



Who are the traffic offenders among ethnic groups and why?



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ABSTRACT

Marginalized populations, particularly ethnic minorities, are often at a higher risk of being involved in traffic crashes and committing traffic violations. Prominent explanations for this “ethnic traffic risk gap” include cultural and socioeconomic factors, usually measured at an aggregate level. In particular, it has been hypothesized that ethnic minorities commit traffic violations as a form of social resistance to what they perceive to be an oppressing regime. The current study examined the mechanisms underlying traffic violations at the individual level within a single ethnic minority, Israeli-Arabs. The study sample ($n = 231$) included a group of known offenders ($n = 60$) and non-offenders ($n = 171$), all of which completed the Traffic Violation Questionnaire. The results show that offenders and non-offenders tended to have different types of occupations, although these did not translate into significant differences in level of income. Offenders reported significantly lower levels of trust in some hegemonic institutions (the police, government ministries) but not others (parliament, the juridical system). However, offenders displayed remarkably different daily activity patterns, including much higher exposure to traffic (3 h/day vs. 0.75) and more complex trip patterns. Our results find little support for the social resistance hypothesis, as it fails to explain the differential treatment of hegemonic institutions. Daily activity patterns stand out as a central mechanism influencing the risk of violations. These results suggest policymakers should adopt a holistic approach for traffic safety interventions but avoid monolithic views of ethnic minorities which may lead to an inefficient use of resources.

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1. Introduction

Marginalized populations, and particularly marginalized ethnic minorities, are often at a higher risk of being involved in traffic violations (Gantz et al., 2003; Romano et al., 2005) and traffic crashes (Laflamme and Diderichsen, 2000; Campos-Outcalt et al., 2003; Steinbach et al., 2010) compared to non-marginal social groups or the general population. For example, Romano et al. found that Hispanic drivers in the US commit more traffic violations than white drivers. In useful review of the topic, Gantz et al. (2003) cite evidence that minorities are less likely to use seat belts and in some cases have been more likely to engage in impaired driving. Similarly, Campos-Outcalt et al. (2003) found that Native Americans are at a higher risk for a crash-related fatality compared to other social groups in Arizona, and Steinbach et al. (2010) demonstrated that a children of a ‘Black’ ethnicity had a higher risk of injury than

those of a ‘White’ or ‘Asian’ ethnicities. While the existence of an “ethnic traffic risk gap” is well established, the specific mechanisms underlying it remain understudied.

This paper aims to identify the characteristics that distinguish between traffic violation offenders and non-offender in marginalized groups in order to develop a more holistic and effective policy to reduce such violations among these groups. To do this, we examine three factors identified in the literature as being associated with higher traffic risks for ethnic minorities: socio-demographic factors, cultural-normative factors, and risk exposure. The majority of work in this area has used aggregate models, which provide a macro-level view of the differences between ethnic/racial groups. For example, data is collected on the frequency of a certain behavior (e.g., not using a seat belt) in a specific social group (e.g., Latinos), and this rate is compared to other groups. While this approach has considerable merit, it neglects to make explicit the mechanisms at work at the individual level. This runs the risk of confusing correlational for causal relationships: for example, assuming that we should trace the reason that Latinos are less likely to wear a seat-belt to an element in Latino culture. In other words, the use

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of aggregate models based on pre-conceived segmentations (e.g., ethnicity) can lead to tunnel vision and neglect other factors at play. The current study complements the aggregate-level approach using an individual-level comparison between offenders and non-offenders in a single ethnic minority, using the case of Arab-Israelis. The use of individual-level data enables the construction of different segmentations, such as differences in daily activity patterns.

Arab Israelis provide a clear example of a marginalized ethnic minority with higher traffic risks. Although Arab-Israelis consist of about 20% of the Israeli population, they account for 34% of traffic fatalities (Magid et al., 2015). Arab-Israelis are also more likely to be convicted of traffic violations compared to their Jewish counterparts (CBS, 2011). Their marginal position in society can be traced back to the inception of Israel in 1948, when they were put under military rule. While Arab-Israelis were integrated into Israeli society in 1967 and became full-fledged citizens, institutional and normative discrimination remains rife (Peled, 1992; Smootha, 1990; Rouhana and Ghanem, 1998). Importantly, this group is legally and geographically distinct from the Palestinians living in the areas occupied after the 1967 war.

The study seeks to answer the following questions: (1) which socio-demographic and socio-cultural characteristics are significantly different between offenders and non-offenders, thus allowing us to understand who are the offenders? (2) What individual-level mechanisms can be identified as responsible for such differences? Answering these questions would assist policy-makers to avoid monolithic perceptions of ethnic minorities and facilitate the development and promotion of safety measures focusing on substantiated causal routes.

