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Workplace stress as predictor of risky driving behavior among taxi drivers. The role of job-related affective state and taxi driving experience

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ABSTRACT

This study evaluated the relationships between the workplace conflicts and risky driving behavior in a sample of taxi drivers. We also investigated the mediational role of job-related affective state in the relationships between the workplace conflicts and risky driving behavior on the road, and whether these relationships are moderated by driving experience as a taxi driver. The sample included 237 taxi drivers (*M*age = 39.10, *SD* = 9.97 years). The participants completed scales measuring the workplace conflicts with clients and with peers, job-related affective state, and risky driving behavior, as well as demographic information. The results showed that both conflicts with clients and with peers are positively associated with risky driving behavior. Further, the relations between workplace conflicts and risky driving behavior are mediated by job-related positive and negative affective state. Moreover, the relation between conflicts with clients and risky driving is moderated by driving experience as a taxi driver. Our findings indicated that workplace conflicts play an important role in risky driving behavior engagement. Further, results bring evidence for the less studied relations between job-related affective states and risky driving behavior, taking into account taxi driving experience. Means of improving workplace safety that target not only taxi drivers but also members of the community are presented. Further, the importance of reducing job-related stress in order to enhance driver's ability to cope with job challenges is presented.

1. Introduction

Previous studies showed that people whose job is driving present a higher tendency to adopt risky driving behaviors and are at a higher risk of road accidents compared with the general driving population (Nævestad et al., 2015; Shi et al., 2014; Tseng, 2013). When it comes to taxi drivers, these results may be surprising because it is commonly accepted that they have higher driving skills (e.g. fluent driving, perceiving hazards in traffic, managing the car through a skid, overtaking), an exceptional visuospatial representation (see for more details, Kalakoski and Saariluoma, 2001) and also a richer driving experience on urban roads due to higher exposure to different traffic conditions (Stewart et al., 2005; Zhao et al., 2014). However, greater experience and higher exposure may lead to desensitization to road traffic risks (Öz et al., 2010). Moreover, the tendency to engage in risky driving behaviors, in particular under the circumstance of ambiguous legal terms, such as running the yellow light, arbitrary lane change and fast start-stop, may be explained by the fact that taxi drivers' income depends on the passenger numbers (Dalziel and Job, 1997; Facey, 2010; Stewart et al., 2005; Tseng, 2013; Zhao et al., 2014). These behaviors are dangerous not only to taxi drivers themselves, but also to their clients and to other road users (Cheng et al., 2016). Despite these consequences, researchers neglected the study of driving behaviors among Romanian taxi drivers. This gap in the literature in terms of theory leads further to a lack of empirical base for interventions designed to promote safety public transportation.

Although some factors have been associated with the frequency of risky driving behaviors manifested by taxi drivers, most of previous studies focused on the drivers' personal characteristics, like age, gender, job experience, educational level, and driving experience (Chung and Chang, 2015; Sullman et al., 2013; Tay and Choi, 2016; Tseng, 2013). Without denying the role of personal factors, safe driving can be also shaped by organizational factors, such as safety climate, the way people communicate within the organization, interpersonal interactions, or work-related stress (Caird and Kline, 2004; Öz et al., 2014). For a better understanding of risky driving behavior among taxi drivers and in order to advance the literature, the aim of the present study is to assess both the contextual and individual determinants of risky driving among this

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professional group. Because the frequency and severity of hazards, including verbal abuse, is very high among taxi drivers (Dalziel and Job, 1997), we studied the relation between workplace conflicts generated by the interactions with clients and with peers (i.e., other taxi drivers) and risky driving behavior.

Some evidence suggests that workplace hazards, like verbal abuse, verbal or physical threat, physical assault etc., would significantly contribute to job-related affective wellbeing, which can further lead to unsafe behaviors (Machin and De Souza, 2004). However, there are very few studies on this topic among taxi drivers and mostly conducted in developed countries (Couto et al., 2011). Given the fact that cultural factors may influence safely driving behavior of the work-related driving population (Newnam et al., 2014), little is known about these driving behaviors manifested by taxi drivers from low and middle income countries. Therefore, we further assessed the relation between job-related affective state and risky driving, as well as if job-related affective states mediate the relations between workplace conflicts and risky driving behavior. The moderated role of professional experience was also investigated.

