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ORIGINAL

Gender differences in travel patterns and care trips in the Mexico City metropolitan area

Diferencias de género en los patrones de viaje y el cuidado en la Zona Metropolitana del Valle de México

Yennifer Díaz Romero[1]

[1] Universidad Autónoma de Sinaloa, Vicerrectoría. Mazatlán, México.

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Corresponding Author: Yennifer Díaz Romero

ABSTRACT

Introduction: Women and men travel differently, and care-related mobility is a central driver of that gap, yet evidence for the Mexico City metropolitan area remains limited. Methods: We analyzed the public microdata of the 2017 Origin-Destination Household Survey of the Mexico City metropolitan area (INEGI), a population-based travel survey. We compared trip purpose, mode used, trip chaining and travel time between women and men with survey-weighted estimates and generalized estimating equations with cluster-robust standard errors, adjusting for age, day type, sociodemographic stratum and locality size. Results: Women made 52.0% of the 531,594 person-trips recorded. Escorting someone accounted for 7.0% of women's trips and 2.2% of men's (adjusted OR 3.18; 95% CI 3.05-3.32). Women walked on 64.9% of trips and used a private car on 18.3%, versus 54.6% and 25.8% for men. Women made more trips per person-day (2.22 vs 2.08) and shorter trips (median 30 vs 35 min; adjusted difference −10.6 min; 95% CI −11.0 to −10.3). Conclusions: In the Mexico City metropolitan area women travel more often, by walking and collective modes, with more care trips and shorter travel times than men. Transport planning should recognize care mobility and the gendered distribution of trip purposes.

Keywords: gender; travel behaviour; trip purpose; trip chaining; travel time; Mexico City.

RESUMEN

Introducción: Las mujeres y los hombres viajan de manera distinta, y la movilidad de cuidado es un motor central de esa brecha, aunque la evidencia para la Zona Metropolitana del Valle de México sigue siendo limitada. Métodos: Se analizaron los microdatos públicos de la Encuesta Origen-Destino en Hogares de la ZMVM 2017 (INEGI). Se compararon motivo, modo, encadenamiento y tiempo de viaje entre mujeres y hombres con estimaciones ponderadas y ecuaciones de estimación generalizadas con errores robustos por conglomerado, ajustando por edad, tipo de día, estrato sociodemográfico y tamaño de localidad. Resultados: Las mujeres realizaron el 52.0 % de los 531 594 viajes. Llevar o recoger a alguien fue el 7,0 % de sus viajes frente al 2,2 % de los hombres (OR ajustado 3,18; IC 95 % 3,05-3,32). Las mujeres caminaron en el 64,9 % de los viajes y usaron automóvil en el 18,3 %, frente al 54,6 % y 25,8 % de los hombres. Hicieron más viajes por persona-día (2,22 frente a 2,08) y más cortos (mediana 30 frente a 35 min; diferencia ajustada −10,6 min). Conclusiones: En la ZMVM las mujeres viajan más, caminando y en modos colectivos, con más viajes de cuidado y tiempos más cortos. La planeación del transporte debe reconocer la movilidad de cuidado y la distribución por género de los motivos de viaje.

Palabras clave: género; movilidad; motivo de viaje; encadenamiento de viajes; tiempo de viaje; Ciudad de México.

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INTRODUCTION

Daily mobility is distributed unevenly between women and men, and this unevenness constitutes a durable dimension of transport inequality in the cities of Latin America.(1)

The gap originates in the division of paid and unpaid work, which assigns to women a larger share of household responsibilities and of the trips that sustain them, from escorting children and older relatives to combining work, services and the home within a single day.(2)

Because the number, purpose and length of trips differ systematically by sex, the transport system filters access to employment, health care and public life in ways that reproduce gender inequality rather than neutral ground for movement.(3)

Comparative research describes a recurring pattern. Women tend to make more trips than men but shorter ones, to chain several activities within one tour, and to rely less on the private car and more on walking.(4,5)

Trip purposes also diverge, with shopping, care and escorting concentrated among women and work concentrated among men, a division observed for school escorting in Germany,(6)for commuting across the life cycle in Toronto,(7)and for daily travel in Barcelona, where sequence analysis links gender and life course to distinct mobility patterns.(8,9)

