Narratives of injured motorcyclists regarding risks and the various means of transport

Hercília Najara Ferreira de Souza(a)
Deborah Carvalho Malta(b)
Maria Imaculada de Fátima Freitas(c)

(a) Departamento de Medicina Básica, Faculdade de Medicina, Faculdade de Minas. Av. Cristiano Machado, 1201, Vila Clóris. Belo Horizonte, MG, Brasil. 31744-007. hercilianajara@hotmail.com
(b, c) Departamento Materno-Infantil e Saúde Pública, Escola de Enfermagem, Universidade Federal de Minas Gerais. Belo Horizonte, MG, Brasil. dcmalta@uol.com.br; peninhabh@yahoo.com.br

In this article, the objective was understand the representations of motorcyclists that suffered a traffic accident about the risks as well as the various means of transportation. The qualitative approach was based on the notions proposed by Giami, using the psychosocial frame of the Social Representations. We interviewed 16 motorcyclists injured in traffic accidents in Belo Horizonte-MG/Brazil, that were cared for at a referral hospital for trauma. Results show that everyday experiences, the attributes observed in vehicles and above all, involvement in traffic accidents are used as a framework to represent transport as “safe” or “unsafe”. The balance between the advantages and disadvantages presented by the vehicles are basic to predict the option for this or that kind of vehicle. Although the motorcycle is considered an unsafe vehicle, its use is defended by the interviewees who continue to imagine themselves untouchable.

Keywords: Traffic accidents. Motorcycles. Risk. Public Health. Qualitative research.

Introduction

Traffic accidents represent a growing public health problem around the world. It highlights the complex and violent scenario that transcends the magnitude in the number of lives cut short, as well as the incapacitating power they have. Approximately 1.24 million people are killed each year and between 20 and 50 million people are injured as a result of traffic accidents worldwide(1,2). Half of all deaths in the world involve so-called “vulnerable” users: motorcyclists (23%), pedestrians (22%) and cyclists (5%)2.

Brazil occupies the 5th position among the countries with the highest number of deaths in traffic, preceded by India, China, the United States and Russia3. External causes represent the third cause of death among the Brazilian population4 and one-third of these deaths refer to injuries/traumas resulting from traffic accidents5,6. The number of deaths due to Road Transportation Accidents (RTA) in Brazil in 2013 was 45,099 deaths7. Of this total, approximately 27% occurred among motorcyclists7.
Despite the efforts to reduce the number of traffic victims, there is a growth in the fleet of vehicles, especially a motorcycle fleet growth, which increased by 403.7% between 2001 and 2014, the largest increase being in the regions North and Northeast of the country. The extraordinary increase of motorcycles occurs in several countries, especially among younger people attracted, for the most part, by the possibility of rapid displacement, especially in large urban centers, and in search of the advantages offered by the vehicle, such as low cost and fuel economy.

The overvaluation of individual transport, reflected in the increase of private cars and motorbikes that compete for space in transit, the difficulties to carry out mass transport of quality and the pressure of the companies for the speed in the delivery of orders leading to dangerous forms of driving by the motorists, as well as road conditions and urban organization, are factors that explain the increase in accidents in this group. Reichenheim et al. present several risk factors related to road deaths and injuries, including accidents involving motorcyclists, such as human factors (driving under the influence of alcohol, stress, fatigue and dizziness); road signs (poor traffic signs and poor road maintenance, insufficient or nonexistent lighting, lack of road and slopes, inefficient drainage, containment rails and inadequate curves); related to vehicles (inadequate maintenance), as well as speeding.

However, the literature is scarce on aspects that concern the subjectivity of drivers, their world views, their representations around the motorcycle object and the possible risks that can define their choices for more or less protection.

In the present study, a sociological view of the risk that surpasses the material conditions of social organization is proposed, focusing on the unique characteristics of people, cultural values, representations and social interactions that contribute to identity and identification of the subjects, in their life contexts.

The concept of risk in epidemiology was used to delimit analytical and abstract causal relationships, in the form of probabilistic associations with broad scientific acceptance in the field of health. It was expanded using the concept of vulnerability that demonstrated the recognition of the different degrees and nature of the susceptibility of individuals and communities to diseases and injuries, formed by the integrated set of social, programmatic and individual aspects that put the subjects in relation to the problem and with the resources for coping with it.