1.1. Workplace conflicts and risky driving behavior

Risky driving behaviors are defined as those actions that increase the objective likelihood of a crash or the severity of injury should a crash occur (Sumer et al., 2005). It includes speeding, tailgating, not halting completely at stop signs, driving off from a stop before passengers have time to get seated, or running traffic lights (Greiner et al., 1998). Previous studies reported positive associations between these driving behaviors and various indicators of work-related stress, like the inadequate behavior of other drivers, traffic congestion, ergonomic factors, climate conditions, or work scheduling (Rowden et al., 2011). Social stress generated by interpersonal conflicts at workplace was also linked to risky driving and fatal accidents on the road (Oliver et al., 2002). These conflicts can be defined as situations that occur in a work related context and lead to physically and/or psychologically harm of a worker (Schat and Kelloway, 2005). The prevalence of workplace conflicts is very high among workers in public transport, all over the world (Couto et al., 2011; Richardson and Windau, 2003). A previous study sustained that taxi drivers are 15 times more exposed to workplace aggression and conflicts than the average worker (Mayhew, 2000). Given the fact that taxi drivers manifest a higher risk of being victims of conflictual situations, not necessary physically but emotionally, their job is considered one of the hazardous and stressful professions (Mayhew, 2000; Schaufeli and Taris, 2014).

Taxi drivers negotiate multiple interactions with many customers and other taxi drivers, thus the sources of workplace conflicts are multiple. Studies showed that the simple presence of passengers in the car is associated with a higher tendency of engaging in different risky driving behaviors, such as speeding or careless driving. This tendency is higher in conflictual situations generated by the presence of the clients in the car (Cooper et al, 2005; Simons-Morton et al., 2005). These clients may have drunk excessive amounts of alcohol or have taken drugs, which can predispose them to verbal insults or even physical assaults. According to a safety culture model, conflicts with peers, generated by competition, often lead to different risky driving behaviors, like speeding or the lack of seat belt use (Nævestad et al., 2015). Because taxi driving is a moneymaking business based on the amount of clients in a given period of time, drivers are often engaged in highly competitive struggle for passengers (Couto et al., 2011). Thus, different conflictual situations may appear when one taxi driver tries to gain an advantage over another colleague. For example, one driver may jump a queue at a taxi rank or may drive over the speed limit in order to get ahead of another taxi driver so as to be able to pick up the passengers (Cheng et al., 2016). However, the literature about the relation between conflictual situations with peers and risky driving among taxi drivers is very scarce. Given the fact that there are theoretical reasons and few empirical evidence to assume that these workplace conflictual situations increase risky driving, the first aim of the present study is to explore the relations between conflicts with both clients and peers and risky behaviors behind the wheel. We expected that a high level of workplace conflicts to be associated with a high level of risky driving behavior.

1.2. Job-related affective state and risky driving behavior

The most important consequences of exposure to workplace conflicts, among taxi drivers, are rather emotional, than physical (Mayhew, 2000). Among different professional categories, several emotional reactions have been identified as consequences of this exposure, such as anger, fear, helplessness, sadness, and frustration, which can lead to decreased job satisfaction (Bowling and Beehr, 2006). Van Katwyk et al. (2000) introduced the concepts of positive and negative affective states, referring specifically to job-related affect determined by the pleasure and the arousal that job demands may imply. Thus, job related positive affective states represent positive states (e.g. calmness, happiness, enthusiasm) frequently experienced at work. The opposite one describes negative affective states frequently experienced while working, such as sadness, anger, or anxiety (Van Katwyk et al., 2000).

Affective states are known to impact drivers' behavior, in terms of errors and risk-taking attitudes and practices (Hu et al., 2013; Machin and Hoare, 2008; Öz et al., 2010; Rowden et al., 2011). Moreover, affective states related to job characteristics, like a low level of positive job-related affective state or negative feelings about driving profession, are positively related to risky driving behavior (Machin and De Souza, 2004; Öz et al., 2010). However, previous studies did not examine the simultaneous role of both job related positive affective state and job related negative affective state in determining risky driving behavior among taxi drivers, in low and middle developed countries. Thus, the second goal of the present study is to assess the relation between job related positive and negative affective state and risky driving behavior, in a sample of Romanian taxi drivers.

