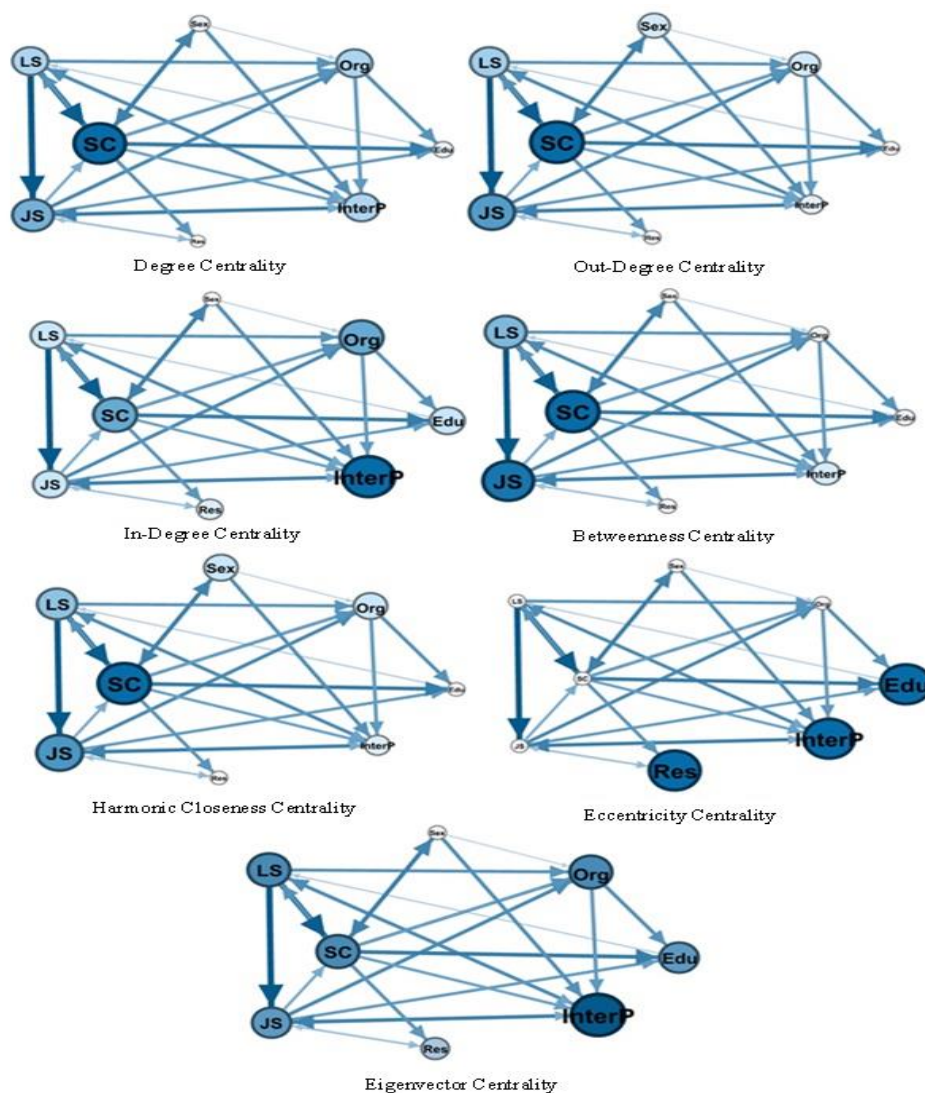

Figure 2: Centrality Models for PCR

Eccentricity centrality is the maximum distance from a node to any other node in the graph (i.e., the distance between a node and the furthest node from it) [56, 57, 60], "representing the importance of a node within a network, determining the influence of a particular node within a network" [57]. "A high eccentricity means that the furthest node in the network is a long way away, and a low eccentricity means that the furthest node is quite close" [60].

Interpersonal, educational, and research ATs with the same score had the highest eccentricity centrality, and other variables with the same score had a low eccentricity centrality.

In eigenvector centrality, the importance of each node is dependent on the importance of its neighbors [60, 63]. "It assigns relative scores to all nodes in the network based on the concept that connections to high-scoring nodes contribute more to the score of the node in question than equal connections to low-scoring nodes" [60]. As shown in the Figure 2, interpersonal AT had the highest eigenvector centrality, after that were LS, SC, and organizational AT with the same score, and then, JS and educational AT had high eigenvector centralities. It shows that these variables are important in that they are connected to other important variables in the network.

