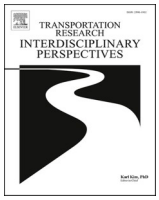
Transportation Research Interdisciplinary Perspectives 37 (2026) 101974

Contents lists available at ScienceDirect

Transportation Research Interdisciplinary Perspectives

journal homepage: www.sciencedirect.com/journal/transportation-research-interdisciplinary-perspectives



Do you speed when you dash? A qualitative study of app-based food delivery drivers

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ARTICLE INFO

Keywords:
Speeding
Driver behavior
Delivery driver
Occupational environment

ABSTRACT

This study examines factors that contribute to driver speed choices among app-based food delivery drivers in the United States. Transportation incidents are the leading cause of death at work. Speed is a factor in one-third of fatal crashes. Yet, limited information is available about factors influencing drivers' decisions to speed in an occupational and app-based driving environment. Three food delivery driver subreddits from the Reddit site were reviewed for posts and comments about driver speed. Eighty-seven posts and 1,970 associated comments were identified. Seventy percent of the posts and comments were from the DoorDash subreddit. Thematic analysis of posts and comments revealed that both work and non-work-related factors were at play in drivers' decisions to speed. Within the work domain, the desire to achieve high on-time delivery rates and please customers who gave large tips influenced some drivers' speed decisions. However, ongoing driver record checks, company monitoring of driver speed, and payment by elements of time rather than per delivery influenced some drivers to not speed. Within the non-work domain, some drivers considered speeding to be acceptable, while other drivers found that the potential consequences of speeding were not worth the risk. These findings shed light on opportunities for food delivery companies to adjust their practices and potentially reduce pressures on drivers to speed. Potential modifications include reducing consequences of late deliveries and providing tip information following delivery completion.

Background

Transportation incidents are the leading cause of death in the U.S. workplace, most of which are due to motor vehicle crashes (Bureau of Labor Statistics [BLS], n.d. – a). Fourteen percent of all U.S. worker fatalities are delivery drivers who die in transportation incidents (BLS, 2024). The proportion of these fatal incidents that involved speed is not available. However, speed was a factor in approximately one-third of all fatal crashes in the United States in 2021, and the number of speeding-related fatalities was the highest in fourteen years (National Highway Traffic Safety Administration, 2023). In fatal work-related crashes, 15% of deaths are to workers, but 85% of deaths are to the general public, making occupational driving a public health priority (French & Gumus, 2021). Given the burden of delivery driver fatal transportation incidents on workers, employers, and the public, and the substantial contribution of speed to fatal crashes, it is important to understand factors contributing to delivery drivers' decisions to speed while working.

One type of occupational driving that has been on the rise since the

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https://doi.org/10.1016/j.trip.2026.101974
Received 9 June 2025; Received in revised form 8 March 2026; Accepted 26 March 2026
Available online 3 April 2026
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COVID-19 pandemic is the delivery of food and parcels to private residences. Food delivery drivers working for application-based (i.e., app-based) platforms (e.g., DoorDash, Uber Eats, Grubhub) are largely gig workers who operate on an informal or on-demand basis. App-based gig workers, referred to by the Bureau of Labor Statistics as "electronically mediated workers," are younger on average than more traditional workers (Cummings & Kreiss, 2008; BLS, n.d. – b). Compared to all workers, electronically mediated workers are more likely to be in the prime–working-age group of 25–54 years and less likely to be 55 years or over (BLS, n.d. – b). Electronically mediated work can offer several benefits to delivery drivers, such as control over work schedules, hours of work, and which deliveries to accept. However, app-based food delivery drivers are typically "independent contractors," which leaves them vulnerable to financial and health challenges if involved in a crash. These workers have limited occupational safety and health supports and are rarely eligible for workers' compensation (Howard, 2017). These drivers often spend workdays on unfamiliar roads and in varying weather conditions (Eastlake & Hornback, 2021). They also face operational pressures such as tight delivery windows and demanding customers (Eastlake & Hornback, 2021). All these factors may place workers and the general public at risk for crashes and subsequent injuries. A New York City study of 500 food delivery couriers, 83% of whom rode bikes and 17% of whom drove vehicles, found that nearly half of workers had been involved in a collision, and 75% of the workers used their own funds to pay for medical treatment (Figueroa et al., 2023).

Information on the safety of app-based food delivery drivers in the United States is limited for several reasons. First, the drivers' self-employment status makes it challenging for traditional occupational injury systems to track drivers' crashes and injuries (Iacobucci et al., 2023). Second, occupational safety surveillance is fractured across multiple systems with multiple data sources that have differing objectives. Third, many of the systems have antiquated data collection processes that do not adequately capture current employment trends, such as app-based work (National Academy of Sciences, 2018). In addition to these surveillance limitations, reaching app-based food delivery drivers to conduct safety research or understand their perspectives is difficult given the independent nature of their work.

The use of the app-driven business model replaces a human manager with a machine-driven algorithm and comes with relatively unknown health and safety consequences (Nilsen et al., 2022). These algorithms may incentivize unsafe driving behaviors, such as speeding, by using metrics like on-time delivery rates to measure performance (Nilsen et al., 2022). There is also a lack of transparency in the algorithms determining payment, with half of workers reporting underpayment or no payment for at least one delivery (Zipperer et al., 2022). Similar to the plight of commercial truck drivers, these drivers are paid for delivery completion and thus are not compensated for time spent waiting for orders if restaurants are late in preparing food, for example.