1.3. The mediating role of job related affective state

Given previous findings, there is empirical evidence to consider that environmental factors, like workplace conflicts, and affective factors, like job-related affective state, influence risk taking tendency on the road (Mayhew, 2000). The stressor–strain model designed for bus drivers (Tse et al., 2006) sustain that affective states may mediate the relation between stressors intrinsic to the working environment and particular individual behaviors. In samples of taxi drivers, previous studies confirmed the fact that verbal abuse, as well as verbal or physical threat, encountered at work, are related to a low level of job-related positive affective state of employees (Machin and De Souza, 2004; Tse et al., 2006). Further, studies showed that affective states may impact risky driving behavior (Machin and De Souza, 2004; Öz et al., 2010). However, although there is evidence that work-related conflicts have an indirect effect on unsafe behaviors (Machin and Hoare, 2008; Öz et al., 2010), little is known about the mediating role of job related affective states in the relation between workplace conflicts and risky driving behavior. Therefore, the third aim of the present study is to assess if job-related affective state is a mediator among workplace conflicts and risky driving behavior, among taxi drivers. We expected that a high level of workplace conflicts to be associated with a low level of job related positive affective state and a high level of job related negative affective state, which further will lead to risky driving behavior.

1.4. The moderating role of taxi driving experience

Some studies suggest that professional drivers have a higher tendency to adopt risky driving behaviors and to be involved in road

crashes given their job experience (Peltzer and Renner, 2003) and, particularly, given their driving experience (Borowsky and Oron-Gilad, 2013; Newnam et al., 2014; Wang et al., 2015). Other studies sustain that new taxi drivers, with a lower level of experience on the road, present a higher risk to commit speeding violations and to be engaged in other risky driving behaviors (La et al., 2013; Tseng, 2013). Although the relation between experience as a taxi driver and risky driving is inconclusive, we can hypothesize that it may moderate the relation between workplace conflicts and risky driving. Therefore, the four aim of the present study is to assess if the relation between workplace conflicts and risky driving behavior is moderated by taxi driving experience.

2. Method

2.1. Participants

A total of 237 taxi drivers took part in this study (*Mage* = 39.10; *SD* = 9.97; all males). Initially, our sample included four female taxi drivers. Because gender have significant effects on driver behaviours (e.g. Lajunen and Summala, 1995) and because of the very few number of female taxi drivers of the study, we decided that the female participants to be kept out of the analyses. The participants had been driving for 15.29 years on average (range 1–41, *SD* = 7.88 years) and they have between 0 and 27 years of experience as taxi drivers (*M* = 7.79; *SD* = 6.04). The participants reported that they had been involved in 0 to 10 active accidents, and in 0 to 30 passive accidents on average in a lifetime period, not only as taxi drivers.

2.2. Instruments

The Interpersonal Conflict at Work Scale (ICAWS, Spector and Jex, 1998) consists of four questions that measure the extent to which the employee experienced arguments, yelling, and rudeness when interacting with the others at work. The participants completed twice the same four items. For the first time, they had to think about conflicts with clients, then about the conflicts with the peers. The items were rated on a 5-point Likert scale ranging from 1 (never) to 5 (every day) where high scores represented higher levels of conflict. In order to verify the factorial validity of the scale, we used confirmatory factor analysis (CFA). For the model fit we applied the maximum-likelihood estimation and reported the following fit indexes: Root Mean Square Error of Approximation (RMSEA), Goodness of Fit Index (GFI), and the normative fit Index (NFI). The model fit indexes of the data analysis were: χ^2 (2) = 1.65, p = .437; RMSEA = 0.00, 90% CI: [0.00, 0.12]; GFI = 0.99; NFI = 0.99. These values are in line with the joint fit criteria (Hu and Bentler, 1999), therefore the model fit the data in a satisfactory degree. The internal consistency for the ICAWS were 0.70 (conflicts with clients), respectively 0.71 (conflicts with peers). Average scores were computed for each dimension, higher scores suggesting higher involvement in conflicts.