2. Mechanisms explaining differential traffic risks

2.1. Socioeconomic and demographic characteristics

The association between socioeconomic and demographic characteristics and the risk of committing traffic violations is frequently reported. Prominent factors include ethnicity, age, gender and income. Ethnic minorities have been found to be more likely to commit traffic violations compared to dominant groups (Gantz et al., 2003; Romano et al., 2005), and several studies stress the role of age, suggesting that young adults take more risks on the road (Eby et al., 2002; Fynbo and Järvinen, 2011). Similarly, it is widely accepted noted that “gender matters”, as males consistently have a higher risk of committing a violation (Veevers and Gee, 1986; Massie et al., 1995; Yagil, 1998; Al-Balbissi, 2003; Mast et al., 2008). Finally, low income has been associated with increased risk of some traffic violations, such as failing to use safety devices (Braver, 2003).

These variables often influence individuals’ risk exposure. For example, the predominance of males in the labor market increases their likelihood to engage in work trips; having low income may be associated with holding jobs requiring additional driving (Ameratunga et al., 2006; Sehat et al., 2012).

2.2. Cultural and normative factors

It is generally recognized that cultural factors influence the driving behaviors of various social groups. However, the elusiveness of the term “culture” (Douglas and Wildavsky, 1982; Swidler, 1986; Tulloch, 2008) has made it difficult to operationalize and standardize cultural factors in a generalizable manner. Examples for the operationalization of ‘culture’ in the context of traffic safety include the generalized attitudes of a large group of drivers (Zaidel, 1992) as well as an attribute derived from membership in a particular nationality (Shinar et al., 2003; Rundmo et al., 2012), or religious affiliation (Melinder, 2007). Recently, it has been

suggested that cultural influences on marginalized ethnic minorities can be conceptualized as a form of “social resistance”: in cases of structural discrimination, members of marginalized groups use risky and unhealthy behaviors as an opportunity to resist the dominant hegemony. Dangerous driving behaviors in particular are seen as an expression of distrust in the governing institutions. Other examples for ‘social resistance’ include evidence that members of marginalized groups are more likely to engage in smoking and excess consumption of alcohol (Factor et al., 2013a,b).

2.3. Risk exposure measure

Numerous studies have demonstrated overall exposure is positively associated with the risk of a crash (Al-Balbissi, 2003; Spallek et al., 2006; Thouez et al., 2005). The direct association between exposure and violations has remained surprisingly neglected, but most studies of the exposure-crash association stress the role of speeding, suggesting that exposure may also increase violations. This association makes intuitive sense: the longer you are on the road, the more time you have to commit a violation, even when all other factors remain constant. However, Chliaoutakis et al. (2005) showed that travel distance alone is insufficient to reflect the exposure to risk, since risk levels are affected by trip purpose. Similarly, Thouez et al. (2005) showed that for pedestrians the risk varies with residence location, and Spallek et al. (2006) claimed that crash risk estimates generally do not account for different risk levels in different situations. Accordingly, integrating exposure into the model necessitates accounting for trip attributes.

3. Method

3.1. Research design

We conducted a survey that included both activity and travel diaries for 24 h and a general questionnaire regarding socio-demographic variables, attitudes, traffic violations and traffic convictions. The survey was conducted among Arab citizens of Israel. Socio-demographic variables include age, gender, and occupation. Occupation was divided into three groups: highly mobile occupations, whereby driving is a central element of the job, for example distribution or moving; occupations of moderate mobility, including free professions (lawyers, doctors) and owners of shops which require frequent supply runs (e.g., a hardware store); and stationary occupations, such as teachers, bureaucrats, plant laborers, clerks and cashiers. Attitudinal variables include attitudes towards various governing institutions: the government, parliament, the juridical system, the police force, and the local municipal authority. Furthermore, individuals were asked about their driving behaviors in different environments, operationalized as a comparison between Jewish localities (Haifa or Tel-Aviv) and their own localities. Responses were measured using Likert scales, whose specific contents and ranges are elaborated below. Personal activity and travel patterns included questions regarding the drivers’ daily activity patterns, focusing on their travel purpose, travel time, travel mode, destinations, activity duration, and complexity of trips. Complexity was measured as the average number of stops taken on the daily main tour (e.g., home-work-home).

3.2. Sampling and participants

The survey was conducted among residents of two Arab localities, Shfar’am and Majd El-Krum. Both localities belong to the lower socioeconomic echelons of Israeli society, and both have a high rate of traffic crashes compared to the national average. The data was collected in two waves, both conducted in 2008. In the first wave, households were randomly sampled from the spatial distribution

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