The pattern is reinforced by the unequal allocation of motorized resources within households and by the safety burden that falls on women in public space. Where a household owns one car, its use tends to be reserved for the longer, work-related trips of men, while women absorb the remaining travel on foot or by collective modes, an arrangement documented in analyses of task allocation and commuting in Norwegian households.(10)

At the same time, fear of harassment and victimization constrains when and where women travel, particularly on public transport, a constraint synthesized in reviews of transit environments(11) and in studies of gender-based violence in transit systems.(12)

These two mechanisms, resource allocation and safety, converge to make the gender gap in mobility a structural rather than an individual phenomenon.

Care mobility has emerged as the concept that names these differences. Defined as the travel performed to sustain the care of dependents and the household, it includes escorting children to school, accompanying relatives to health services and carrying out household errands, and it falls disproportionately on women across settings.(13,14)

In Latin American cities the evidence is growing: care mobility in Bogotá is strongly gendered and stratified by income,(15)low-income women in Itagüí, Colombia reorganized their care travel under lockdown,(16)and child health care in Uruguay exposes how transport costs shape women's wellbeing.(17)

Part of the difficulty in quantifying this phenomenon is that care travel hides inside standard trip categories: a trip recorded as shopping may embed a school escort, and a trip recorded as returning home may carry a stop to collect a relative, so purpose-based definitions capture only a lower bound of care mobility.

This limitation is shared by the analytical literature, which has experimented with transit smart card data and sequence analysis to recover the care component that conventional surveys undercount.(8,18)

The present study therefore uses the explicit escorting purpose as its operational measure of care trips while acknowledging that the true volume of care mobility is larger.

The Mexico City metropolitan area (ZMVM), one of the largest conurbations of the hemisphere, offers a representative population survey to examine this pattern at metropolitan scale. The 2017 Origin-Destination Household Survey recorded more than half a million trips with their purpose, mode and duration, and previous work with this source has examined trip chaining, mode choice among older adults and travel behavior in Mexican cities without isolating the full gender contrast.(19-22)

A preliminary exploration of care mobilities in Mexico City confirms the relevance of the question but does not quantify purpose, mode, chaining and time within a single framework.(23)

Quantifying these differences in this setting is not a purely descriptive exercise: it identifies where investment in walking, collective transport and safety would release the time and mobility that women currently devote to care.

The gap matters for policy because a metropolis in which women walk and use collective modes, while carrying care trips under specific time and safety constraints, cannot be planned as if all travelers faced the same conditions.(24)

The objective of this study was to quantify gender differences in trip purposes, with emphasis on care trips, and in mode use, trip chaining and travel time in the ZMVM using the 2017

Origin-Destination Household Survey.

METHODS

A cross-sectional secondary analysis was conducted on the public microdata of the Encuesta Origen-Destino en Hogares de la Zona Metropolitana del Valle de México(EOD 2017), collected by the Instituto Nacional de Estadística y Geografía (INEGI) between 23 January and 3 March 2017.(25)

The survey interviewed residents aged six years and older in a probabilistic, stratified and clustered sample of households of the ZMVM and recorded every trip made on a reference weekday and on a Saturday. Each record carries an expansion factor that scales the sample to the metropolitan population, together with the primary sampling unit and the design stratum. Because the survey captures trips for the same person on two days of the week, it allows the analysis of both the number of trips and the chaining of those trips within a day, which is the information needed to describe travel patterns rather than isolated journeys.

The analytical file was built from the trip table (tviaje), which contains one record per trip with the person's sex, age and expansion factor, and from the person table (tsdem), used to confirm sociodemographic consistency. The analysis included all person-trips with a valid sex and purpose. Trips with an unknown start or end time or with an implausible duration were excluded only from the travel-time analysis, which retained 531,032 of the 531,594 trips.

Sex was coded by INEGI as man or woman and was treated as the exposure, with man as the reference category. Trip purpose was the reason reported for the trip and was analyzed in its ten original categories: returning home, work, study, shopping and services, social and recreation, escorting someone, errands, health, religious and other. A care trip was defined as the purpose llevar o recoger a alguien, that is, escorting or picking up someone.