Job-Related Affective Well-being Scale (JAWS, Van Katwyk et al., 2000) was designed to assess employees' emotional reactions to their job over the previous 30 days. The scale is comprised of 30 questions of job-related emotional states, evaluated on a 5 point Likert scale, from 1 (never) to 5 (always). It includes questions such as "my job made me feel content" and "my job made me feel fatigued". Confirmatory factor analysis indicated that the model fit the data adequately: $\chi 2$ (109) = 161.58, p = .001; RMSEA = 0.04, 90% CI: [0.03, 0.05]; CFI = 0.97; NFI = 0.91. For the current sample, the Cronbach alpha reliability coefficients were 0.85 for job related positive affective state and 0.84 for job related negative affective state. The average scores were computed, higher scores indicating high levels of job related positive affective state and job related negative affective state, respectively.

Risky driving behavior was measured using items from two scales aimed at measuring self-reported risky driving behavior in different traffic situation (Iversen, 2004; Ulleberg and Rundmo, 2003). From the two scales, 18 items were selected, measuring five classes of risky driving behaviors: speeding, drunk-driving, not wearing seat belts, reckless driving, and violation of different traffic rules. These items were translated into Romanian and were used in a previous study to measure the risky driving behavior among Romanian taxi drivers (removed for peer-review). We selected the items referring to the most risky behaviors on the road relevant for the Romanian context, and excluded safe behaviors. The participants rated the frequency of manifesting risky driving behaviors, using a 6-point scale from 0 (never) to 5 (very often). An average score was computed with high scores indicating a high level of engaging in risky driving. In our sample, the Alpha Cronbach coefficient was 0.84.

The *demographic questionnaire* asked participants to report their age, gender, their total mileage, the number of years since they work as a taxi driver, the number of accidents they produced (i.e. active accidents), and the number of accidents they were engaged in, without having any fault (i.e. passive accidents).

2.3. Procedure

The present research was conducted during April – May 2017 in a large city in North-Eastern Romania. According to the data obtained from the City Hall, approximately 2400 drivers are licensed to be taxi drivers. First, the authors of the study approached the representatives of the lobby group of taxi drivers working and afterwards, these representatives contacted their taxi drivers and informed them about the fact that they will be contacted for the participation in a study. Secondly, the authors of the study contacted taxi drivers from five major taxi stations, where drivers can stop to rest or wait for clients. These locations were chosen because they attract large numbers of drivers with sufficient time to respond to the questionnaire. Given that we did not have details about the socio-demographics of the taxi drivers' population, taxi drivers were randomly selected. The drivers were informed that the aim of the study is to assess different characteristics of their profession. They were also informed about the fact that the participation is voluntary and that the information provided will be kept confidential. Those who agree to take part at the study signed the informed consent form and completed the self-report questionnaires while waiting in the taxi station. The majority of the surveys were completed in the presence of one of the researchers. When passengers arrived, these respondents were given the questionnaires to complete and return. Stamped-envelope with researchers' name and address were provided to them. The completion of the survey lasted about 10 min. There were no exclusion criteria or restrictions based on demographic variables.

3. Results

3.1. Overview

First, the associations among the study variables were computed. Second, the main effects of workplace conflicts on risky driving behavior and the moderated mediation model were tested simultaneously. In order to test the hypothesized moderated mediation model we used the PROCESS custom dialog for IBM SPSS (Hayes, 2013). This solution permits building bootstrap-based confidence intervals in order to test the statistical significance of mediation effects in a nonparametric and less biased way (Preacher and Hayes, 2004). In the present study we used 5000 resamples in order to estimate 95% confidence intervals. The graphical display of the significant moderations was facilitated through ModGraph (Jose, 2013), a web-based application designed to compute the necessary estimates for visualizing interaction effects.

Table 1
Means, standard deviations, minimum and maximum values of the main study variables.