As some of the centrality measures showed, SC was the most important variable, with the highest causal effect in the network, connecting various parts of the network. It can suggest a mediating role for this variable. JS and LS were the second and third most important variables in the perceived network, that could play a mediating role among other variables. Sexual and organizational ATs were also perceived as fourth important variables in the network with high causal effects, but not with a high mediating role for the organizational AT, and, with no mediating role for sexual AT. Interpersonal AT was fifth important variable that had a high causal effect, while playing a mediating role in the network. All of the Important variables with a mediating role, along with educational AT, also were perceived to be strong effect variables. Interpersonal, organizational, and educational ATs can be influenced more than other dependent variables in this network.

The Perceived Status Quo of Academic Transgressions

As Table 3 shows, the most and the least perceived AT by faculty members were research and sexual transgressions, respectively. Almost all mean scores for perceived ATs were higher than average (i.e., 5), except for sexual transgression that it was also very close to the average value. Standard deviation showed divergence among ratings, that could be influenced by different factors such as the work experience duration, and the institution type.
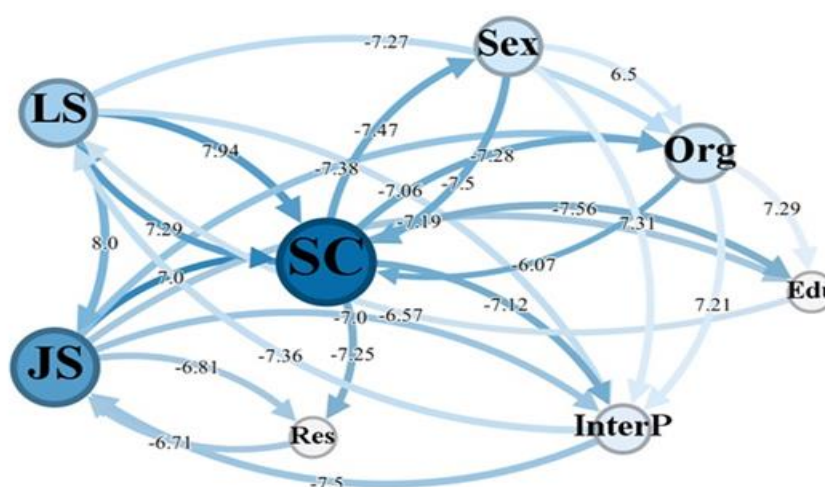

Figure 3: A Network Analysis Model for Perceived Causal Relations (With Out-Degree Centrality)

Table 3: The Perceived Existence of ATs in Universities

Rank	Variable	Mean	Std. Deviation	Median	Mode	Minimum	Maximum
1	Res	7.50	2.646	9.00	10	3	10
2	Edu	7.45	2.781	9.00	9	2	10
3	Org	7.20	2.764	8.00	10	2	10
4	InterP	6.35	2.815	6.00	5 & 10	1	10
5	Sex	4.85	3.150	5.00	1 & 7	0	10
–	Avg. AT (α=.929)	6.67	2.504	7.60	Multi	2.80	10

DISCUSSION

The current research seeks to examine the perceived effectiveness of selected soft-edged social control means [10] on ATs of university professors. Faculty member participants perceive that ATs are prevalent in Iranian academia. Research AT is the highest rated transgression. It is compatible with the previous research [23, 24] that have shown the extremely high rate of Iranian article retraction, and its first rank among other countries. Educational AT is the second highest-rated transgression. As researchers [19] also argued, students have been becoming subject to increasingly poor teaching and quality standards. A study [17] also showed that some forms of educational AT (e.g., ineffective teaching methods, and unfair grading) are highly prevalent among faculty members. Organizational AT is rated by faculty members as third highest prevalent transgression. Researchers [19] mentioned several examples and incidents of serious organizational misconduct (including research misconduct), although, they stated that it is difficult to estimate the prevalence of it. Interpersonal and sexual ATs are rated somewhat lower than other types of transgressions, but yet highly. Regarding interpersonal AT, a study [17] showed that all examined forms of incivility and interpersonal AT are moderately to highly prevalent among faculty members.