Mode use was derived from the twenty yes-or-no questions about the modes employed on each trip and grouped into six categories: private car, public transport, taxi or ride-hailing, motorcycle, bicycle and walking. Public transport aggregated the collective modes of the survey, including bus, microbus, metro, bus rapid transit, trolleybus, light rail and suburban rail.

Because a trip may combine several modes, each trip could contribute to more than one category, and the mode figures therefore represent the share of trips in which each mode was used; this choice preserves the multimodal character of travel, in which a single trip often links walking with a collective or motorized stage.

Trip chaining was measured with three indicators: the mean number of trips per person-day, the share of person-days with three or more trips, and the share of trips with an intermediate stop of less than ten minutes, including stops made specifically to escort someone. Travel time was computed in minutes as the difference between the reported end time and start time of each trip.

Covariates were age group (6 to 17, 18 to 29, 30 to 49, 50 to 64 and 65 years or older), day type (weekday or Saturday), sociodemographic stratum (low, medium-low, medium-high and high) and locality size (more than 100,000 inhabitants, 15,000 to 99,999, 2,500 to 14,999 and fewer than 2,500). These covariates were chosen because age structures the life course of travel, the weekday and Saturday differ in trip generation, and stratum and locality size capture the socioeconomic and territorial gradients that shape mode availability in the metropolis. The ten purpose categories are mutually exclusive and exhaustive for the trips recorded, which means the purpose distributions can be compared directly without double counting.

The person-day indicators were constructed by grouping trips of the same person within each reference day, which produced a file in which each record is a person-day with its number of trips and the person's sex and covariates. This grouping separates weekday and Saturday travel so that the chaining indicators refer to a single day rather than to an arbitrary sequence of trips across days. The choice of a day as the unit of chaining follows the survey structure, in which trips are anchored to a reference day, and it aligns the indicator with the temporal scale at which care and household tasks are organized.

All estimates were weighted with the survey expansion factor. Weighted percentages were computed as the ratio of the sum of weights in the category of interest to the sum of weights in the sex-specific denominator, and weighted medians and quartiles were obtained from the weighted cumulative distribution of travel time.

Categorical comparisons were expressed as weighted percentages by sex with odds ratios from weighted logistic models, and continuous comparisons as weighted means and medians with differences from weighted linear models. With man as the reference category, an odds ratio above one indicates a higher probability among women.

Adjusted models included age group, day type, sociodemographic stratum and locality size and were fitted with generalized estimating equations using an independence working correlation and cluster-robust standard errors at the primary sampling unit, which accounts for the clustering of trips within sampled areas. Statistical significance was set at 0.05, and inferential estimates are reported with 95% confidence intervals. A sensitivity analysis repeated the travel-time model after excluding trips longer than 180 minutes, and the chaining and time models were checked by rerunning the analysis twice to confirm that the estimates were reproducible.

RESULTS

1. Study units

The analytic sample comprises every person-trip reported by a resident aged six years or older who traveled on the reference day. A total of 531,594 person-trips made by 160,095 trip-makers were analyzed, which expand to 55,930,398 weighted trips and 16,747,394 weighted persons. Women contributed 52.0% of trips and 51.3% of trip-makers, so the comparison by sex rests on a nearly balanced number of records in each group, with 276,027 trips by women and 255,567 by men.

2. Trip purpose

Trip purpose is the component that organizes daily mobility around work, study, household tasks and care. Returning home accounted for 46.8% of women's trips and 46.8% of men's, and work for 14.4% and 27.1%, respectively, a contrast expressed in an odds ratio of 0.45 (95% CI 0.44-0.46). Shopping and services reached 12.9% among women against 5.8% among men (OR 2.38; 95% CI 2.33-2.43), and social and recreational trips 8.2% against 7.4%. Study trips were 7.6% for women and 8.4% for men (OR 0.89; 95% CI 0.87-0.91). Errands, health and religious trips were small in absolute terms but all more frequent among women, with health trips almost twice as likely (1.81; 95% CI 1.71-1.91). The care trip emerged as the sharpest contrast: escorting someone represented 7.0% of women's trips and 2.2% of men's, a ratio of 3.16, with an unadjusted odds ratio of 3.32 (95% CI 3.18-3.46) that remained at 3.18 (95% CI 3.05-3.32) after adjustment (Table 1).