The sociology of risk is a privileged sphere regarding this topic, because it addresses both the way in which individuals feel or not in danger, give meaning and act in relation to risks, as well as the ways societies conceive and define those risks. Risk is a socially constructed notion, varying according to different places and eras. The perception of risk refers to the ways of life, the family and collective values introjected by each subject, reflecting a moral in action and a worldview that are also part of intrapsychic life, at the same time that there is recognition of the existence of an external world with its objective risks.

Because it is not a just a copy of reality into the consciousness of the individual, risk is mixed with the subjectivity of social and cultural representations. It comes from an imaginary and not from a lack of reflection or of pretended irrationality, it is an introjected representation.

Considering the complexity of coping with the problem, the growth of the fleet of motorcycles and the accidents associated with it, the promotion of health and the prevention of injuries require knowledge as well as data that associate events and objective factors, which form the basis of quantitative studies. It is important to emphasize the need for qualitative studies that focus on people's ways of living, so that greater knowledge and
depth can be given to this important area of collective health. The dynamics and multi-causality of traffic accidents involving motorcyclists require studies that focus on psychosocial aspects to understand what subjects think and how they face the possible risks of motorcycle use in urban spaces. In this perspective the risk, in its sociological aspect deepens the reflection in the discussion of social vulnerability, because it adds to its conceptualization the representations constituted by psychosocial aspects that condition the ways of living and, by extension, that allow to promote health.

In this approach, the present study aims to understand the representations of motorcyclists who suffered a traffic accident in Belo Horizonte, Minas Gerais, regarding the risks and the various means of transportation.

Methodology

Qualitative research of a sociological approach, with fieldwork conducted through open interviews, initiated by an indirect key question about the object of study: "I would like you to tell me about your use of the motorcycle" and related questions that contemplated their modes to think about the risks and ways of acting in traffic.

The survey was carried out from February to May 2014, interviewing 16 motorcyclists aged 18 to 47 years in a referral hospital for polytraumatized victims after the traffic accident in Belo Horizonte (BH), capital of Minas Gerais, Brazil. The criteria for inclusion of the subjects were: (a) was the driver of the motorcycle at the time of the accident; (b) to be over 18 years of age, as the minimum age foreseen by the Brazilian Traffic Code (CTB) for the National Driver's License (CNH); (c) to reside and have suffered the accident in the urban perimeter of the capital; (d) to remain in care in the emergency room or hospitalized for at least 24 hours after admission as per the hospital's medical record; (e) to present clinical conditions to participate in the interview.

The obligation of the CNH was not defined as an inclusion criterion, precisely because it is an opportunity to understand the notion of risks of the drivers without CNH in the transit of BH.

The interviews occurred 24 hours or more after the motorcyclist's entry into the hospital due to the greater number of multiprofessional team professionals, clinical procedures and complementary examinations performed in these first hours.

The selection of the participants was started after the medical records were retrieved to confirm the inclusion criteria. After that, contact was made during the hospitalization period with the 'possible eligible participants' to verify the remainder inclusion criteria.

The interviews lasted an average of 40 minutes each, were performed in the hospital's premises in places that guaranteed safety and privacy to the participants, previously agreed upon by the healthcare team. The interview took place after clarification and objectives of the research, the acceptance to participate voluntarily and the signing of the Informed Consent Term (TCLE). The interviews were recorded in audio and transcribed for analysis.

The data collection process was performed in two stages. The first one consisted of identification of the sociodemographic profile of the participants, collection of information regarding the accident and the use of the motorcycle, collected in the records of admission, in the medical records and in the report of the participants. The second stage consisted of an open and in-depth interview\textsuperscript{27,28}, to provide a narrative that revealed the
interviewees' ways of thinking and acting in relation to traffic accidents, in a process of reflection on the risks that focused on their life experience and context inserted in the event of the accident or risks incurred.

There was no a priori definition of the number of participants. The criterion for the conclusion of the data collection was the saturation of the data, verified through repetition of points of view, judgments and feelings about facts and experiences related to the objects present in the narratives, which provided security to define the suspension of the collection with new participants and allowed to establish a rigorous and contextualized interpretation of the object being studied.