Variables	N	Mean	SD	Minimum	Maximum
1. Conflicts with clients	237	2.25	0.62	1.00	5.00
2. Conflicts with peers	237	1.99	0.61	1.00	5.00
3. Job related PA	237	3.32	0.65	1.60	5.00
4. Job related NA	237	2.25	0.62	1.00	4.40
5. Taxi driving experience (years)	237	7.79	6.04	0	27.00
6. Risky driving behavior	237	1.33	0.63	0.33	4.61

Note. PA = positive affective state; NA = negative affective state.

3.2. The associations between study variables

Descriptive statistics for the main variables are presented in Table 1. Participants' driving experience significantly correlated with risky driving behavior ($r = -0.19$; $p = .002$). The number of active and passive accidents did not significantly correlate with risky driving behavior ($r = 0.06$, $p = .315$; $r = 0.02$, $p = .719$ respectively). Further, the correlations between the main variables were conducted, controlling for the number of years of experience as a driver.

Zero-order associations showed that both conflicts with clients and with peers were significantly positively associated with risky driving behavior. Moreover, the conflicts with clients and with peers are negatively related to job-related positive affective state and positively related to job-related negative affective state. Further, job-related positive affective state was negatively associated with risky driving behavior, while job-related negative affective state was positively associated with risky driving behavior. The number of years of experience as a taxi driver was negatively related to risky driving behavior. However, after controlling for the participants' overall years of driving, the years of experience as a taxi driver did not significantly correlated with risky driving behaviour. These results are displayed in Table 2. The next analysis was conducted controlling for the overall years of driving.

3.3. The mediating role of job related affective states

As expected, conflicts with clients positively predicted risky driving behavior. Further, a high level of conflicts with clients negatively predicted job-related positive affective state and positively predicted job-related negative affective state. Moreover, both job-related positive and negative affective state predicted risky driving behavior. Table 3 displays the complete results of the multiple regressions testing the mediation effects. Both positive and negative affective state act as mediators for the relation between conflicts with clients and risky driving behavior on the road (see also the upper side of Table 4). The model explained 28.65% of the variance in risky driving behavior, $F(6, 230) = 15.39$, $p < .001$.

Conflicts with peers did not significantly predicted risky driving behavior. However, these conflicts negatively predicted job-related positive affective state and positively predicted job-related negative affective state. As we already mentioned, both positive affective state and negative affective state predicted risky driving behavior. Moreover, job-related positive and negative affective state mediate the relation between conflicts with peers and risky driving behavior (see upper side of Table 4). The model explained 24.17% of the variance in risky driving behavior, $F(6, 230) = 12.22$, $p < .001$.

3.4. The moderating role of experience as a taxi driver

Taxi driving experience is a significant moderator for the direct relation between conflicts with clients and risky driving behavior ($t = -3.28$, $p = .001$) (see lower side of Table 4). This relation is significant only for the participants with a low and medium level of taxi driving experience, and not for the participants with a high level of taxi driving experience. Fig. 1 displays the plot of the moderation effect showing that for the participants with a medium ($b = 0.20$, $p = .001$) and low level ($b = 0.35$, $p < .001$) of taxi driving experience there is a positive relation between conflicts with clients and risky driving behavior, while for the participants with a high level of taxi driving experience ($b = 0.04$, $p = .579$) this relation is non-significant. For the interaction between taxi driving experience and conflicts with peers, the results showed that the relation between conflicts with peers and risky driving behavior is non-significant for the participants with a low ($b = -0.10$, $p = .245$), medium ($b = 0.02$, $p = .654$) and high level ($b = 0.16$, $p = .079$) of taxi driving experience.

Overall, the results offered support for our hypothesized moderated mediation model (see Fig. 2), revealing that the relation between workplace conflicts and risky driving behavior is mediated by job-related affective state. Moreover, the relation between workplace conflicts with clients and risky driving behavior is evidenced only for the participants with a low and medium level of taxi driving experience.

4. Discussions

The present study investigated the relations of both conflicts with clients and with peers, experienced by taxi drivers, with risky driving behavior. Further, we explored whether the job-related positive and negative affective states are associated with risky driving behavior and whether they mediate the relations between workplace conflicts and risky driving behavior. Finally, we examined the moderating role of taxi driving experience in the relation between workplace conflicts and risky driving behavior. We considered that the study of the factors associated with risky driving among taxi drivers is necessary given that these behaviors are major determinants of accidents involvement, and taxi driving is an occupation that involves a high risk of being involved in traffic accidents (Nævestad et al., 2015; Shi et al., 2014; Tseng, 2013). An increased attention on work-related determinants of road safety would significantly contribute to the safety transport industry,

Table 2
Zero-order correlations among our study variables.

