

Assessing the challenges and the effects of climate change on street vendors in Jaipur, Rajasthan

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In

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By

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Background

Methodology

Result

Conclusion

Recommendation

Background

- Climate change is already affecting our daily lives—it is no longer just a future concern.
- The UNFCCC (1992) says climate change is caused by both natural reasons and human actions, like pollution and deforestation.
- According to the World Health Organization (2008), climate change is now a major threat to public health as it affects access to clean air, safe water, and food.
- India is highly vulnerable to climate change, especially in cities where temperatures are rising, rains are unpredictable, and air quality is getting worse.
- These changes are not only harming the environment but also impacting people's health, jobs, and everyday life.
- People working in the informal sector, like street vendors, are among the most affected.





- They work outside in harsh weather with little protection and no regular income or health support.
- A UNICEF India (2024) report said that many street vendors in Rajasthan suffer from fatigue, dehydration, and poor health due to extreme heat.
- In Jaipur, the capital of Rajasthan, vendors face heatwaves, dust storms, and sudden rains while working on the streets. Earth Exponential (2023) found that most vendors have no shade, no cooling, and no clean water, which puts their health and income at risk.
- On days with bad weather, many vendors lose income or can't work at all. Even though India has plans like the National Action Plan on Climate Change (NAPCC) and the Rajasthan State Plan (RAPCC), these rarely focus on urban informal workers like street vendors.
- Most policies are aimed at big industries or agriculture, while vendors are left to manage on their own. Many vendors try to cope by changing their work hours or using plastic sheets—but these are temporary fixes.
- Women vendors face extra challenges—they often do not have access to clean toilets, drinking water, or safe working spaces (Sharma & Patel, 2022).
- This study is important because it focuses on a neglected group—street vendors—who are directly exposed to the effects of climate change.

Research Questions

1. What types of climate change-related challenges are faced by street vendors in Jaipur
2. How do these environmental issues affect their health and income?
3. What strategies or changes are vendors adopting to manage these challenges?

Objectives of the Study

1. To identify and understand the climate-related problems experienced by street vendors in Jaipur.
2. To explore how these issues affect their health, safety, and earnings.
3. To find out what actions vendors are taking to cope with or adjust to these environmental challenges.

Significance of the Study

1. Highlights a neglected group: Focuses on street vendors, a vulnerable yet overlooked group in climate discussions and urban planning.
2. Connects health and livelihood: Shows how climate change affects both the health and daily income of people who work outdoors.
3. Fills a policy gap: Brings attention to the lack of government support, infrastructure, and climate-resilient planning for informal workers.
4. Supports future action: Provides real data and lived experiences that can help design better programs, policies, and local support systems for vendors.

Methodology

Research Design

- Cross-sectional approach, collecting data at a single point in time.
- A mixed-methods strategy was followed, combining: Quantitative data (numerical insights from surveys) & Qualitative data (personal stories from interviews).

Research Setting

- The study was conducted in Jaipur city, Rajasthan—an urban area experiencing extreme climate conditions like high temperatures, dust storms, and sudden rainfall.
- Data was collected from busy street vending locations where vendors work in open or semi-open spaces, exposed to daily weather changes.

Key vending areas included:

1. Sanganer Thana (Airport area)
2. Sunday Market,
3. Sanganer Near Subodh College, Sanganer
4. Pratap Nagar (near D-Mart)
5. Patrika Gate
6. Durgapura



Target Group

Male and female street vendors working in open or semi-open spaces in Jaipur.

Inclusion Criteria

- Age 18 years or older
- Minimum one year of vending experience
- Willing to participate in the study
- Regularly exposed to heat, rain, and dust while working

Exclusion Criteria

- Shopkeepers working inside enclosed shops
- Vendors with less than one year of experience
- Individuals who declined to participate

Sampling Technique & Sample Size Used

Purposive sampling (selected based on relevance, not random).

100 street vendors completed the survey.

Duration : 10th March to 31st May

Data Collection Tools

Survey Questionnaire Developed and asked them in Hindi for easy understanding.