During the process of reviewing the medical records for the survey of the possible participants according to the criteria of inclusion and confirmation of eligibility, seven people refused to participate. These were replaced by others, until the saturation of the qualitative data was reached, with no harm to the collection and the results. This refusal reinforced the importance of deepening the discussion of representations, assuming that there are processes of denial of the subjects about the event, for example "I do not want to talk about it".

Sixteen interviews were carried out, eight in the Emergency Room and eight in the Hospitals (orthopedics, surgical clinic and neurology). Each interviewee received an identification with letter E followed by the initial letter of their first name and the number corresponding to the increasing order of collection to preserve their anonymity.

The research was approved by the Ethics Committees of the Federal University of Minas Gerais (UFMG), opinion no. 471.184, and the Hospital Foundation of the State of Minas Gerais (FHEMIG), opinion no. 604.412-0.

The analysis of the data collected was based on the proposal of Structural Analysis of Narrative (AEN), presented by Demazière and Dubar, based on Greimas, Greimas and Landowski and Barthes, on the axis of Grounded Theory: the theoretical categories arise after the interpretation of the empirical categories created from the analysis of the set of interviews. In this line, it is considered that everything in the subjects’ speech has meaning; and that the interview is a construction of meanings by the interviewee that narrates facts, stories and justifications, besides presenting people and institutions involved throughout his speech. Once transcribed, each interview was thoroughly read. Initially, using vertical reading, in which the global meaning was sought, answering the question: what does this text say? Later, the reading was horizontal: the text was sequenced by order of appearance of each object in speech and each sequence was numbered in ascending order (S1, S2, ...). In each sequence were identified the facts (F), the justifications presented (J) and the characters (P). The first two were numbered in ascending order within the sequence and the characters were given the same number by being repeated in other sequences. Then the sequences dealing with the same subject addressed in their confirmations, differences and contradictions, were regrouped and received a provisional title that gave rise to a provisional categorization of the totality of the individual interview. In a third step, we sought to find the similarities and differences in the set of interviews, in a so-called transversal reading, in which the provisional categories found were compared and regrouped for the totality of the interviews, defining, in their conjunctions and disjunctions, the empirical categories on the objects of study in question. At the end, the results were compared with the relevant literature, explaining the theoretical categories.

The category of the representations about means of transport was defined emerging from the interpretation of the data. The content of this category is supported by representations around conducts and
risks experienced in the daily life of the traffic, understood within a material and social, structural and conjunctural context of the interviewees' lives.

Results

We interviewed 16 male subjects, aged between 18 and 47 years. There were women involved in motorcycle accidents hospitalized or in hospital care, however, none of them fulfilled the inclusion criteria. For the most part, the women were accompanying the driver at the time of the accident or were residents from other municipalities.