Variables	1	2	3	4	5	6
1. Conflicts with clients		0.33***	−0.21**	0.36***	−0.07	0.31***
2. Conflicts with peers	0.33***		−0.22**	0.45***	−0.03	0.20**
3. Job related PA	−0.22**	−0.22***		−0.50***	0.01	−0.32***
4. Job related NA	0.37***	0.45***	−0.50***		−0.03	0.41***
5. Driving experience	−0.10	−0.02	0.04	−0.10		−0.02
6. Risky driving behavior	0.32***	0.20**	−0.33***	0.43***	−0.15*	

Note. lower left – zero-order associations; upper right – partial correlations controlling for the participants' overall years of driving. PA = positive affective state; NA = negative affective state.

* $p < .05$.
** $p < .01$.
*** $p < .001$.

Table 3
Results for the regression models used for testing the mediation model.

	Coefficient	SE	*t*	*p*	Confidence interval 95%	
					Lower limit	Upper limit
Risky driving behavior as outcome (DV)						
Conflicts with clients	0.40	0.09	4.43	< .001	0.2243	0.5829
Conflicts with peers	−0.14	0.10	−1.40	.162	−0.3372	0.0567
Positive affective state	−0.14	0.06	−2.24	.025	−0.2641	−0.0172
Negative affective state	0.27	0.06	3.99	< .001	0.1390	0.4100
Positive affective state as outcome (M)						
Conflicts with clients	−0.22	0.06	−3.41	< .001	−0.3604	−0.0966
Conflicts with peers	−0.23	0.06	−3.53	< .001	−0.3718	−0.1057
Negative affective state (M)						
Conflicts with clients	0.36	0.06	6.03	< .001	0.2455	0.4836
Conflicts with peers	0.46	0.05	7.91	< .001	0.3463	0.5760

Table 4
Mediation moderated effects between workplace conflicts and risky driving behavior.

	Coefficient	SE	Confidence interval 95%	
			Lower limit	Upper limit
Mediation model				
Conflicts with clients				
Positive affective state	0.03[a]	0.02	0.0032	0.0851
Negative affective state	0.10[a]	0.03	0.0418	0.1780
Conflicts with peers				
Positive affective state	0.03[a]	0.02	0.0010	0.0874
Negative affective state	0.15[a]	0.05	0.0656	0.2876
Moderated mediation				
Interaction 1	−0.02[b]	0.00	−0.0417	−0.0104
Interaction 2	0.02[b]	0.01	0.0023	0.0416

Interaction 1 = product between conflicts with clients and years of experience as a taxi driver; Interaction 2 = product between conflicts with peers and years of experience as a taxi driver.

[a] Indirect effect of workplace conflicts on risky driving behavior for affective state as mediator.

[b] Index of moderated mediation.

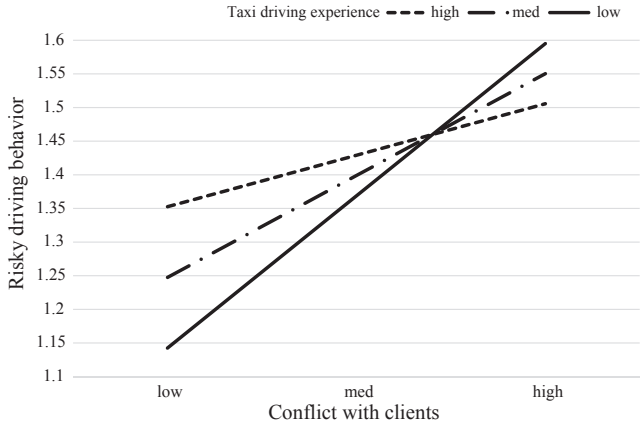

Fig. 1. Graphical representation of the interaction between conflicts with clients and taxi driving experience in predicting risky behavior.

with applicability to professional drivers who must safeguard passenger safety and their own safety and job.