In addition to the challenges associated with a machine-driven manager, this workforce does not operate under safety regulations. Most app-based food delivery drivers are not required to be licensed commercial drivers. Licensed commercial drivers operate under a number of safety regulations to protect them from crash and injury risk, including hours of service regulations to limit the number of hours drivers are on the road. Food delivery drivers using personal or company light-duty vehicles (i.e., passenger vehicles) lack any specific federal regulatory safety or labor protections. Finally, the Occupational Safety and Health Administration (OSHA) does not have authority to regulate self-employed workers (OSHA, 2005).

App-based food delivery drivers also face operational stressors that have safety implications. The ability to receive items quickly and cheaply in the home has fuelled pressures to keep costs low and encourage speeding, including in deliveries (Iacobucci et al., 2022; Strategic Organizing Center, 2022; O'Donovan, 2019). Interviews with drivers working in the gig economy (i.e., app-based) in the U.K. revealed that some drivers felt pressure to use their phone while driving, continue to drive when fatigued, and violate speed limits (Christie and Ward, 2019). A separate study of U.K workers delivering hot food using motorcycles compared driving behaviors between app-based riders and riders employed by restaurants (Christie and Ward, 2023). The authors found that compared to restaurant-employed riders, app-based riders were more likely to violate traffic rules related to speeding, run red lights, have more penalty points on their license, and be involved in a crash resulting in property damage or injury.

Driving with increasing speed not only reduces the time the driver has to react in a hazardous situation but also increases the distance to brake. Greater speeds result in greater crash risk and injury severity (Aarts & van Schagen, 2006). The significance of safe speeds is highlighted as one of the five key components of the U.S. Department of Transportation's Safe System framework: Safer Speeds, Safer Vehicles, Safer Roads, Safer People, and Post-Crash Care (U.S. Department of Transportation, 2025). The role of delivery in achieving safer speeds is a substantial part of tackling this issue, as 39% of worker fatalities due to transportation incidents were among delivery drivers (BLS, 2024). Employers have begun to use telematics devices to monitor driver speed, yielding promising results (Bell et al., 2017). However, recently published studies of home delivery drivers reported that despite the presence of telematics devices, drivers still felt pressure to speed and take risks to meet delivery deadlines (Christie, et al., 2025, Christie, et al., 2024).

While speed is a significant risk factor for crashes, there is limited information available about factors influencing decisions to speed among app-based food delivery drivers while driving for work in the United States. There is also a need to deepen our understanding of factors influencing drivers' decisions to comply with speed limits, as telematics devices alone may not be sufficient to address speed violations in an app-based food delivery environment. Thus, the aim of the study was to explore individual, environmental, operational, organizational, and regulatory factors that may contribute to speed choices while working in a gig worker delivery environment. An additional aim was to build a conceptual model of the factors identified that would inform safety initiatives of employers and others.

This study sought to answer the following questions:

1. Which work and non-work factors may motivate app-based food delivery drivers' decisions to speed while working?
2. Alternatively, which types of work and non-work factors may motivate drivers to comply with speed limits?

2. Methods

We selected a qualitative approach to answer these research questions, as it can help to understand the "why" of a phenomenon—in this case, speeding behaviors (Green & Thorogood, 2018). It can also serve to strengthen an understanding of the work context and its connection to the health and safety of workers (Boot & Bosma, 2021). We used a qualitative descriptive study design because our aim was to summarize findings in straightforward and everyday terms that will be understandable and actionable for employers, drivers, and policymakers (Sandelowski, 2000).

We used Reddit as our data source based on its strong potential for understanding public reactions to health topics, as well as its established utility for public health research (Park et al., 2018; Park & Conway, 2018; Reddit Inc., 2024). App-based food delivery work is an isolated job due to the solitary nature of food delivery work generally, which lacks interaction among peers or with managers (Smith, 2015). Importantly, Reddit has become a tool drivers now frequently use to interact, share experiences, and get tips on how to overcome work challenges and stressors (Meyer et al., 2023). In recent years, Reddit has grown, becoming a valuable data source for researchers, including transportation researchers, to understand populations that may be difficult to

reach using other methods. For example, Iacobucci et al. (2022) used Reddit to examine parking availability and associated challenges for parcel delivery drivers working in urban areas. Meyer et al. (2023) used Reddit to understand COVID-19–related risks among platform-based couriers in Canada. Researchers often choose Reddit over other social media sources such as Facebook and Twitter because it allows for longer posts (40,000 characters for posts and 10,000 for comments). Reddit is also a good option for research purposes because it includes an application programming interface that facilitates effective data acquisition. Because Reddit is organized by "subreddits" for specific communities, numerous subreddit groups exist for conversations among delivery drivers, including specific groups for individual drivers working as independent contractors.

We selected three food delivery driver subreddit groups for analysis, based on a review of delivery driver company–specific subreddits (Reddit Inc., 2024). These three food delivery services comprise the bulk of the app-based food delivery market in the United States: DoorDash (DD), Grubhub (GH), and Uber Eats (UE). While most of these workers drive passenger vehicles, some workers in cities operate on bicycles, mopeds, and scooters. All three services are app-based companies; thus, all drivers are gig workers and self-employed. Table 1 provides the number of subscribers for each of the selected subreddits as of June 11, 2024, including the subreddit's rank by size of all subreddit groups on the site. The lead author (KHH) used Reddit Extractor in R (Rivera, 2023) to identify all posts during a one-year period, June 2023 to May 2024, that contained the word "speed" in each of the three subreddits for DD, GH, and UE. Next, the lead author (KHH) read all posts, including title and text, to determine if they met the following inclusion criteria: the poster's use of the term "speed" referred to driving speed, and the post discussed a driver's experience. Posts were excluded if they were an advertisement. The study's inclusion and exclusion criteria are similar to those used by Iacobucci et al. (2022). For all included posts, the lead author (KHH) extracted all comments made in response to the post as well.