The data on the profession, time since getting a license, driving time, motorcycle use (hours/days), number of accidents suffered, reason for locomotion during the current accident and the most frequent secondary diagnoses, according to the International Statistical Classification of Diseases and Conditions Related to Health are shown in Table 1.
<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Age (years)</th>
<th>Profession</th>
<th>Time since getting driver’s license(*)</th>
<th>Driving time (**)</th>
<th>Motorcycle use (hours/day)</th>
<th>Accidents Suffered (n)</th>
<th>Reason for locomotion - Current Accident</th>
<th>Secondary Diagnosis (CID-10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>21</td>
<td>Service Agent</td>
<td>3y</td>
<td>3y</td>
<td>2</td>
<td>2</td>
<td>Outing</td>
<td>S82.0</td>
</tr>
<tr>
<td>E2</td>
<td>27</td>
<td>Hodman</td>
<td>No license</td>
<td>14y</td>
<td>3</td>
<td>1</td>
<td>Outing</td>
<td>S82.6</td>
</tr>
<tr>
<td>E3</td>
<td>18</td>
<td>Locksmith attendant</td>
<td>10m</td>
<td>2y</td>
<td>5</td>
<td>2</td>
<td>Outing</td>
<td>- -</td>
</tr>
<tr>
<td>E4</td>
<td>37</td>
<td>Pizza Chef</td>
<td>12y</td>
<td>10y</td>
<td>4</td>
<td>10</td>
<td>Commute</td>
<td>S82.2</td>
</tr>
<tr>
<td>E5</td>
<td>22</td>
<td>Printing attendant</td>
<td>2y 6m</td>
<td>2y 6m</td>
<td>1</td>
<td>2</td>
<td>Commute</td>
<td>S62.3</td>
</tr>
<tr>
<td>E6</td>
<td>47</td>
<td>Supervisor of Personnel</td>
<td>25y</td>
<td>25y</td>
<td>1</td>
<td>1</td>
<td>Outing</td>
<td>S72.0</td>
</tr>
<tr>
<td>E7</td>
<td>38</td>
<td>Bricklayer</td>
<td>3y</td>
<td>3y</td>
<td>3</td>
<td>3</td>
<td>Outing</td>
<td>S82.1</td>
</tr>
<tr>
<td>E8</td>
<td>35</td>
<td>Customer Service Representative</td>
<td>13y</td>
<td>5y</td>
<td>6 (weekend)</td>
<td>1</td>
<td>Outing</td>
<td>S06</td>
</tr>
<tr>
<td>E9</td>
<td>46</td>
<td>Handyman</td>
<td>6y</td>
<td>6y</td>
<td>1</td>
<td>3</td>
<td>Commute</td>
<td>S82.1</td>
</tr>
<tr>
<td>E10</td>
<td>24</td>
<td>Mechanic</td>
<td>No license</td>
<td>14y</td>
<td>3</td>
<td>2</td>
<td>Outing</td>
<td>S81.9</td>
</tr>
<tr>
<td>E11</td>
<td>40</td>
<td>Truck driver</td>
<td>15y</td>
<td>15y</td>
<td>1</td>
<td>1</td>
<td>Commute</td>
<td>S00.0</td>
</tr>
<tr>
<td>E12</td>
<td>29</td>
<td>Delivery person</td>
<td>5y</td>
<td>15y</td>
<td>12</td>
<td>6</td>
<td>Work</td>
<td>S82.3</td>
</tr>
<tr>
<td>E13</td>
<td>36</td>
<td>Delivery person</td>
<td>15y</td>
<td>15y</td>
<td>10</td>
<td>3</td>
<td>Work</td>
<td>S81</td>
</tr>
<tr>
<td>E14</td>
<td>20</td>
<td>Self employed</td>
<td>1y 3m</td>
<td>1y 3m</td>
<td>4</td>
<td>3</td>
<td>Outing</td>
<td>S62.6</td>
</tr>
<tr>
<td>E15</td>
<td>24</td>
<td>Delivery person</td>
<td>2y 6m</td>
<td>10y</td>
<td>8</td>
<td>3</td>
<td>Outing</td>
<td>S82.2</td>
</tr>
<tr>
<td>E16</td>
<td>45</td>
<td>Commercial agent</td>
<td>26y</td>
<td>3m</td>
<td>6</td>
<td>2</td>
<td>Commute</td>
<td>S92.4</td>
</tr>
</tbody>
</table>

(*) y: years; m: months  
(**) Lost license after first accident
Representations on means of transport

The central axis of this category was constructed by the representations about the security offered by the various means of locomotion. Initially, motorcyclists classify the means of transport as safe or unsafe, although there is a common representation that all means of transport present risks because none of them is totally safe.

Most of the interviewees were based on daily experiences, vehicle attributes and, above all, by their previous involvement in traffic accidents, leading to consider which means of transport are safe or not. In general, advantages and disadvantages are listed to qualify the means of transport in the category of insurance or unsafe. It should be emphasized that this dichotomy was represented as fundamental for the interviewee to choose among means of transportation. It was also verified that there is a balance between the list of advantages and that of the disadvantages, so that, finally, the option is made adding to the objective values, those defined according to the needs and possibilities of the individual, sentimental values and within a set of representations about the means of transportation.

Safe means of transport

Aspects related to the structure and size of the vehicle preponderate between the reports and are revealed as a basis for representations about safe means of transportation: “The car is one of the safest, right? If you're careful ... Even so ... But the safest, I think it's the car yet” (E11). Physical protections, such as the existence of closed bodywork and the larger size of vehicles, are described as capable of conferring a greater sense of protection and safety for individuals. Concurrently, the safe transport representation becomes even more evident when compared to the motorcycle. For motorcyclists, although pleasure is recognized in the use of motorcycles, safety is assessed as low, being four-wheeled vehicles or metal frame those providing better safety for the driver.