Table 1. Trip purpose and mode used on person-trips by sex, Mexico City metropolitan area, 2017.

Indicator	Women %	Men %	OR (95% CI)	p
Trip purpose				
Returning home	46.8	46.8	1.00 (1.00-1.01)	0.041
Work	14.4	27.1	0.45 (0.44-0.46)	<0.001
Study	7.6	8.4	0.89 (0.87-0.91)	<0.001
Shopping and services	12.9	5.8	2.38 (2.33-2.43)	<0.001
Social and recreation	8.2	7.4	1.11 (1.09-1.13)	<0.001
Escorting someone (care trip)	7.0	2.2	3.32 (3.18-3.46)	<0.001
Errands	0.7	0.6	1.22 (1.13-1.32)	<0.001
Health	1.4	0.8	1.81 (1.71-1.91)	<0.001
Religious	0.4	0.2	1.83 (1.64-2.03)	<0.001
Other	0.6	0.6	1.09 (1.00-1.18)	0.055
Mode used				
Private car	18.3	25.8	0.64 (0.63-0.66)	<0.001
Public transport	36.7	43.1	0.77 (0.75-0.78)	<0.001
Taxi or ride-hailing	6.6	4.3	1.58 (1.53-1.64)	<0.001
Motorcycle	0.5	1.7	0.28 (0.25-0.32)	<0.001
Bicycle	1.0	3.4	0.29 (0.26-0.31)	<0.001
Walking	64.9	54.6	1.54 (1.51-1.57)	<0.001

Note: Weighted percentages; a trip may use more than one mode. OR = odds ratio for women versus men (unadjusted); CI = confidence interval.

3. Mode use

Mode use is the component that connects trip purposes to the physical and economic resources available to each sex. Walking was recorded on 64.9% of women's trips and 54.6% of men's (OR 1.54; 95% CI 1.51-1.57), whereas the private car appeared on 18.3% and 25.8% (OR 0.64; 95% CI 0.63-0.66).

Public transport was used on 36.7% of women's trips and 43.1% of men's (OR 0.77; 95% CI 0.75-0.78), a contrast in which men held a slight edge, and taxi or ride-hailing on 6.6% and 4.3% (OR 1.58; 95% CI 1.53-1.64). Motorcycle and bicycle use remained low in both sexes but higher among men: the motorcycle appeared on 0.5% of women's trips and 1.7% of men's (OR 0.28; 95% CI 0.25-0.32), and the bicycle on 1.0% and 3.4% (OR 0.29; 95% CI 0.26-0.31) (Table 1).

4. Trip chaining

Trip chaining is the component that captures how trips are grouped into multi-stop tours. Women averaged 2.22 trips per person-day and men 2.08, an adjusted difference of 0.13 (95% CI 0.12-0.14), and the median was 2 trips for women and 2 for men. Chained days, defined as three or more trips in a day, represented 13.6% of women's person-days and 8.6% of men's (OR 1.67; 95% CI 1.63-1.72). Trips with an intermediate stop reached 7.5% among women and 7.0% among men (OR 1.07; 95% CI 1.05-1.10), while stops specifically to escort someone were recorded on 1.7% and 1.9% of trips, respectively, a null or slightly inverse contrast (OR 0.92; 95% CI 0.87-0.97) (Table 2).

Table 2. Trip chaining and travel time by sex, Mexico City metropolitan area, 2017.

Indicator	Women	Men	Estimate (95% CI)	p
Trips per person-day, mean (SD)	2.22 (0.82)	2.08 (0.62)	+0.13 (0.12-0.14)	<0.001
Chained days (3+ trips), %	13.6	8.6	1.67 (1.63-1.72)	<0.001
Trips with intermediate stops, %	7.5	7.0	1.07 (1.05-1.10)	<0.001
Trips with escort stop, %	1.7	1.9	0.92 (0.87-0.97)	0.003
Travel time, median [P25-P75], min	30 [15-60]	35 [20-65]	-10.6 (-11.0 to -10.3)	<0.001

Note: SD = standard deviation; CI = confidence interval. Estimate column shows adjusted mean difference (trips per person-day and travel time) or unadjusted odds ratio (remaining rows) for women versus men.