The lead author (KHH) imported all included posts and associated images, comments, and the number of upvotes (i.e., likes) into a dataset in QDA Miner Lite (Provalis, 2024), a free qualitative analysis software, for analysis. She then completed a hybrid deductive/inductive thematic analysis using methods from Braun and Clarke (2006). Deductive analysis began with two a priori domains: work and non-work. The inductive analysis included identification of themes within each domain and employed an open-coding approach (Maguire & Delahunt, 2017). As such, the lead author (KHH) first read all data to become familiar with the dataset. Next, she reviewed the data again and generated initial codes for portions of the posts, comments, and images that provided insight into study questions. Codes were then reviewed and organized into initial themes. The lead author (KHH) then reviewed themes and corresponding codes to identify the underlying meaning of the theme and named and defined each theme. Next, peer debriefing was conducted by three researchers (SK, KW, EL). Each researcher independently reviewed the coded data and themes and provided feedback to the lead author (KHH) on alternative interpretations of data and additional insights. Based on feedback, the lead author (KHH) completed a final revision of the themes, allowing enhanced trustworthiness of the findings.

To avoid identification of any Reddit username, usernames were not included in the study results. Additionally, to avoid reverse identification, quotes used in this manuscript were slightly modified by replacing select words with synonyms, but every effort was made to maintain the sentiment and meaning (Ayers et al., 2018). In one circumstance, the authors paraphrased the comment to avoid identification. The authors did not use quotations in these circumstances. Finally, the lead author (KHH) tested each quote for possible reverse identification of the poster by using an online search engine to attempt to identify the original post. The authors did not seek IRB approval as this study was not human subjects research; the posts were publicly available and the authors did not collect identifiable information or interact with Reddit users.

2.1. Reflexivity

The lead author is female, a doctoral candidate in public health, an occupational research epidemiologist, and has graduate-level training and experience in qualitative analysis. She does not have personal experience with app-based driving and is not an active member of any subreddit communities. Two of the three additional researchers self-identify as male, the third self-identifies as female, and one of the three has app-based driving experience. One of the secondary researchers has completed qualitative Reddit analysis previously. The other two are occupational epidemiologists and have some qualitative data analysis experience.

3. Results

Study results are presented in three sections. The first section includes a description of the final dataset. The second section introduces general speeding habits mentioned in posts, as well as the conceptual model, which includes two domains: work factors and non-work factors. Finally, descriptions of each of the seven themes and quotes illustrating the themes are provided.

3.1. Dataset

The lead author (KHH) identified a substantial number of posts and comments that discussed speeding choices within all three subreddits. The final dataset contained 87 original posts and 1,970 comments. Table 2 includes the number of relevant posts and corresponding comments by subreddit. The proportion of posts from each company were similar to the market share for each (Earnest Analytics, 2025). The DD subreddit constitutes almost 70% of the dataset. From the dataset, 453 excerpts from the 2,057 total excerpts provided valuable insights into the most common themes that emerged (Table 3). These excerpts were largely unique to individual drivers, as 424 unique drivers were represented among the 453 excerpts (Table 3).

Table 2
Number of posts and associated comments in dataset (extracted June 2023 to May 2024).

Subreddit	Posts		Comments	
	Number	%	Number	%
r/doordash_drivers	61	70.1	1,371	69.6
r/grubhubdrivers	12	13.8	206	10.5
r/ubereatsdrivers	14	16.1	393	19.9
Total	**87**	**100**	**1,970**	**100**

Table 1
App-based food delivery subreddits used in analysis as of June 11, 2024.

Subreddit	Subscribers	Reddit rank by number of subreddit subscribers
r/doordash_drivers	295,000	Top 1%
r/grubhubdrivers	61,000	Top 2%
r/ubereatsdrivers	40,000	Top 3%

Table 3
Number of posts/comments and drivers that provided insight into study questions by theme.

	Number of posts/ comments	Number of drivers
Work factors		
Ongoing driver record checks	145	129
Monitoring of driver speed	98	91
On-time delivery metrics	51	49
Payment by time rather than by delivery	17	15
Advance tips	11	11
Non-work factors		
Consequences of speeding not worth it	89	87
Speeding is acceptable	42	42
Total	453	424

3.2. Speeding habits and conceptual model

The lead author (KHH) first examined driver admissions of speeding to confirm that speeding was in fact occurring within this driver population. Across the three subreddits, the authors found that drivers reported speeding habits that varied widely. Some drivers admitted to speeding (i.e., exceeding posted speed limits) whereas a few others stated clearly that they never speed. Drivers did not always provide insights into the reasons for their speeding choices. Examples are as follows:

Speeding:

*Yep. 55 in a 45, 65–70 in a 55, 70–80 on the highway even if it says 60. My work route has a stretch of highway where they are always working and the speed limit is 55. 70–80 there too. Get off the f***ing road!*

Speeding:

Speed limits are just a casual suggestion to me.

Not speeding:

Even if I had a Bugatti Chiron, I'd drive like I was on my way to church.