The possibility of injury in the event of accidents is decisive in ensuring such a definition. Thus, the starting point for explaining safe transport is the existence of physical structures, present in the vehicles that serve as a barrier and at the same time guarantee a greater sense of security.

By introjecting the existence of protections inherent to the structure of vehicles such as cars, buses and subways, the interviewees recognize it as something concrete and objective that will be able to ensure more safety and physical protection in case of involvement in accidents. The image of the motorcycle is then an open vehicle with no physical protection.

On the other hand, the vehicles cited as safe or that add other advantages were also represented as disadvantaged in several aspects. Regarding the transit displacements in Belo Horizonte, the difficulty of implementing collective transportation is highlighted as the main barrier to meet the needs of the users, in the opinion of motorcyclists. The crowding of the public
transport, delay in the transportation time and the restricted option of displacement (mileage) covered by the rail network, among others, are pointed out as problems in public transport. On the other hand, the excess of vehicles and the consequent lack of space in the transit for the displacements are described as elements that hamper the option for automobiles. Safety becomes a criterion overcome by the disadvantages of transport considered safe: “The car, in traffic too heavy does not move. Bus, in addition to full, very bad traffic. Subway takes people, like, from nowhere to nowhere” (E5).

Many motorcyclists use the unsatisfactory quality of public transport to explain their choice of motorcycle as a means of transportation:

“I even started riding a motorcycle because of the transport problems, a lot of traffic. By bus is very bad, I can not ride a bus, I find it very difficult to get around bus work to home, from home to work, a lot of time wasted, I arrive very stressed” (E9).

Although the representations of safe transport exclude the motorcycle, it is observed that the crucial element to choose it as a means of transport is its representation of speed and efficiency: ‘it may be insecure, but it solves the problem’.

Unsafe, but agile means of transport

The characterization of the motorcycle as an unsafe transport refers to aspects observed by the interviewees in the daily interactions established in traffic, mainly due to the design of the motorcycle. The absence of physical protection is in a way an evident concern regarding motorcycle trips. This concern becomes even greater at times when the interviewees are faced with the possibility of getting involved in accidents: “[Motorcycle] is a vehicle that does not have much safety. To tell you the truth, to be honest, you have no safety. Accidents can be horrible” (E12).

The awareness of motorcycle danger is most often based on the probability of an accident and, above all, on the injuries that may occur, as if the motorcycle had a life of its own and every accident occurred due to factors external to the driver. In this way, the risk representation by motorcyclists is never contained in their behavior or through risks due to the ways of using the vehicle, or even due to the situation of the roads. Instead they highlighted only the possible damages to the physical integrity that can be suffered: “The motorcycle it's kind of the bumper... People's chest is kind of the car's bumper and we suffer direct shock and it can be the end, right?” (E10).

It is related to the probability of occurrence of accidents that the real risk of death is explained. It is now rated much larger when compared to the risk of the car, due to the absence of physical protections in motorcycles, such as "bodywork" in cars. The fact that it does not have a
protective barrier in any accidents, the motorcyclist is left vulnerable and without safety. This was presented by all the interviewees, more or less severely injured, being the risks perceived more clearly by motorcyclists who use the motorbike as a working tool. The working day for these professionals can last between eight and 12 hours, resulting in a longer exposure time than the other interviewees. Therefore, the possibility of not returning home after the workday is highlighted as a real threat: “We leave the house to work, to be able to earn our living and maybe not come back” (E13). However, the daily use of the motorcycle shows practical advantages that motorcyclists represent as overcoming the risks. These advantages are expressed in a pragmatic way regarding speed and reduction of time between the displacements, aspects considered fundamental to choose the motorcycle as a means of transportation. The motorcyclists’ ability to filter through traffic and consequently, to move quickly between vehicles, due to the reduced size of the motorcycle, is the basis of the ambiguous postures in relation to this means of transport: “The motorcycle is very agile. You have stopped traffic, you get to pass, be more agile than the cars. It's faster, easier. The biker, does not want to be trapped in the corridor or in traffic and does not remember that there is danger. There is the agility of the bike” (E5).

