Contributors to young drivers' driving styles – A comparison between Israel and Queensland

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ABSTRACT

Among the numerous factors that contribute to young novice drivers' driving styles, personality characteristics, sociodemographic variables, family atmosphere, and friends' norms are known to have an important impact. However, cross-cultural comparisons are relatively rare in the safety literature concerning young drivers. This study aimed at comparing young drivers from Israel and Queensland (Australia) and examining the contribution of personality, sociodemographic, family and friends' aspects to their driving styles (reckless and careless; hostile and angry; anxious; patient and careful). More specifically, this study examined the associations between young drivers' driving style and their perceptions of separation-individuation, the family climate for road safety, and the safe driving climate among friends. We also examined sociodemographic and driving history variables such as gender, the marital status of parents, and personal exposure to traffic crashes. The study consisted of two samples of male and female young drivers (age 17–22) from Israel (n = 160) and Queensland (n = 160), who completed a set of valid and reliable self-report questionnaires. Findings indicate that in general, maladaptive driving styles are associated with lower family tendency to engage in promoting road safety, higher pressure and costs of driving with peers, and unhealthier separation-individuation aspects. The opposite is observed for the patient and careful driving style that relates to higher engagement of the family in road safety, lower pressure from friends, and healthier separation-individuation. Some differences were found regarding specific styles between the two samples. In addition, women scored lower than men in the reckless and careless style, and higher (in the Israeli sample) in the anxious as well as the patient and careful styles. Overall, similarities in the associations between the study variables in the samples exceed the differences, and the importance of examining variables on multi-levels when referring to young drivers' driving styles, is confirmed. The findings attest to the universal utility of the MDSI, together with the understanding that only a wider examination of personal and environmental contributors enables true insights into the complex behavior of driving among young drivers.

1. Introduction

A recent review of the utility and uses of the Multidimensional Driving Style Inventory (MDSI; Taubman-Ben-Ari et al., 2004) revealed that it has been the subject of studies conducted around the world, especially in Israel, where the instrument was originally designed (Taubman-Ben-Ari and Skvirsky, 2016). The MDSI has been translated into numerous languages (e.g., English, Italian, Russian, Arabic), and used in various countries (e.g., England, Italy, Romania, the United States, Argentina); however, direct cross-cultural comparisons had not been undertaken thus far.

Previous cross-cultural studies tended to use the Driver Behaviour Questionnaire (DBQ; Reason et al., 1990), showing differences in reported driving behaviours of drivers in culturally different countries (Bener et al., 2013; Özkan et al., 2006; Warner et al., 2011). In addition, studies have indicated demographic as well as cultural factors related to driver behavior or to involvement in traffic crashes (e.g., Nordfjærn et al., 2014; Özkan et al., 2006). The current study aimed at comparing young drivers from Israel and Queensland (Australia). Moreover, the study looked into the role played by various contributors to the young drivers' driving styles: socio-economic and driving history variables, their level of separation-individuation, their perceptions of the family climate for road safety (Taubman-Ben-Ari and Katz-Ben-Ami, 2012, 2013), and their understanding of the safe driving climate among friends (Guggenheim and Taubman-Ben-Ari, 2016).

The **MDSI** assesses four broad driving styles: (a) reckless and careless; (b) anxious; (c) angry and hostile; and (d) patient and careful. The reckless and careless driving style refers to deliberate violations of safe

driving norms and the seeking of sensations and thrills while driving. It is characterized by driving at high speeds, passing in no-passing zones, and driving while intoxicated. The anxious driving style reflects feelings of alertness and tension, as well as ineffective engagement in relaxing activities during driving. The angry and hostile driving style refers to expressions of irritation, rage, and hostility while driving, along with a tendency to act aggressively on the road, including cursing other drivers, honking the horn, or flashing headlights. The patient and careful driving style reflects well-adjusted driving behaviors, such as planning ahead, paying full attention to the road, displaying patience, courtesy, and calm behind the wheel, and obeying the traffic rules. These various driving styles were found to be systematically related to socio-demographic variables, driving history elements, personality characteristics, as well as features of the environment, such as family and peers' safety-related attitudes and behavior (Taubman-Ben-Ari and Skvirsky, 2016).

Separation-individuation is a concept which represents the extent to which a teenager relinquishes the power of internalized parents in order to attain greater intrapsychic autonomy (Blos, 1979), and is considered an important sign of adolescent development. Importantly, the disengagement from the internalized parents, should not come at the expense of severing external family ties; both individuality and connectedness in parent–adolescent relationships are important for optimal adolescent development (Grotevant and Cooper, 1998). The separation-individuation process enables one to be psychologically independent yet at the same time more capable of establishing deep intimate relationships with others outside of the family unit, such as friends (Årseth et al., 2009).

More specifically, there appears to be two major components of the individuation process: A *risk* component, reflected by separation or emotional detachment from the family, and a *protective* component, reflected by the development of autonomy while maintaining intimacy and connection to the family (Baer and Bray, 1999). As such, the separation-individuation concept entails alongside with healthy separation, also more problematical aspects, such as strong dependency needs, separation anxiety, need denial, high degree of narcissism and self-centeredness, and more (Levine, Green, and Millon 1986). Individuation is considered a developmental process that occurs with all adolescents regardless of ethnic background (Baer and Bray, 1999; Bray et al., 2000).