However, many Reddit posters provided insight in their posts as to their reasons and motivations for speeding. From this information, the researchers developed a conceptual model (Fig. 1). As indicated at the top of the model, drivers exercised practical reasoning to reflect on a range of work and individual (i.e., non-work) factors to determine their intentions to speed (Wallace & Kiesewetter, 2003). The drivers' reasons for speeding, or not speeding, were categorized into two primary domains: work factors and non-work factors. Work factors mentioned in driver posts were all connected by drivers' strong desire to avoid deactivation and to maximize potential income. Non-work factors included a variety of reasons related to drivers' judgment, values, and perceptions of norms and risk. Within the work domain, the researchers identified five themes: on-time delivery metrics, advance customer tips, ongoing driver-record checks, monitoring of driver speed, and payment by time rather than by delivery. Within the non-work domain, the team identified two themes: speeding is acceptable, and consequences are not worth it. The next section includes a description of each of these themes.

3.3. Themes

Work factors

Reasons for speeding. **Theme 1**: On-time delivery metrics influence speeding decisions.

Many conversations among drivers that mentioned speeding during work were related to the app's system of tracking on-time delivery rates, set by the app's algorithms. On-time delivery metrics keep track of the proportion of deliveries that are delivered on time, as determined by the app, out of all deliveries completed. Extremely late deliveries are also flagged. Drivers reported receiving "contract violations" for extremely late deliveries. Receiving contract violations placed the drivers at risk of deactivation (i.e., losing account access). These conversations about speed and on-time delivery metrics occurred across all three company subreddits. A substantial number of drivers expressed the need to rush to pick up food, get to the customer, and get deliveries completed. As a part of that feeling that they need to rush, drivers also described that they had to speed to meet the app's established delivery times. Similarly, some drivers cited that delivery times could be unrealistic, leading to a decision to drive faster to avoid being late. Drivers often reported that delivery times were unrealistic due to a variety of causes, such as traffic and restaurant delays. Drivers sought to maintain a certain threshold of on-time delivery proportions and felt speeding was necessary to achieve that:

I don't pay a lot of attention to my arrival time history, but it kind of bothers me that to be on time for about 75 percent of my trips, I'd have to exceed the speed limit rather a little bit.

I am financially motivated to deliver quickly. But in order for me to have a high on-time stat I have to speed over the speed limit more than I

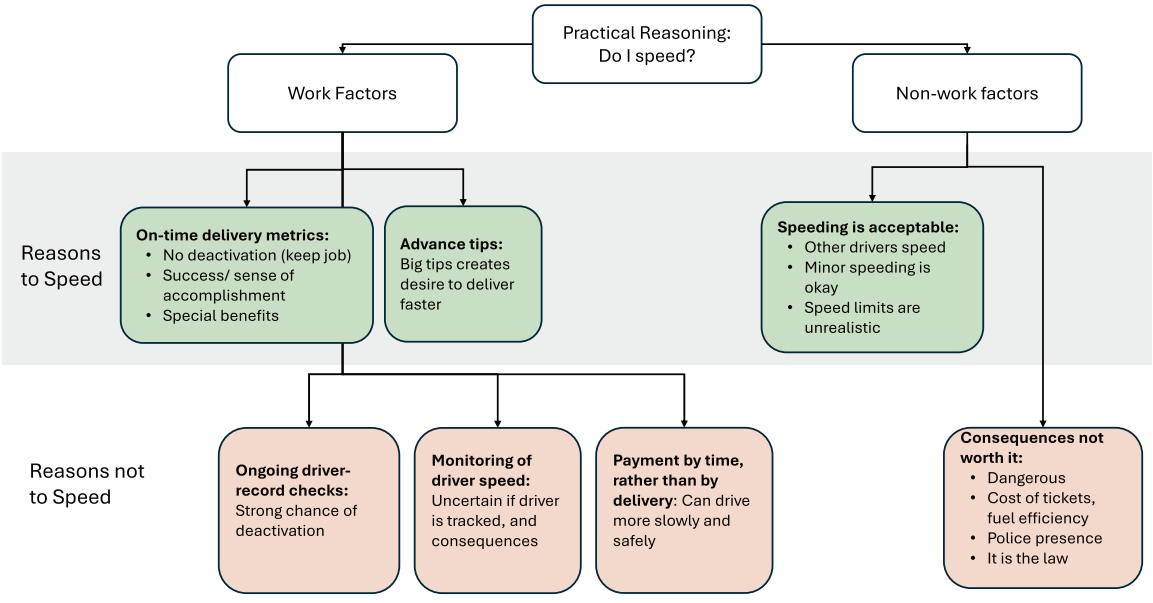

Fig. 1. Conceptual model of app-based food delivery drivers' reasons for opting to speed or not speed.

feel comfortable.

Drivers were sometimes frustrated with failed attempts at making deliveries on time. One driver used a Star Wars space flight image to depict the experience of trying to make delivery times, stating:

The speed I go for a delivery…notified I was late.

Drivers feared deactivation or losing special benefits if they did not keep a high enough rate. An example of this frustration is highlighted by this driver who felt it was almost impossible to sustain these high rates:

I'm over it. it is nearly impossible to keep my Premier driver rating, and I like the scheduling options but if you fall below a certain on-time rating you can get deactivated.

Drivers also reported feeling conflict about whether the company preferred they comply with speed limits or get there on time:

Can I get deactivated for speeding? I get so scared when the app shows my speed in red and I immediately slow down. Does [app] want us to deliver on time or for us to obey the speed limit?