Divergent ratings of the prevalence of sexual AT can be due to the difficulty for estimating it, as previous research found that more than half of students and faculty who have experienced sexual harassment do not report it [30]. Another study [30] findings also demonstrated a large variation in prevalence of sexual harassment by students, faculty members, or staff, in HE, from 2 to 93 percent.

SC is perceived as the most effective variable in the network, that decreases all five types of ATs. It is consistent with the General Theory of Crime, that emphasizes the important role of low SC in any non-normative behavior [37], and consistent with the previous research on various deviant and criminal behaviors [35, 39]. The results of the current research suggest that SC can play a mediating role among other variables. It is consistent with the previous findings of researchers [40] who showed that SC mediates the effects of their examined variables on both online transgressive behaviors and transgressive content consumption.

JS and LS were the second and third most important variables in the perceived network, that could play a mediating role among other variables. JS decreases almost all types of ATs, except for sexual AT. LS, also, directly decreases organizational and interpersonal ATs. Our findings, in consistence with previous research [42, 46], also show that cognitive components of subjective well-being (i.e., satisfaction with life and domain satisfaction) decrease counterproductive work behaviors and crime.

The interplay of the independent variables makes their role more significant in the perceived network, as LS increases both JS and SC; JS increases SC; and SC, itself, increases LS. It is compatible with Ouyang et al.'s [38] findings that showed SC influences subjective well-being. Previous research found reciprocal relationships between JS and LS (45). Our findings are consistent with it, as our perceived network shows that LS has a direct effect on JS; and JS through increasing SC, indirectly affects LS. It is noteworthy that in our initial analysis, 65% of participants endorsed the direct effect of JS on LS, which later, is eliminated due to the endorsement cutoff of 70%. Our finding of the

probable mediating role of JS is compatible with the findings of another study [47] that showed JS can mediate the inverse effect of SC on counterproductive work behaviors.

Our findings show that the perceived reciprocal relations among dependent variables themselves, and their inverse effects on given independent variables, exacerbate the commission of ATs among faculty members. Also, our findings show that by increasing independent variables, we can decrease interpersonal, organizational, and educational ATs more than other dependent variables.

In addition to the research findings, the contribution of the current research is the adoption of the PCR methodology from psychology field, and applying it in the HE research, and also, suggesting it as an effective methodology for conducting research on sensitive topics such as transgression and crime. Another contribution is the modification we have made to the original methodology to further examine the type of variable effects (i.e., direct, inverse, without effect), and calculating endorsement levels according to them. There are studies which used PCR methodology with a limited number of respondents. For example, a study [51] built perceived causal networks upon answers of 29 clinicians, and another study [49] compared the perceived causes of crime between two samples of 28 British and 38 American criminologists. Although our research is limited to its low response rate, it is yet justifiable, as our participants are experts. A study [51] showed that 29 clinician participants' perception of causal relations between autism and well-being was similar to the interrelatedness found in the self-reported data from 323 clients. Hence, they suggest this methodology as a useful tool for translating clinical expertise into quantitative information. In the same way, we also argue that this methodology can be useful for the sensitive topics that self-reporting about them seems infeasible. Moreover, we suggest further research to develop an online tool to gather data for conducting this methodology considering the types of variable effects. We also recommend future research to employ more participants, and different social control means variables to conduct this methodology on ATs of faculty members.

CONCLUSION

The current research aims to examine the perceived effects of self-control, job satisfaction, and life satisfaction, as social control means, on five types of academic transgressions among faculty members of higher education. Faculty member participants perceive the importance of their self-control, job satisfaction, and life satisfaction in decreasing academic transgressions, particularly interpersonal, organizational, and educational ATs. As they perceive high prevalence of all types of academic transgressions in Iranian academia, there is an urge to consider new policies to employ effective social control means suggested in this research, especially self-control, to reduce, and even restrain the perpetration of these transgressions, to first of all, enrich the well-being of faculty members themselves, and also, foster the well-being of students, and university staff, and consequently, transcend the integrity within the society. We also suggest perceived causal relations as a useful and strong methodology to conduct research on sensitive topics, especially, transgression and crime.

ETHICAL CONSIDERATIONS

As the current research, itself, is all about transcending academic integrity, it is conducted thoughtfully, considering all issues regarding ethical research practices, from consensual participation to carefully acknowledging the used sources.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interests.

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