Our results revealed that both conflicts with clients and with peers were significantly positively associated with risky driving behavior. These results confirm previous studies that also showed a positive relation between workplace conflicts and risky driving behavior among taxi drivers (Cooper et al., 2005; Nævestad et al., 2015). However, the results of a regression analysis including conflicts with clients and peers simultaneously, and taken into account the effects of other variables (e.g., the overall years of driving experience) indicated that conflicts with peers have not a unique and independent contribution to risky driving behavior. Only conflicts with clients directly predicted risky driving. This result can be explained by the fact that taxi drivers spend much of their time with clients, not with their peers. Thus, conflictual situations may be more frequent in relation with clients. Given that the main hazard taxi drivers could meet is in relation to clients, they engage in various health-protective strategies. The evaluative talk is used primordially when first meeting a client and elicits information needed to critically evaluate the client in order to establish a temporary and instrumental relationship. The “placative talk” is used in an effort to create trust between the taxi driver and the client and to deter abusive behaviors. Last but not least, the entertaining talk illustrates the interpersonal stance that drivers adopt in their interactions with clients. Even if these strategies were created in order to protect the individual, conflicts with clients can arise when using any of them (Facey, 2010).

Further, in line with our hypotheses, both positive and negative affective state are related to risky driving. Therefore, our results bring further evidence for these less studied relations between job-related affective states and risky driving behaviors (Machin and De Souza, 2004). Moreover, they act as mediators for the relation between conflicts with clients and peers and risky driving behavior. Therefore, a high level of conflicts determines a low level of job-related positive affective state and a high level of job-related negative affective state, which in turn determine a high level of involvement in risky driving behaviors. Positive emotional reactions to their work may be important factors for maintaining safety behaviors, given that they increase job satisfaction and the desire to better perform at work (Hülsheger et al., 2013). Previous findings suggested that positive emotions while driving promotes taking into account future plans and actions (Rowe et al., 2007), thus helping drivers map their destination route more efficiently. As we previously discussed, taxi drivers’ income depends on the number of clients and the drive’s length. Thus, when needing to obtain more clients and do lengthier drives, one could choose destination paths’ that are more directly associated with clients and perform safer maneuvers and behaviors in order to have more clients. On the contrary, negative affective states may be accompanied by cognitive interferences that disrupts the drivers’ attention to the situations encountered in traffic (Rowden et al., 2011).

Thus, our results suggest that gaining abilities to improve communication with clients and peers and to solve conflictual situations can impact job related well-being, among taxi drivers. Such negative interactions should not be neglected, given their implications for driving safety of many traffic participants.

Our results also showed that the relation between workplace

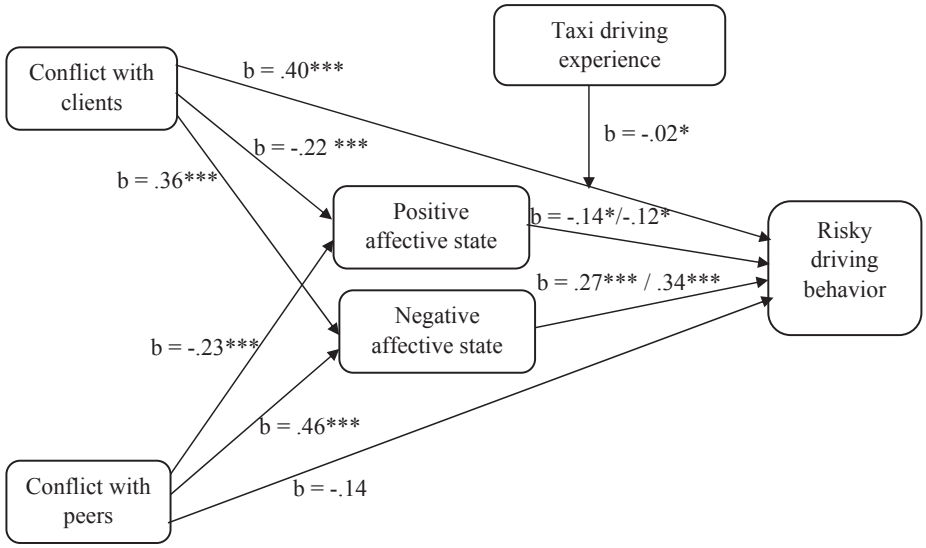

Fig. 2. The modified theoretical model as indicated by the current results. *Note.* ***$p < .001$; **$p = .01$; *$p < .05$.