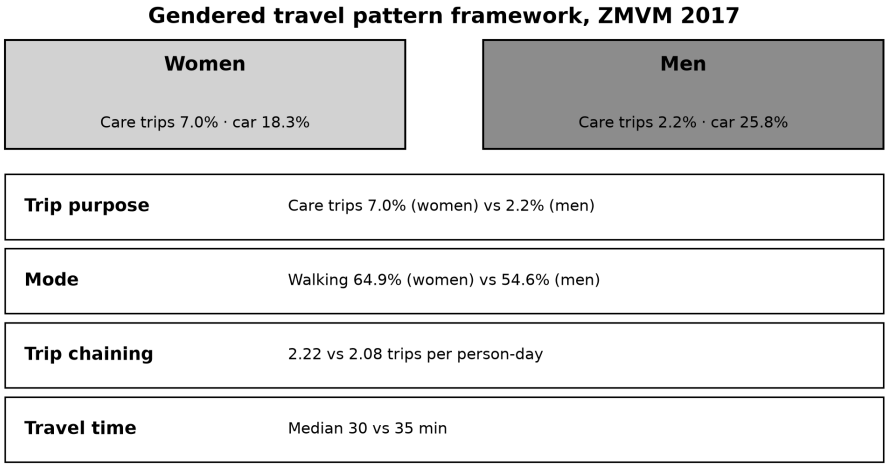
5. Travel time

Travel time is the component that expresses the cost of each trip in minutes and links it to the destinations each sex can reach. The median trip lasted 30 minutes for women (P25-P75 15-60) and 35 minutes for men (P25-P75 20-65), while the weighted mean was 38.8 minutes for women and 49.0 for men, and the adjusted difference in mean travel time was −10.6 minutes (95% CI −11.0 to −10.3). The gap persisted when trips longer than 180 minutes were excluded (−10.3 min; 95% CI −10.6 to −10.0). By purpose, work trips lasted a median of 45 minutes for women and 50 for men, while care trips lasted 15 and 20 minutes, respectively (Table 2).

6. Gendered travel pattern framework

The four components integrate into a single framework of gendered mobility in the ZMVM. Within this framework, women's travel rests on more frequent but shorter trips, a higher share of care and shopping purposes, walking and collective modes, and longer exposure to time spent chaining activities, whereas men's travel derives from a higher share of work trips, private car use and longer single-purpose trips. Each component links to the next: the purposes that women carry accompany the modes they use, the modes appear alongside the number of trips chained within a day, and the chaining corresponds to the cumulative time spent traveling (Figure 1).

Figure 1. Gendered travel pattern framework in the Mexico City metropolitan area, 2017.



Note: Weighted estimates from the EOD 2017; the framework integrates trip purpose, mode use, trip chaining and travel time by sex.

DISCUSSION

The objective of this study was to quantify how women and men differ in trip purpose, mode, chaining and travel time in the Mexico City metropolitan area. The results assemble these differences into a coherent pattern in which women move more often and for more socially necessary reasons, with fewer motorized resources and shorter trips, while men concentrate longer, work-oriented and car-based mobility.

The concentration of care trips among women is the finding with the clearest external correspondence. The adjusted odds of a trip being made to escort someone were more than three times higher for women, a magnitude consistent with the gender distribution of care mobility reported in Bogotá,(15)with the sociospatial analysis of care-related trips in Sweden,(13)and with mobility-of-care measurements in Washington, D.C. and Montreal.(14,26)

Soto-Villagrán(23)reached a similar conclusion in a preliminary exploration of care mobilities in Mexico City, which supports the interpretation that these estimates reflect a structural feature of metropolitan travel rather than a measurement artifact.

The German evidence on gendered school escorting(6)indicates that this division begins with the mobility of children, and the wellbeing penalties of care mobility measured in the United States(27)suggest that the burden is not only statistical.