Covered six major areas:

- Personal details (age, gender, education, experience)
- Exposure to climate (heat, rain, dust)
- Health problems (fatigue, dehydration, discomfort)
- Income loss (spoiled goods, fewer customers)
- Coping methods (tents, water, changing work hours)
- Climate change awareness and access to support
- Multiple-choice and Open-ended questions .



Data Collection Process

- Conducted in April – May 2025.
- Vendors approached during morning and evening hours.
- Study purpose was explained to each participant.
- Verbal consent was taken.
- Each survey took around 15–20 minutes.

Data Analysis

Quantitative Data Entered and analyzed using Microsoft Excel.

Data presented through percentages, tables, and graphs.



Qualitative Data:

- Interview responses noted manually.
- Key themes identified: health issues, income loss, coping methods.
- Helped understand common challenges and shared experiences.

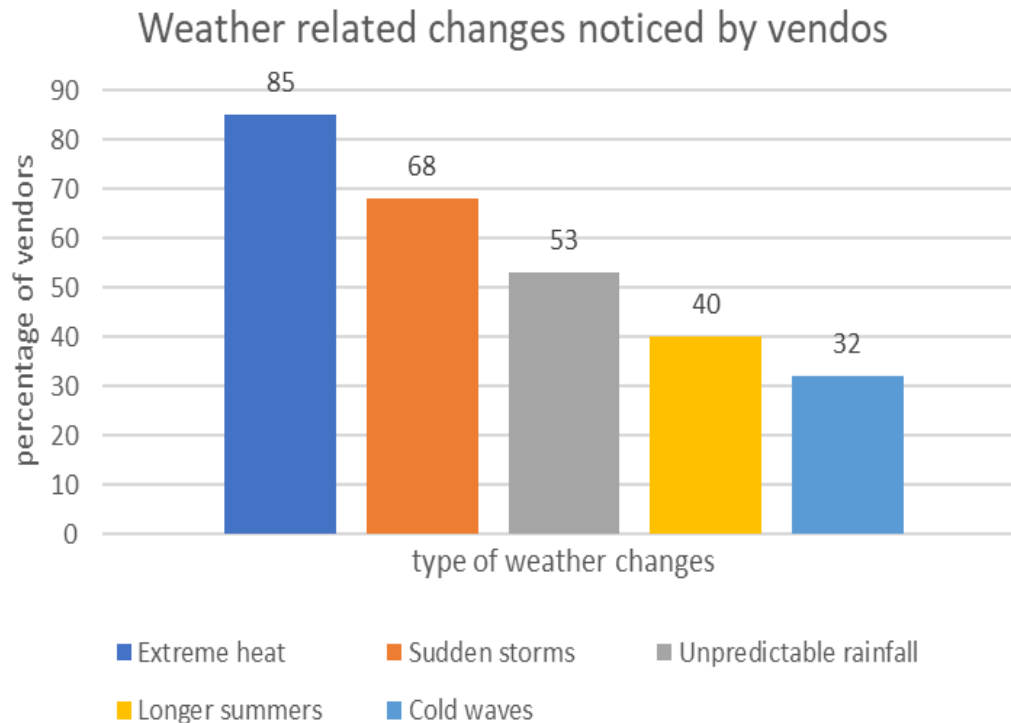
Mixed Analysis:

- Both quantitative and qualitative insights were combined
- Provided a complete picture of how vendors are affected by climate change.