Parallel to the representations of speed, when compared to other means of transport, the motorcycle is also described as an opportunity to facilitate the displacement by the sidewalk when the 'return is too far', constituting a transgressive conduct even if apparently considered only as a way to 'dribble traffic': "In every spot you may pass, sometimes you climb up on the sidewalk, and leave on the other side. Makes it easier, saves time. Maybe you'll be on a street; you go from the place you have to go and the place to return is very far” (E15).

Another aspect considered to be an advantage concerns the motorcycle economy, measured in the low cost of acquisition, the fuel expense and the maintenance of the equipment, comparing it with both individual and collective transportation: “It is more practical and is more economical, cheaper” (E12).

Thus, the option for this means of transportation is increasingly frequent. Seduced by advantages such as economy and reduced time between routes, motorcyclists choose to face daily risks and perils.

Discussion

In the current study, when analyzing the representations of drivers of motorcycles related to traffic accidents and related to the category on means of transportation, a recognition that collective transportation (bus and subway) and individual transportation (car) provide greater safety. However, these means of transportation do not constitute a real transport option for these motorcyclists. The motorcycle, even though it is an unsafe transport, is represented as the alternative to solve the mishaps experienced in traffic, due to its displacements with speed and
versatility, by not being "stuck in traffic", controlling time and 'making life flow', besides being an economic vehicle.

Vehicle-related factors influencing driver safety are associated with vehicle performance in traffic maneuvers and driver ergonomics/comfort. Concomitantly, it was remarked how vehicle design influence on these two variables. Thus, everyday experiences and attributes observed in the composition of the various vehicles and, especially, the possibility of getting involved in accidents are the constructs that determine the characterization as safe or unsafe transport.

As described by Veronese, "the mastery of everyday knowledge results in a sense of security". In this sense, by introjecting the existence of protections inherent in the structure of vehicles such as cars, buses and subways, the interviewees recognize it as something concrete and objective that will be able to ensure more safety and physical protection in case of involvement in accidents. The image of the motorcycle is then an open vehicle with no physical protection.

However, the unsatisfactory quality of public transport has led many individuals to opt for individual means of transport, which has worsened traffic problems in large cities. Many motorcyclists use this same argument to explain motorcycle choice as an individual means of transport. It should be noted that, in addition to the versatility and low cost of ownership, the economic advantage over the cost of using public transport was one of the important reasons for the increased use of motorcycles. As a consequence, the motorcycle became the most popular means of transportation in Brazil and also one of the most dangerous means of transport.

However, motorcycles offer greater mobility and advantages in the use of space when compared to cars, as well as allowing the movement in reduced spaces in an efficient way, guaranteeing mobility and accessibility even in congested environments. The reduced stay in traffic jams was pointed out as an advantage for motorcyclists. Besides the possibility of reducing travel time, it is also a more economical way to get around and a income producer for some people.

The emphasis on lack of safety or protection gives motorcyclists a greater chance of getting involved in circumstances where dangerous situations result in injury to their physical integrity. The danger is mainly due to the coexistence with large vehicles, the difficulty of these drivers to see the motorcycle and the lack of physical protection of motorcyclists, making them especially vulnerable. Research conducted in New Zealand and Australia revealed that motorcyclists are vulnerable to more serious injuries due to lack of vehicle protection. Moreover, in similar situations of the same accident, the consequences are more severe for motorcyclists than for car drivers. On motorcycles, a major challenge for improving safety is associated with braking technology and the most effective safety devices, such as inflatable vests, helmets and better limb protection.

The benefits arising from the use of motorcycles in everyday life outweigh the risks that are perceived as likely to occur, however not as something that will certainly occur, as was the case of those interviewed.

Every perception of risk implies strong affective connotation and intervention of a social and cultural discourse. Fear seems to be less related to the objectivity of risk and more to the
imaginary that is produced and induced by it, including some fatalism about the dangers. Risk representation is not a fantasy of the subject, but its personal measure of danger, it is no error or deformation at the moment of the decision, but rather a search for his/her own meaning of that risk\(^{26}\). It is the result of a singular passion, of a pleasure that inaugurates a way of life, or is considered as external to the subject\(^{23}\). If, collectively, risk is sometimes seems more threatening than reality, in the individual sphere the subject is often attracted to it and experiences it as a forbidden act or a desired transgression. It may also be attractive for the pleasure felt for this behavior and because it is rooted in its identity. It may also attract either by the refusal to feel to be compelled in a certain way or by considers that as the others are not himself/herself, and, as far as it may concern, fears nothing, considering herself/himself stronger than death\(^{26}\).