It has been suggested that risky behaviors such as substance abuse, are partially a result of problems with the individuation process, and that emotional isolation and a lack of differentiation from parents interfere with the adolescent's separation-individuation process. Evaluations of this model with cross-sectional samples of a broad age range of adolescents provide support for the role of individuation in alcohol use (Baer and Bray, 1999; Bray et al., 2000; Bray et al., 2001), so that higher healthy separation was related to lower alcohol consumption. Although its importance has been proven in risky alcohol use, to the best of our knowledge, this personal feature has never before been tested in the context of driving styles, though its established association with familial and social aspects may hint to its importance in this context as well.

However, the personal level is not the only one that reflects on young drivers' driving style. One of the most important contributors, investigated in recent years is the model set by the family (e.g., Hartos et al., 2000; Shope and Bingham, 2008; Gil et al., 2016). To assess the contribution of the family in the current study, we employed the **Family Climate for Road Safety** (FCRS; Taubman-Ben-Ari and Katz-Ben-Ami, 2012, 2013), a multi-dimensional construct referring to the values, perceptions, priorities, and practices of the family, and in particular – the parents, in regard to safe driving. The seven dimensions comprising the FCRS refer to different angles of this concept, with Modeling reflecting the model given by parents' driving, parents' safety attitudes, as well as their tendency to obey traffic regulations; Feedback referring to the degree to which parents tend to provide their offspring

with feedback and encouraging comments for safe and considerate driving; Communication indicating direct and open communication between parents and adolescents on driving behavior in general, and especially on risky driving; Monitoring denoting the extent parents supervise their offspring, and how much they insist on being informed of where youngsters are taking the car, who is going with them, and when they intend to be home; Commitment to safety relating to the comprehensive commitment parents hold towards road safety; Messages referring to clarity of verbal safety messages from parents to young drivers; and Limits indicating the magnitude of parental systematic and clear-cut limits setting on adolescents' driving behavior and the degree to which they discipline them for traffic violations (Taubman-Ben-Ari and Katz-Ben-Ami, 2013).

Studies indicate that positive dimensions of the family climate are related to safe driving among young drivers. More specifically, when parents are better role models, provide encouraging and empowering feedback for safe driving, enable more open communication, convey clearer messages regarding safe driving, monitor their driving to higher extent, and tend to set clear limits on violating traffic laws, young drivers tend to endorse a more patient and careful driving style and less reckless and careless and angry and hostile styles. On the other hand, young drivers who perceive their parents to be uncommitted to safety report more endorsement of reckless and careless and angry and hostile styles. Regarding the anxious driving style the results of previous studies are less unequivocal, showing that some positive aspects of FCRS may relate to greater utilization of this driving style (Taubman-Ben-Ari, 2016; Taubman-Ben-Ari and Katz-Ben-Ami, 2012, 2013).

Notwithstanding the importance of the family, a third significant aspect which should be considered when discussing young drivers' driving styles is the central influence of their peers (e.g., Curry et al., 2012; Horvath et al. 2012 ; Winston and Jacobsohn, 2010). An attempt to comprehensively understand this aspect was undertaken recently by Guggenheim and Taubman-Ben-Ari (2016) with the construction of a new scale – the **Safe Driving Climate among Friends** (SDCaF), tapping four dimensions of driving with friends: friends' pressure; social costs of driving with friends; communication between friends about driving; and shared commitment to safe driving. These dimensions have been validated by significant associations, such as with self-disclosure (Miller et al., 1983), resistance to peer influence (Steinberg and Monahan, 2007), the global tendency for peer pressure (Santor et al., 2000), and personal commitment to safe driving (Taubman-Ben-Ari and Katz-Ben-Ami, 2012).

When attempting to compare two countries with different licensing systems, it is important to review similarities and differences in the laws of both countries: 1) In Israel, teenagers can begin driving lessons at the age of 16.5. In Queensland, teenagers can start their learning period at 16 years old, and in both countries this is depending on passing the learner theory test; 2) In Israel, lessons are given by professional instructors on specially equipped vehicles; learners are permitted to drive only during their lessons. In Queensland, there is no obligation of taking lessons from professional instructors, but there is an obligation to log at least 100 hours on a logbook (including 10 hours at night); 3) A driving license is issued in Israel upon successfully passing an on-road driving test. The road test cannot be taken until the learner has turned 16 and 9 months and has completed a minimum of 28 on-road driving lessons. In Queensland, after a minimum of 1 year of accompanied driving, learners take a practical driving test that enables them to have a provisional license where restrictions are maintained on mobile phone use and high-powered vehicles. After another minimum 1 year, holder of provisional license take a hazard recognition test that allows them to earn an open license; 4) Israeli new young drivers (under the age of 24), have to be accompanied by an experienced driver, someone over the age of 24 who has held a valid driving license for a minimum of five years, for the first three months during day and night trips, and during the next three months, only in night hours. New drivers under the age of 21 are restricted from carrying more than two passengers for a period of two