In the Latin American region the same concentration appears among low-income women in Itagüí, Colombia, whose care travel persisted and intensified under lockdown,(16)and in Uruguay, where transport costs around child health care fall on women.(17)Put differently, care trips are the most visible surface of a division of labor that the transport system currently treats as incidental.

The mode-use component also aligns with previous work while revealing a specific feature of this metropolis. Women walked on almost two thirds of their trips and used the private car on fewer than one fifth, whereas men used the car on a quarter and walked on slightly more than half.

The higher reliance of women on walking and their lower car availability are consistent with the constraints on women's use of urban public transport described for developing countries,(24) with the adaptive strategies of women travelers documented in Bangladesh and other settings,(28) and with the gender disparities in multimodal travel observed comparatively.(29)Public transport itself was used slightly less by women than by men, which departs from the pattern reported in several high-income cities and is plausibly explained by two forces: many of women's trips are short and local, so they are walked rather than boarded, and the trips that are not walked shift toward taxi and ride-hailing in search of safety.

The higher use of taxi and ride-hailing among women is consistent with the search for safer door-to-door alternatives in a context where harassment and violence on public transport affect women disproportionately, a link documented in reviews of transit environments and women's fear of victimization(11,12,30)and in case studies of women's mobility challenges in Peshawar.(31)

Cycling, in contrast, remains a male-dominated mode here, mirroring the gendered cycling gap attributed to safety and built environment factors elsewhere,(32,33)and the notion of vélomobilities of care shows that even where cycling exists it is rarely designed around the errand and

escort patterns that dominate women's travel.(34)

The commuting evidence from Bogotá domestic workers(35)and from school and work commuting in Toronto(7)shows that these mode differences are entangled with occupation, income and life stage, not only with sex.

Safety offers a complementary explanation for the mode contrast. The higher use of taxi and ride-hailing among women is unlikely to reflect greater willingness to pay and more plausibly reflects the search for a protected door-to-door trip, since harassment and violence in transit are experienced disproportionately by women and are known to alter route, timing and mode.(12,30)

In the ZMVM, where walking carries two thirds of women's trips, the quality of the pedestrian environment is therefore not a convenience but a condition of access, and the same reasoning extends to waiting areas and transfers.(11)

The chaining and time components complete the framework. Women made more trips per person-day and more chained days, a difference consistent with the determinants of trip chaining reported for non-work travel in Mexico City(20)and with chaining behavior in Sydney and among non-workers elsewhere.(36,37)

At the same time, women's trips were shorter, and the gap of roughly ten minutes in adjusted mean travel time matches the gender gap in commuting time estimated for Peru, Ecuador, Chile and Colombia,(38)the multilevel differences in commute time described for men and women,(39) and the gender-sensitive effects of travel time on mode choice in Ghana.(40)

The shorter care trips, around fifteen minutes, indicate that this travel happens close to home and is woven into the local environment, whereas work trips concentrate the longer commuting burden on men.

One result deserves a cautious reading. Although women made far more care trips, the share of trips with an intermediate escort stop was similar or slightly lower among women, which seems to contradict the chaining narrative until the two measures are distinguished.

The escort stop captures a brief, unpaid stop of less than ten minutes made within a trip, whereas the care trip captures escorting as the entire purpose of a dedicated trip. The pattern therefore suggests that women resolve care as dedicated trips rather than as brief detours, a behavior that is more visible to survey instruments and more demanding of time and scheduling than the incidental stop it might otherwise appear to be.

These results can be read through the concept of time poverty. Because women's days assemble more trips of shorter duration for care, shopping and household purposes, their travel consumes time in small but frequent units, an organization of daily time that transport indicators based on distance or speed tend to undervalue.(41)

The allocation of household tasks and commuting within Norwegian households(10)suggests that the division observed here is part of a broader negotiation of domestic work in which transport both expresses and reinforces the unequal distribution of care. Within this framework, the gendered pattern is not a preference but the daily trace of that negotiation.