The desire to keep high on-time delivery rates led to several conversations about strategies to not be late and to raise the drivers' on-time delivery scores. Drivers learned from each other about ways to notify the app when delays, such as at restaurant pickup, occurred. Importantly, newer drivers appeared to feel more pressure to speed to get on-time delivery, while more experienced drivers had learned how to work the system. Drivers became familiar with restaurants that often held them up when food was not ready and would avoid accepting orders for slow restaurants so as not to get behind. Yet these methods were not always successful:

> *I was able to raise my on-time rate by clicking the "Order not ready, order still being prepared.".*
> *I have to try and hit arrived before I even park, I have to rush on difficult deliveries like hotels during stacked orders as they don't adjust pickup times if a new offer comes in before the current order is finished. I had my on-time rate really high but this was only possible by speeding and distracted driving… trying to hit an arrived button while trying to park.*

Drivers often connected these expectations of high on-time delivery rates to poor safety, more than once referencing the impacts of a past marketing campaign, the pizza delivery promise of "30 min or less", on driver behavior. Nonetheless, there was an element of success drivers felt for keeping their statistics high, even when their driving behavior was risky. This driver's post and screenshot of their "real-time" stats illustrate the feeling of success despite the sacrifices to their own safety:

A final difficulty with late deliveries was that the app platform's customer service was not always easy to reach or helpful to the driver in providing an exception of some kind when late deliveries were unavoidable. Drivers described situations where they hit traffic, or some other obstacle, and the delivery time became unrealistic. This after-the-fact stressor was frustrating for drivers and often encountered while driving:

What pisses me off is when I pick up the first of two orders, then end up being late on delivering that order while [I'm] still waiting to pick up the second order. Sometimes they do not increase the delivery time on the first one. I've called and complained that this is the only thing bringing down my On Time rating. They stupidly offered to call the customer for me to explain why I was late.

Theme 2: Advance customer tips influence speeding decisions.

A number of posts related to speeding choices mentioned customers' desires. A handful of drivers were influenced to speed when they received a large tip prior to delivering an order. Drivers would see the large amount and sometimes feel an obligation to the customer to get their food to them fast. The following comments illustrate examples of such reactions:

> *I received $30 to go 1.6 miles last night. Do you know how fast I drove to get them their meal? Like I was on fire best way I know to say thank you.*
> *I am going to perform my best for the highest bidder. My speed limit is very dependent on my tip, no tip definitely under the speed limit, big money what speed limit. But that's [just] me.*

The most upvotes (i.e., the most liked) on a comment within the dataset occurred within this theme of advance customer tips:

> *If I get that $10 order for 2 mi, I'll be like Speed Racer and get the food to the customer (170 upvotes).*

Simple requests for fast delivery through text message communication from the customer to the driver did not appear to have the same level of influence as a customer tip. This posted text message exchange illustrates resistance on the part of the driver to such a request:

Reasons for not speeding

Theme 3: Ongoing driver-record checks influence speeding decisions.

Many posters and commenters spoke about third-party companies conducting ongoing driver-record checks to identify past speeding tickets and any new speeding tickets. If the record checks came back with a traffic violation, the drivers reported that they were deactivated. Traffic violations received on personal time would also result in deactivation. As a result of this company policy of driver-record checks, many drivers were worried about getting a ticket, and if they got a ticket, that they would be deactivated:

> *When I dashed by offer back [in] 2019, I felt the need to rush. Then I got speeding tickets, then I got deactivated.*
> *Omg. I just got one for 5–9 mph (tried to fight it but didn't succeed). I guess I'm next on the chopping block.*
> *[App] recently changed its policy and has become absurdly strict regarding traffic tickets (and other charges). They have been deactivating dashers over ONE ticket—even for non-moving violations.*
> *Just search this sub [subreddit] and see for yourself. Also got a speeding ticket a few weeks ago and plan on fighting it, but I'm really worried.*

Theme 4: Monitoring of drivers' speed influences speeding decisions.

A substantial number of conversations across subreddits were about the companies' use of in-vehicle monitoring systems to monitor the speed of drivers. Drivers reported a lack of clarity around multiple aspects of this monitoring program. Points of confusion included if and how the monitoring was occurring within the vehicle, whether the drivers had actually consented to enrollment in the monitoring program, and what the consequences of speeding were if caught. Drivers were also unclear as to whether their speed notifications were just a part of their phone's navigation app or if the company had access to the app. Drivers posted phone screenshots of notifications that they had been flagged and could face consequences for speeding (one such image is below). Despite the lack of knowledge among drivers about the speed-monitoring programs within each company, their existence appeared to influence driver decisions about speed. The comments and images below illustrate the range of reactions to being monitored:

Just letting all you drivers know…they can also track your speed while using Google maps so don't speed they will contact police and have them sit waiting for you while on your route. Best wishes drive safe.

I use the in-app Google Maps and noticed on Sunday something new. In the lower left corner it shows the posted speed limit of the road and my current speed. If I exceed the posted speed by 5 mph or more, it turns red. Are they tracking our speed now, as I try to drive the speed limit, or at least the speed of other drivers around me.

Theme 5: Payment by time rather than by delivery influences speeding decisions.

A couple of locations, such as California and New York City, offered payment to drivers by time (i.e., by the hour) rather than per delivery. Drivers had the opportunity to choose which method they preferred, and drivers experimented with the pros and cons of both approaches. As a

result, a handful of drivers reported feeling less of a need to speed or rush when using the "earn by time" payment method. The following comments illustrate these sentiments:

It is MUCH less stress. Before, I was worried about missing green lights, slow drivers, speeding, etc. Now I just pick up, strictly drive the speed limit, walk a normal pace, enjoy red lights, full stops, etc. It's almost relaxing now!