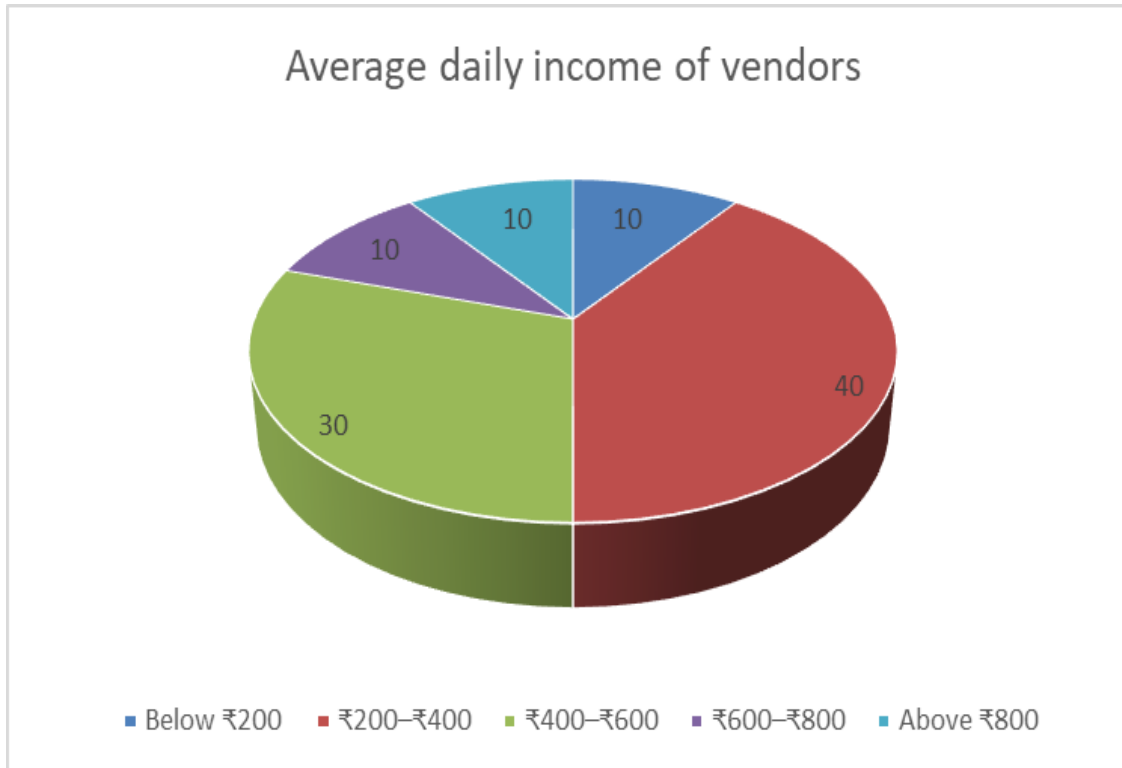
Results

Weather Changes Noticed by Street Vendors



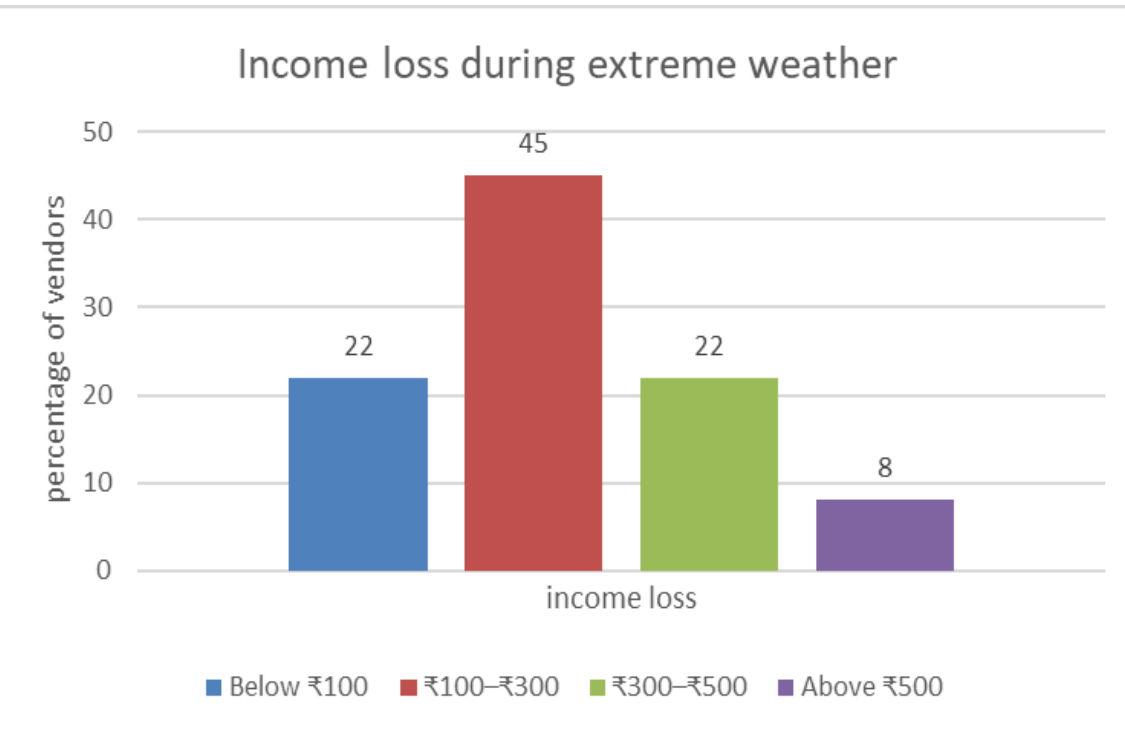
- The graph shows that extreme heat (85%) is the most commonly reported weather change by street vendors in Jaipur.
- This is followed by sudden storms (68%) and unpredictable rainfall (55%), which also disrupt their daily work.
- Around 40% of vendors experienced longer summers, while 32% mentioned cold waves.
- Overall, the data highlights that vendors are facing multiple weather-related challenges, with extreme heat and storms being the most severe.
- These changes have made outdoor vending more difficult, unsafe, and unstable, affecting both their health and income.