Both risks 'mentally' built as well as those appearing as 'real' threats were revealed by the interviewees when referring to the advantages and disadvantages arising from the use of motorcycles. Those risks were supported both in the concept of risk as something distant or as risk being synonymous with danger\(^{43}\), be it imponderable, out of the control of the subject, or desired and assumed to reinforce self-identity\(^{18}\). The perception of risk in traffic is therefore based on the willingness of the subject to envisage possibilities for a type of accident to occur and to generate consequences\(^{44}\), as well as to their subjectivity in avoiding to incur in that risk or inversely, in believing that it is worth living them. It may be based on current values, beliefs and social meanings of the contemporaneity, as the belief in being different, to use a means of transport that offers "greater freedom" and, therefore, greater possibility of breaking rules, in not having to comply with the established norms\(^{45}\).

The results of the research corroborate previous findings that the more the riders are accustomed to risky behaviors, the more they commit infractions, and when they see benefits, they take the risks due to those infractions\(^{46}\). In addition, that driver who feels more insecure about the motorcycle tends to commit fewer violations\(^{47}\). Breaking the pragmatic logic of society, which leads to representations of devaluation of life to the detriment of immediate benefits, seems key to produce traffic patterns with less risk to motorcyclists, in which different actors recognize themselves as equals, including in relation to laws and punishments.

**Final considerations**

The choice of the theoretical-methodological approach used in this research made it possible to unveil the postures, paths and deviations from those paths of motorcyclists in the multifaceted scenario of traffic, in a complex network of sustained representations, imbricated within the risks experienced in daily traffic.

Safe transportation is portrayed by the subjects as capable of providing protection in the event of an accident. The presence of closed bodywork and the "size of the vehicle" represent elements that add a greater sense of safety and produce less possibility of injury, described above.
all for cars and buses. However, difficulties observed in the daily routine to carry out collective or individual transportation such as crowding, delays, traveling time, excess vehicles and traffic are represented as obstacles by motorcyclists to opt for these means of transport on the day-by-day. Although the representations of safe transport exclude the motorcycle, it is observed that the crucial element to choose it as a means of transportation is a pragmatic view of social life, expressed in the representations of speed and efficiency. In addition, risks also mean pleasure and identity, and the violation of norms are also considered as natural.

It was chosen in this study to reveal the meanings attributed to the experiences and behaviors carried out in traffic by motorcyclists when considering that to understand their ways of thinking the world is fundamental to interpret the phenomenon of traffic accidents that harm society.

The results give rise to discussions and a deeper understanding of important aspects to be researched in the approach to the collective health phenomenon. Those aspects, for example, deepen the analysis of the representations explained here, but are also delimited by gender, age, family relations, clinical conditions, length of stay, other actors in traffic and social network, besides being collated with representations of drivers of other vehicles regarding this subject. Studies that seek to deepen subjects' subjective aspects about 'traffic' are still infrequent and can certainly contribute to public health policies more focused on valuing life.

Acknowledgements
We acknowledge the support from the Foundation for Research Support of the State of Minas Gerais (FAPEMIG) - Protocol APQ-02265-13, financing the research and The Commission for the Improvement of Higher Education Personnel (CAPES) for the scholarship granted to the first author of the article.

Authors' Contributions
Hercílio Najara Ferreira de Souza participated in the outline and design of the research, elaborated the proposal of the article, participated in the collection, processing, categorization and analysis of the qualitative material, revision, final writing of the article and approval of the final version of the work. Deborah Carvalho Malta participated actively in the discussion of the results, revision and approval of the final version of the work. Maria Immaculada de Fátima Freitas Souza participated in the outline and design of the research, categorization and analysis of the qualitative material, revision, final writing of the article and approval of the final version of the work.

References


34. Tarozzi M. O que é a grounded theory: metodologia de pesquisa e de teoria fundamentada nos dados. Petrópolis, RJ: Vozes; 2011.

Translated by Félix Rigoli