The chaining and time results also gain depth when read alongside the life-course evidence. In Barcelona, gender interacts with the life course so that the travel of women with children is the most chained and fragmented, a finding that matches the higher prevalence of chained days observed here.(9)

The comparison with older adults in Mexico City is similarly instructive: mode choice among older travelers in this metropolis already reflects strong differences in car availability and walking, which suggests that the gender gap measured in the general population is reproduced and possibly amplified in later life.(21)

This component therefore links the daily pattern to a trajectory that begins with childhood escorting, consolidates in working age and persists into old age.

The framework also travels well beyond the region, which strengthens confidence that it describes a general mechanism rather than a local curiosity.

The long-run changes in activity and travel participation across gender and generations in Sweden show the same direction, with women's travel becoming more fragmented as participation in work and care combines,(4)and the gendered mobility and activity patterns linked to mental health point to the wider consequences of this daily organization.(5)

What the ZMVM adds to this international picture is magnitude and intensity: the gender contrasts in care trips and walking are large by any standard, and they operate in a context of high population density and limited car ownership that makes the framework immediately relevant for transport planning in other large Latin American and Global South cities.

The strengths of this study are the use of a population-representative travel survey of the entire metropolitan area, the direct measurement of trip purpose, mode, chaining and time within

the same instrument, and the survey-weighted and cluster-robust estimation of sex differences with adjusted estimates.

Because the four dimensions are drawn from the same survey, the framework rests on internally consistent definitions, which avoids the comparability problems that arise when purpose, mode and time are assembled from different sources or different cities. Several limitations qualify the interpretation, each with a corresponding recommendation. The survey is cross-sectional, so the differences describe association rather than causal mechanisms, and repeated cross-sections or panels would be needed to detect change over time.

The trip-level record does not identify the person for whom a care trip is made, which prevents separating escorting of children, older adults or other dependents, a distinction that future survey modules could add. Care trips are limited to the purpose llevar o recoger a alguien and therefore exclude care embedded in other purposes, so the estimates are a lower bound of care mobility, and the inference of care travel from transit smart card data proposed elsewhere(18)suggests one route for capturing this hidden fraction.

The survey predates the COVID-19 pandemic, and its patterns may have shifted with the expansion of telework, a limitation that recommends re-estimating the framework with post-pandemic surveys. Finally, the expansion-factor weighting with cluster-robust errors approximates the design but does not reproduce the full complex-survey variance, and dedicated survey software would refine the confidence intervals.

The large number of statistical comparisons across purposes and modes raises the possibility of chance findings, although the central contrasts, care trips, walking, car use and travel time, are so large and so consistent that multiplicity does not threaten their interpretation, whereas the smaller contrasts should be read with that caveat in mind.

For policy, the framework indicates that a transport system organized around the commute systematically undervalues the travel that women perform. Within this framework, interventions that improve pedestrian infrastructure, off-peak and flexible public transport, and safe waiting environments would act on the modes and times where women's travel is concentrated.(3,42)

Concretely, the results support widening and maintaining sidewalks along the routes that link homes, schools and markets, extending off-peak frequencies to serve the midday and evening hours in which care and shopping trips occur, and improving lighting and staffing at stops and interchanges, which addresses the safety constraint that pushes women toward taxis and ride-hailing. Recognizing care trips as a legitimate and measurable purpose in transport statistics and project appraisal is a precondition for planning that treats the mobility of care as part of the system rather than as a residual category,(2)and transit systems that explicitly support the care economy illustrate how service design can follow this recognition.(43)

The finding that care trips are short and close to home also points toward land use and proximity policies: the availability of schools, clinics and shops within walking distance reduces the travel burden of care, so the framework is as much a guide for local service planning as for transport investment. It follows that the appraisal of any investment in the metropolis should report its effect on the travel of women and on care trips, not only on generalized travel time savings.

CONCLUSIONS

This study quantified gender differences in travel patterns in the Mexico City metropolitan area using a population-representative travel survey. Women made a larger share of trips and a substantially larger share of care trips, and their odds of making a trip to escort someone were more than three times those of men, while men concentrated work trips and private car use.

The results also showed that women chained more activities and traveled for shorter times, and that walking and collective modes carried most of their mobility. The assembled framework indicates that transport policy in the metropolis should measure and serve care mobility, walking and safe collective travel, and should evaluate investments by their effect on the travel of women, if it is to reduce rather than reproduce gender inequality in daily movement.

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