Daily income of vendors



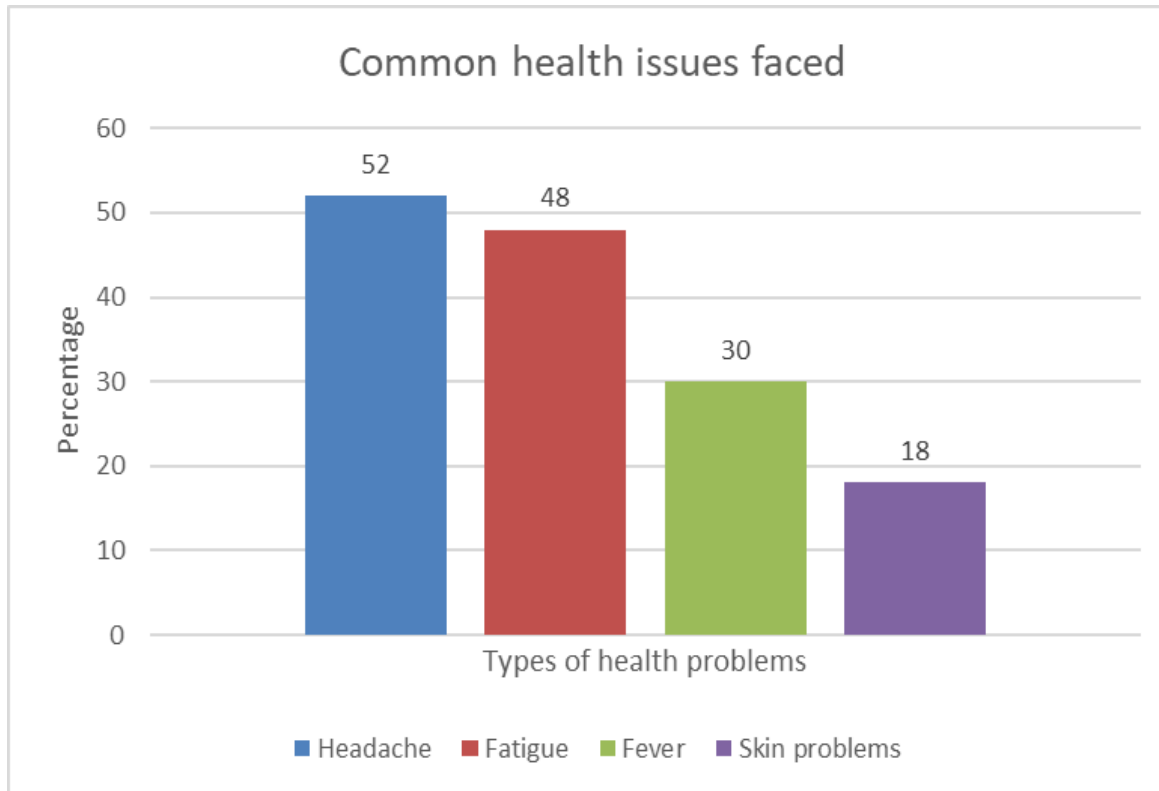
- The chart shows that the majority of street vendors earn a modest daily income.
- Around 40% of vendors earn between ₹200–₹400 per day, making it the most common income range.
- And 30% earn between ₹400–₹600, showing slightly better earnings.
- Only 10% each earn below ₹200, ₹600–₹800, or above ₹800.
- This indicates that most vendors have limited daily earnings, making them financially vulnerable, especially when affected by climate-related disruptions like heatwaves or rainfall.