conflicts with clients and risky driving is evidenced only for the participants with a low and medium level of taxi driving experience. The length of time people have been driving as taxi drivers affect their behavior on the road. A new driver may be less familiar with different situations encountered in relation with clients. Probably, as their job experience increase, the ability to manage stressful situations with clients also increase. As a result, these conflictual situations could not be considered a source of risky driving. Taxi driving experience did not moderate the relation between conflicts with peers and risky driving behavior. This result suggests that conflicts with peers generated by the competition for picking up the passengers is constant for taxi drivers, regardless their job experience. This is not surprising given the fact that taxi drivers' income depends on the passenger numbers. Therefore, the desire to earn more money remains unchanged, regardless of job experience.

Certain limitations need to be considered when interpreting these results. First, our sample is comprised by males. However, a high proportion of males reflect the gender distribution among taxi drivers in a general population and it is in accordance with the proportions used in previous studies (e.g., Cheng et al., 2016). Second, the cross-sectional design did not allow us to sustain causal relations among our study variables. Third, the data is based on self-reports and participants may not accurately reported their risky driving behavior, due to the tendency to give misleading or socially desirable answers. Moreover, there is also the possibility that taxi drivers, as well as other professional drivers, to get "desensitized" to traffic hazards, because of extensive exposure, and to perceive certain traffic situations as less risky (Öz et al., 2010).

4.1. Practical implications

Despite the above presented limitations, the findings of this study have important implications. Our study suggest that one factor associated with risky driving among taxi drivers is represented by the conflicts generated in interpersonal interactions with clients and peers. Therefore, trainings and interventions designed to improve traffic safety should adopt an integrative approach to improve workplace safety and should target not only drivers, but also members of the community. For reducing job-related stress, interventions may aim to mitigate stress responses, through work-related stress management programs, and to enhance the driver's ability to cope with episodic challenges (Matthews et al., 2005). On the one hand, educational programs may try to inform people about proper ways to behave when traveling on public transport, according to some moral and civic rules. This may be possible by using stickers with persuasive messages inside taxi vehicles or putting educational booklets at taxi stations (Shams et al., 2011). On the other hand, educational programs may target taxi drivers and increase their awareness of the unwanted consequences of negative emotional responses to daily hassles. Moreover, interventions should teach them how to approach and resolve conflictual situations with clients and coworkers, as well as effective emotional self-regulation strategies when encountering stressful situations on the road. This is important given the fact that work related stress has an indirect effect on unsafe behavior. A decrease frequency and a better management of these kind of situations may significantly contribute to workplace health and road safety, by decreasing the tendency to be engaged in risky driving behaviors. However, because the pressure to earn money outweigh best safety practice, education programs based on information about safety driving may not be effective, if they are not designed considering other risk factors, like workplace relations, rules, driving personality and attitudes toward driving and their profession.

In conclusion, the results of this study support our hypothesis that workplace conflictual situations with clients and peers are positively associated with risky driving behaviors among taxi drivers, and these relations may be explained by job-related affective state. Moreover, the direct relation between workplace conflicts with clients and risky driving is moderated by experience as a taxi driver, the relation being significant for drivers with a low and medium level of experience. Such drivers will be more willing to take risks than the drivers with a high level of driving experience in this profession. We consider that the results of this study bring new evidence about the relation between workplace conflicts and risky driving behavior and about specific mediators and moderators for these relations in a less studied sample, of Romanian taxi drivers. A better focus on work-related factors associated with risky driving can contribute to the improvement of workplace safety and will open new avenues in developing countermeasures to improve the safety of taxi drivers and, implicitly, of other road users and even of other professional groups.

Appendix A. Supplementary material

Supplementary data associated with this article can be found, in the online version, at https://doi.org/10.1016/j.ssci.2018.07.020.

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