No longer do I have [to] dodge the NYPD while speeding to make as many deliveries as I can. I can now go the speed limit, which is a brutal 25 mph in NYC. I come to full stops at the stop sign. I even let other cars pass me by. I can gently press my [brakes] and take corners easy. It was so nice not racing to and from restaurants.

Then I learned what prop 22 really is. That changed my whole perspective. I no longer get impatient or upset with anyone for driving slowly. I no longer have road rage. I drive the speed limit, if that. I wait for people to come get their food, or I'll gladly take it up to the top floor and last door to get my steps in. Because f*** it, I'm getting paid by time.

Non-work factors

Drivers also used their personal judgement, values, situational norms, and perceptions of risk to determine if it was acceptable to speed. The team identified two overarching non-work themes: 1) speeding is acceptable and 2) consequences of speeding are not worth it.

Theme 6: Speeding is acceptable.

A substantial number of drivers perceived speeding as acceptable behavior when driving. Drivers regarded minor amounts of speeding over the limit as particularly acceptable. Also, a few drivers felt that speed limits were just unrealistic. These perspectives were often mentioned in conjunction with comments about how it is the norm for drivers, even for law enforcement, to travel over the speed limit on the roads they travel:

I'll go 10 to 15 mph right by a cop no issue.. along with everyone else doing it and even the police themselves do it. I used to rail at people going over the speed limit on the highways too … now I regularly push 80–90 zipping around. Know what you can get away with and when and you'll get places much quicker.

Especially on the highway the flow of traffic is always 5–15 over. Cops know this and can pick and choose whichever person they wanna pull over to fulfill quotas:).

Theme 7: Consequences of speeding are not worth it.

Drivers cited a range of reasons for not speeding. They generally felt that the consequences were not worth it and not speeding was the law. A substantial number of drivers avoided speeding because of the dangers it poses, valuing safety over speed:

From these tickets you're a hazard in the roads. Gig driver doesn't mean you can break the rules. How many times did you speed and not get caught? The construction site is very concerning because you may kill someone there—as the reduced speeds is because the site does have workers, and you put them at risk.

Slow down. This isn't a race and your first and foremost responsibility is to yourself and the safety of others.

Some drivers also avoided speeding because of the costs associated with receiving speeding tickets. Drivers reflected on the excessive costs versus the minor benefits of speeding. They perceived that the costs of receiving a speeding ticket were not worth it given that they did not earn very good pay:

I wish I could afford speed on [app] pay.
Few things are dumber [than] speeding for $2.

Other drivers valued abiding by the law and felt that people should not speed because it was simply illegal:

You should be driving 50 or lower in a 50 mph area. It's a limit, not a suggestion. That means if you are going 51 you are speeding. That's above the limit. That's how it works.

Finally, many drivers avoided speeding and other traffic violations due to a distrust of police if pulled over. The distrust of the police (or the app) led many people to purchase their own dashcams to protect themselves from accusations of speeding, at-fault crashes, and in other situations:

How crazy is it that the cops are the scary people instead of the actual perps.
Bored cops in your area? Buy a dash cam that shows your speed. If it happens again file a complaint.
Invest in a dashcam with a speedometer on it. Saved my ass with lying cops before.

4. Discussion

This study is innovative in its use of an online social media forum (i.e., Reddit) to examine motivations for speeding or not speeding within a digital platform-based (i.e., app-based) work environment. It also builds on existing literature on delivery drivers' work-related motivations to speed. The themes identified regarding speed choices were related to both work and non-work factors. Work factors left drivers with both motivators to speed and not speed. Several work factors were unique to employment as a gig worker driven by an app-based platform, such as the importance of on-time delivery metrics, the constant risk of possible deactivation, perceived or explicit customer preferences, and the way drivers are paid (i.e., by time or by job). These practices require drivers to negotiate a complex set of work and individual factors as they apply practical reasoning in their decisions about how fast to drive (Wallace & Kiesewetter, 2003). This study also found that drivers bring their own set of values and perceptions to their delivery job. These non-work factors also play a role in decisions to speed through their interplay with the work factors identified.

Some, but not all, drivers found it difficult to navigate the pressure of sustaining high on-time delivery metrics under conditions of unpredictable challenges (e.g., traffic, restaurant delays). This pressure sometimes led to the decision to speed. Being in a hurry generally is associated with speeding, tailgating, and other risky driving behaviors (Fuller et al., 2008). The reported need to rush has also been identified in studies of gig drivers and riders (Christie & Ward, 2023; Strategic Organizing Center, 2022; O'Donovan, 2019). In the United Kingdom, a study of gig-work hot-food motorcycle riders found that app-driven work was associated with increased time pressures and a likelihood to engage in dangerous driving behaviors (Christie & Ward, 2023). Christie and Ward found that drivers who worked as gig workers were more likely than restaurant-employed drivers to say that time pressures led to speeding. Riders also reported that apps frequently misdirected them to customer homes, causing additional frustration and unnecessarily long trips, further exposing drivers to time pressures and potential for crashes. Other studies of food delivery riders and drivers have also cited time pressures as a significant predictor of running red lights, speeding, crashes, and injuries (McKinlay et al., 2022; Newnam & Watson, 2011; Quy Nguyen-Phuoc et al., 2022). Time pressures were also the most common work-related risk factor for injury for food delivery drivers in China, and a greater number of daily orders was associated with a greater number of injuries and deaths (Zheng et al., 2019). A Reddit study of parcel delivery drivers found that drivers did not feel that they had enough time to search for an authorized parking spot, leading to parking in unauthorized and often unsafe locations to avoid falling behind schedule (Iacobucci et al., 2022). Additionally, our study found that drivers feared deactivation due to low on-time delivery rates, influencing their decision to speed. Studies examining the impact of the fear of deactivation on safety behavior are limited, but one study of New York City food couriers found that drivers and riders often did not report incidents to their companies because they feared being penalized for not completing deliveries (Figueroa et al., 2023).