Income Loss During extreme Weather



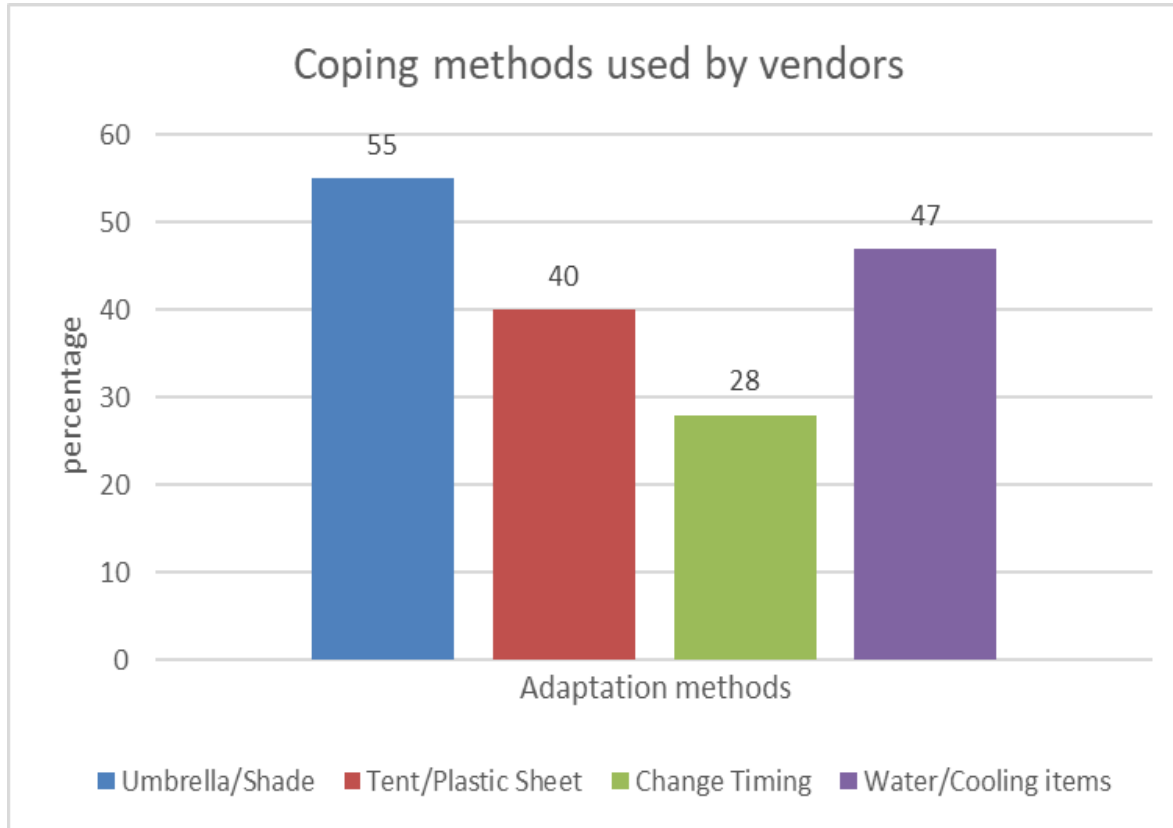
- The chart shows that extreme weather events lead to significant income loss for street vendors:
- Around 45% of vendors lose between ₹100–₹300 on days with bad weather, making it the most common loss range.
- 22% of vendors reported losses below ₹100, and another 22% lose ₹300–₹500.
- Only 8% experience a daily loss above ₹500.
- This highlights that while the majority lose a few hundred rupees per day, even small losses are serious given their low daily income.
- Frequent weather disruptions directly affect their financial stability.

Health Issues Due to Extreme Weather Exposure



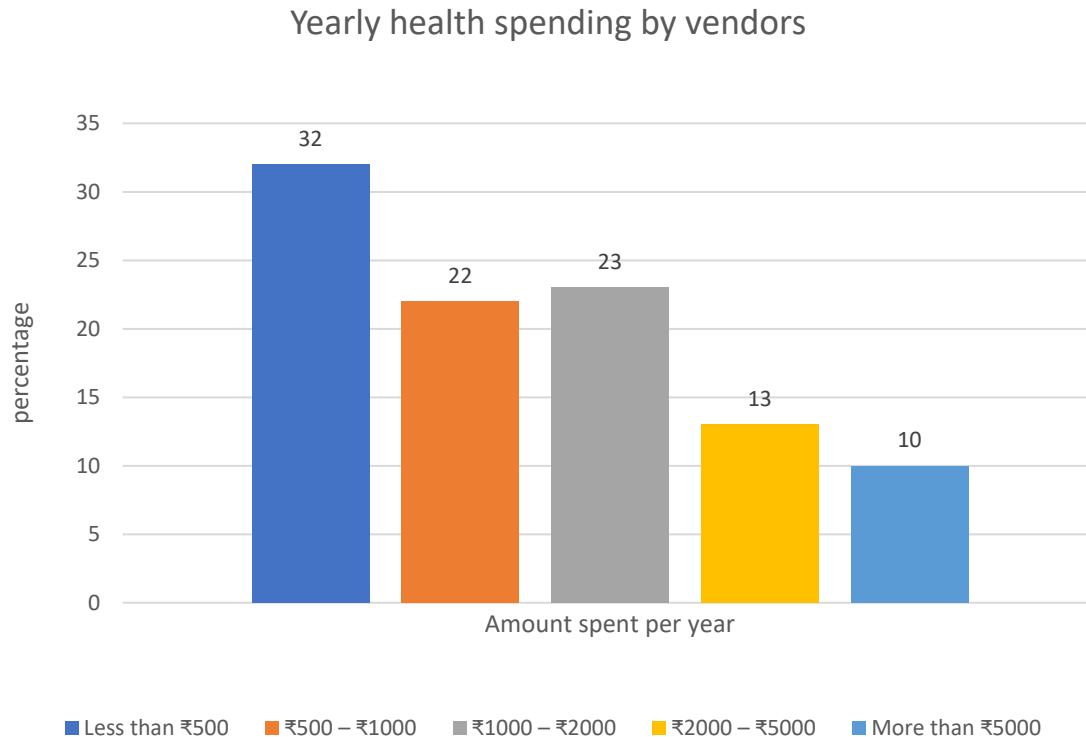
- Respondents highlights the significant health impact of working in extreme weather conditions. According to the survey:
- Headaches (52%) and fatigue (48%) are the most common health problems among street vendors.
- 30% reported fevers, and 18% experienced skin issues.
- These health problems are mainly due to long exposure to heat, dust, and unpredictable weather.
- The data shows that vendors face regular health risks without proper protection or medical support.