We found that large advance customer tips influenced speeding decisions of drivers. Recent research on the role of customer tips on driver

behavior has been focused on order fulfilment time and other supply chain logistical outcomes. One study found that customer tipping reduced the amount of time it took for drivers to accept the delivery (i.e., reduced fulfilment times; Castillo et al., 2022). The ability for customers to tip a driver prior to delivery is increasingly common within apps and is a strategy used by app-based companies to increase acceptance of deliveries by independent contractor drivers. However, significant variability exists among apps as to the timing and approach for drivers receiving customer tips. No research to our knowledge has been completed that examines risky driving behaviors, such as speeding, and their relationship to customer tip amount or the timing of sharing the tip amount with the driver (before or after completion of the order).

We also found that law enforcement driver-record checks provided a strong incentive for drivers to avoid getting speeding tickets and thus likely influenced speeding decisions. The Occupational Safety and Health Administration recommends "progressive discipline" when it comes to traffic violations (Occupational Safety and Health Administration, n.d.). However, no research is available on the effectiveness of employment-related consequences (e.g., driver deactivation) for speeding tickets or other traffic violations on future speeding behaviors. Nonetheless, drivers who have a history of speeding violations are more likely to receive subsequent violations than drivers without a history of violations; therefore, lack of speeding tickets may be a reasonable requirement to work as a delivery driver.

Separate from law enforcement, the monitoring of speed by companies themselves influenced decisions to avoid speeding, but it was also a significant source of confusion for drivers in our study. The use of telematics, often referred to as driver monitoring systems (DMS) or in-vehicle monitoring systems (IVMS), are an effective tool to reduce risky driving behaviors in an occupational environment and in the young novice driver environment (Bell et al., 2017; Molloy et al., 2019). However, studies of effectiveness in work fleets have only been conducted within employer/employee settings and not in gig work environments. The monitoring is also often combined with driver coaching by management for drivers with risky driving behaviors (Bell et al., 2017). Feedback delivered to young novice drivers about their speed exceedance has also led to improved speed management skills (Molloy et al., 2019, 2021). However, the drivers whose posts were included in this study appeared to have not received any feedback or coaching and also lacked an understanding of the purpose or extent of implementation of these systems. The absence of a human to share information about the monitoring system's purpose, coach the driver, and reward progress may inhibit the success of driver monitoring among app-based food delivery drivers. An evaluation of the use of IVMS in this driving environment would be beneficial. However, IVMS interventions alone may not prevent speeding altogether in a gig delivery environment. Christie et al. (2024, 2025) found that even drivers with IVMS still report pressure to take risks and speed to meet delivery schedules.

A few drivers expressed their ability to slow down when being paid by time instead of by delivery. Payment by the load has been connected to increased crash risk among long-haul truck drivers, suggesting the influence of economic arrangements on driver choices, such as speeding or driving while fatigued (Belzer & Sedo, 2018). Research examining the relationship between payment methods and risky driving behaviors within app-based driving environments is needed. A wide number of payment structures exist among app-based delivery companies, ranging from a flat delivery rate to a mixture of per mile/per delivery or per time/per delivery. At the time that these comments were posted on Reddit, legislation in New York City and California had created minimum wage (or more) guarantees for food delivery drivers and riders (Russell & Rasheed, 2024; New York City Department of Consumer and Worker Protection, n.d.). However, not all delivery driver advocates support the California legislation (i.e., Proposition 22) because it continues to uphold the status of food delivery drivers as independent contractors, ensuring that they cannot access employee benefits. In addition, the earn by time payment to drivers only occurs while the driver is actively fulfilling an order (i.e., active time) and not while drivers are waiting to receive an order (i.e., idle time) (Door Dash, xxxx). One study of earnings of gig passenger and delivery drivers' pay found that despite wage guarantees under Proposition 22, California delivery drivers earn well below minimum wage once drivers' expenses and overall shift time is included (Jacobs et al., 2024). An evaluation of the impact of such state or city policies on risky driving behaviors and crashes among app-based food delivery drivers would also be valuable.

In this study's dataset of driver posts and comments, a variety of non–work-related factors appeared to influence drivers to speed, such as the acceptability of minor speeding or the fact that others speed. On the other hand, some drivers avoided speeding due to the dangers or other perceived consequences. Studies that examine work-related motivations for speeding are not available. However, the cited non–work-related reasons for speeding/not speeding in this study were somewhat similar to those found in studies of speeding motivations in the general public (Chen et al., 2022; Leandro, 2012). A Costa Rican study grounded in the theory of planned behavior found that both norms and perceived behavioral control constructs were able to explain speed selection among young drivers (Leandro, 2012). Greater perceived control by drivers was linked to increased speed and included situations such as using a well-known and well-maintained road or driving their own vehicle (Leandro, 2012). The norms around acceptability and safety of minor speeding were also a key finding in a recent study of the reasons for speeding among drivers in the Netherlands (Picco, 2025). In the general population, speeding and other aggressive driving behaviors are also linked to an underestimation of the risks of a major crash (Chen et al., 2022). Efforts to increase perceived risk have been linked to reduced self-reported speeding (Brown, 2010).

5. Implications

A number of opportunities exist for app-based food delivery companies and safe-driving advocates to reduce unsafe speed.

- Modify on-time delivery metrics and consequences

Most importantly, companies could consider modifications to on-time delivery metrics programs. Less stringent approaches to on-time metrics are likely to help drivers feel less rushed, slow their speed, and increase safety for the driver and for all members of the public who are driving, walking, or riding near delivery vehicles, including in residential neighborhoods. Potential opportunities for improvement include 1) adopting wider windows of acceptable delivery times; 2) reducing the consequences associated with periodic late deliveries; and 3) enhancing the ability of the app to automatically extend delivery times in the event of restaurant delays, traffic, or other unavoidable events. Automation may help reduce the burden on the driver to alert the system to every delay. Such improvements in the app's ability to adjust delivery times may reduce the number of times drivers feel rushed (and potentially decide to speed), particularly for newer drivers who have yet to understand how to "game" the system. Improvements in the algorithms that can automatically adjust delivery times could also lessen the need for drivers to interact with their phone, allowing for increased attention toward the primary task of driving safely.

- *Provide customer tip amounts after delivery*

Regarding customer tips, drivers' knowledge of large predelivery customer tips influenced some drivers to want to deliver faster. Modifications to the app to provide tip amounts following delivery completion may reduce any undue influence on drivers. Providing tip information only following delivery completion is already in place for Grubhub (Castillo et al., 2022).

- *Create clear policy about driver monitoring*

Companies may benefit from developing clear policies about the use of driver monitoring and the consequences of speeding. Companies could provide incentives for good driving behaviors, including not speeding. In one study, positive reinforcement was more effective than punishment in changing driving behavior (Bell et al., 2017).

- *Explore opportunities to* pay *drivers using elements of time rather than earning by the mile or the delivery*

Companies may want to consider expansion of opportunities for drivers to be paid by elements of time. Companies may choose to examine the differences in speeding events and crash outcomes between drivers paid by time versus drivers paid by delivery.

- *Increase* awareness *among drivers of risks associated with speeding*

Companies can provide training to workers on essential driving safety practices, including training tailored toward an awareness of risks of speeding and other forms of aggressive driving. Although limited information is available on driver safety training to gig workers, driver training among employees who drive at work is associated with fewer crashes (Vivoda et al., 2019).

6. Limitations

There are several limitations to this study. Drivers using subreddits may not be representative of the food delivery driver population as a whole. Reddit users are more likely to be tech savvy, young, and male (Mitchell, 2016). Young men are also more likely to speed, as measured by fatal crashes in the United States (NHTSA, n.d.). While the over-representation of young men in this sample could introduce bias into the findings, this study did not attempt to quantify speeding prevalence. Rather, it examined reasons for speeding among food delivery drivers and the overrepresentation of young men in the sample should not diminish the relevance of these findings. On the contrary, it may provide unique insights into reasons for speeding for this high-risk subgroup of workers. Also, no demographic information or geographic location information is available for posters and commenters in this study. The authors cannot guarantee that posters or commenters are drivers; there is no verification of occupational status prior to posting on individual subreddits. Furthermore, as these data are self-reported, they may not represent actual driving behavior. An on-road study to examine speeding and other hazardous driving behaviors may help to validate these findings. Finally, only the lead author (KHH) screened posts for inclusion. This approach may have led to inaccurate inclusion or exclusion of posts due to no additional verification by a second researcher. While errors were possible, the inclusion criteria were straightforward to apply (i.e., use of the word “speed” in a driving context), thus requiring minimal subjective interpretation by the author. Despite these limitations, the use of Reddit to understand motivations to speed among app-based food delivery drivers is novel and provides useful insights not available in the literature.

7. Conclusion

App-based food delivery drivers applied practical reasoning to a complex set of work- and non–work-related factors in their decisions to speed or not speed while driving for work. The desire to keep high on-time delivery metrics and please customers who give large advance customer tips influenced some drivers to speed. On the other hand, company practices such as ongoing driver-record checks and driver speed monitoring influenced some drivers to avoid speeding. Drivers who were offered the option of payment by time rather than by delivery reported feeling less of a need to speed with this payment arrangement. Non–work-related factors influencing drivers included a general acceptability of minor speeding. Some other drivers felt that the consequences of speeding were not worth it. A number of opportunities exist for companies and safety advocates to motivate app-based food delivery drivers to drive at safe speeds, though additional research is needed to examine the impacts of such interventions.

Declaration of the use of A.I.

The authors did not use AI for any part of the work related to the manuscript submitted.

CRediT authorship contribution statement

Kyla Hagan-Haynes: Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization. **Ashley Brooks-Russell:** Writing – review & editing, Supervision, Methodology, Conceptualization. **Srinivas Konda:** Writing – review & editing, Validation, Formal analysis. **Kaitlin Wingate:** Writing – review & editing, Validation, Formal analysis. **Eric Lundstrom:** Writing – review & editing, Validation, Formal analysis, Conceptualization. **Hope Tiesman:** Writing – review & editing, Conceptualization. **Imelda Wong:** Writing – review & editing, Conceptualization. **Natalie V. Schwatka:** Writing – review & editing, Conceptualization. **Virginia Visconti:** Writing – review & editing, Supervision, Methodology, Conceptualization.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

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