Coping Methods Used



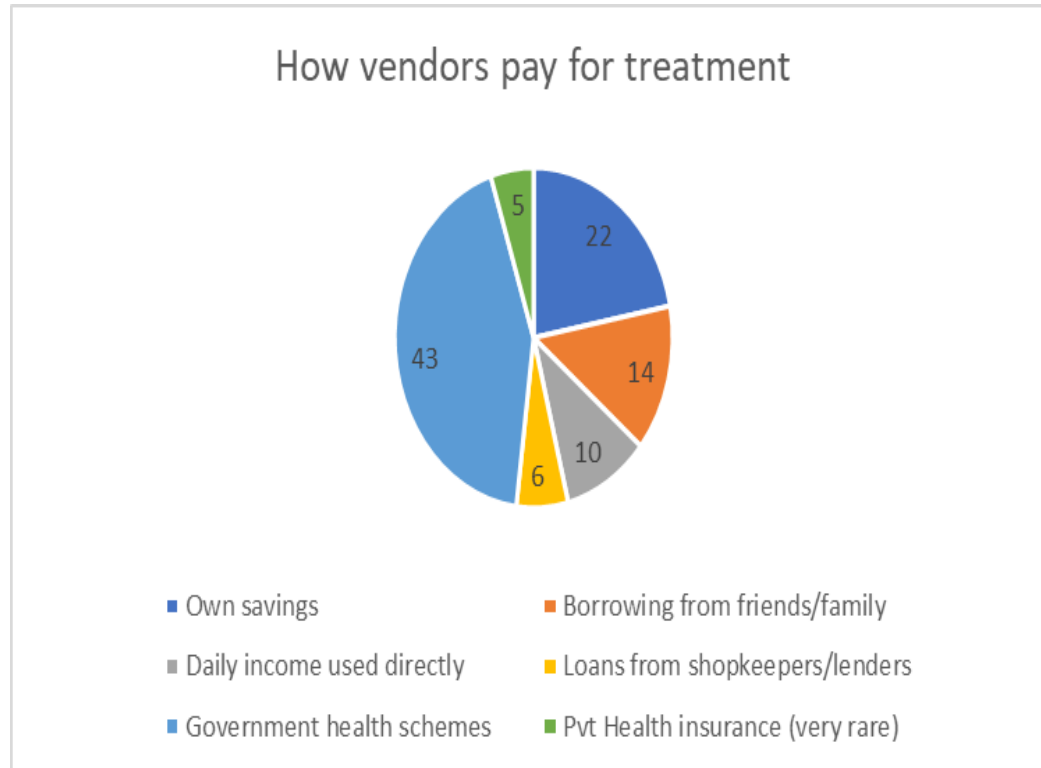
- The most common method used by vendors is umbrella/shade (55%), to protect themselves from heat and sun.
- Around 47% use water or cooling items like cold drinks or wet towels to stay cool.
- Other 40% set up tents or plastic sheets to protect their stalls from rain or sunlight.
- And 28% of vendors change their work timings to avoid extreme weather.
- These results show that while vendors are actively trying to adapt, most methods are basic and temporary, indicating a need for better infrastructure and long-term support.

Out-of-Pocket Expenditure



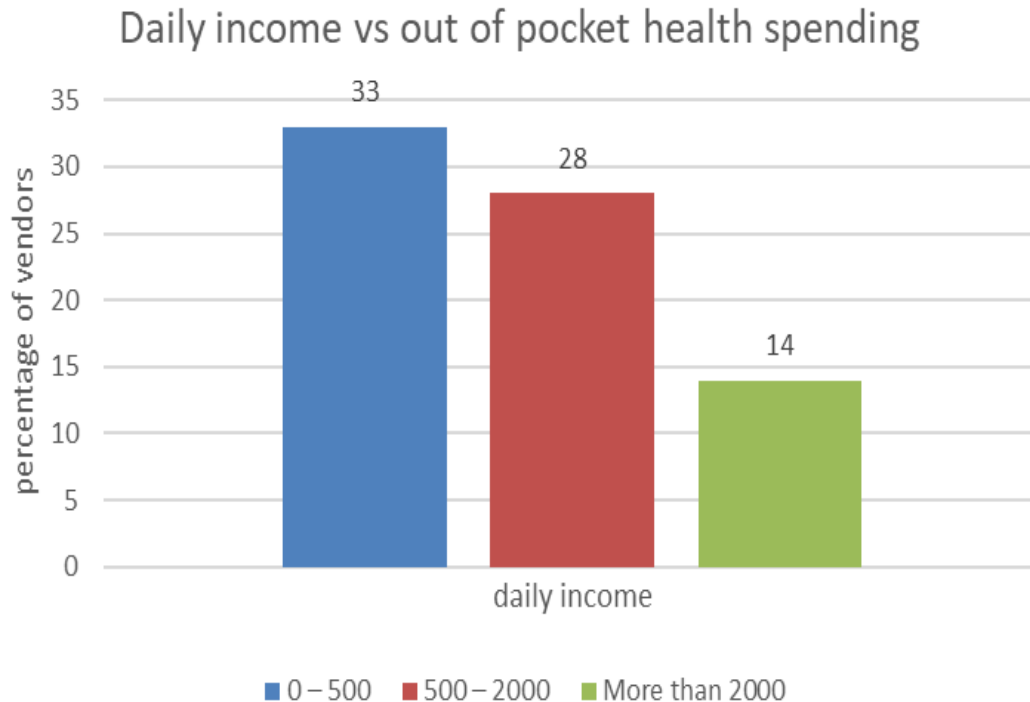
- A majority of vendors (32%) spend less than ₹500 per year on health, mostly using home remedies or over-the-counter medicines.
- Around 45% spend between ₹500 and ₹2000, indicating moderate access to clinics or repeated treatment for common issues.
- A smaller group—13% and 10%—spend over ₹2000, reflecting vendors who experience serious or frequent illnesses and need hospital visits or advanced care.
- These spending patterns show that most vendors avoid or delay medical treatment due to limited income, which may worsen their health over time.

How do vendors pay for this treatment?



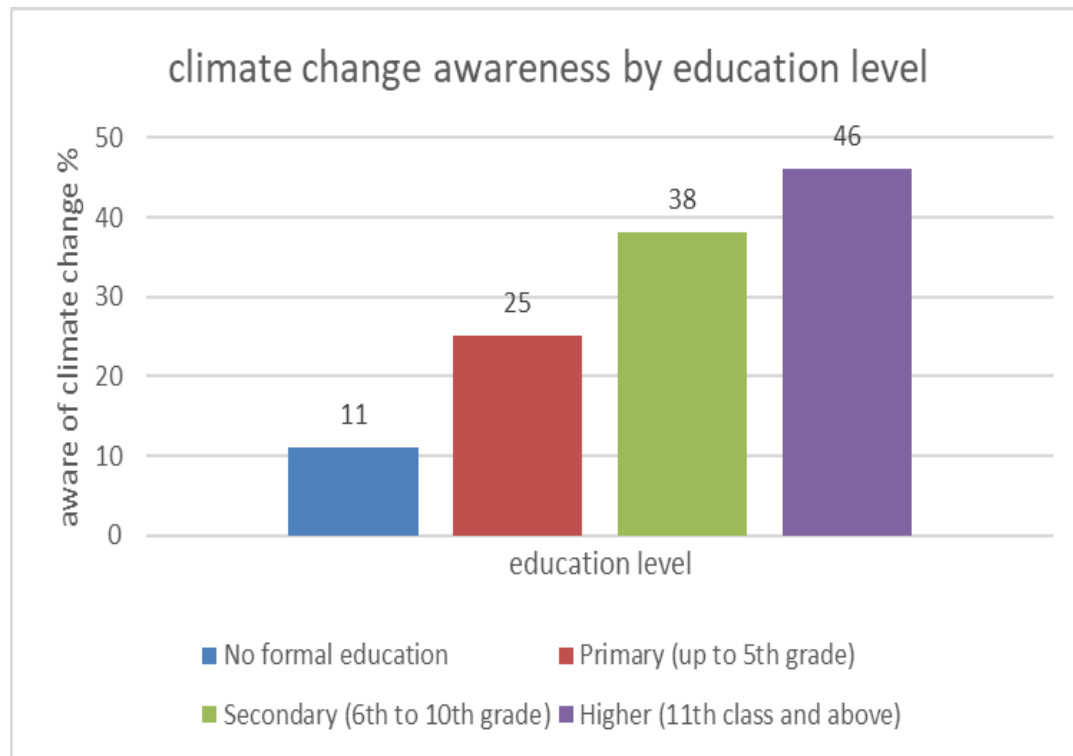
- Government health schemes were the most used option, with 43% of vendors relying on them. However, many face challenges such as lack of awareness, difficulty with documentation, and delays in services.
- Around 22% of vendors used their own savings, often preferring private clinics for faster and more convenient treatment.
- Other 14% borrowed from family or friends, usually in cases of emergencies when savings or access to schemes were unavailable.
- Other 10% used their daily income direct.
- 6% had to take loans from shopkeepers or local lenders, increasing the risk of debt.
- Only 5% had private health insurance, mostly through NGO support or vendor associations.
- These findings indicate that despite the availability of government schemes, a large number of vendors continue to depend on informal or personal sources.
- This highlights the need for improved awareness, simplified processes, and better outreach to ensure more effective utilization of existing health support systems.

Income Vs Health spending



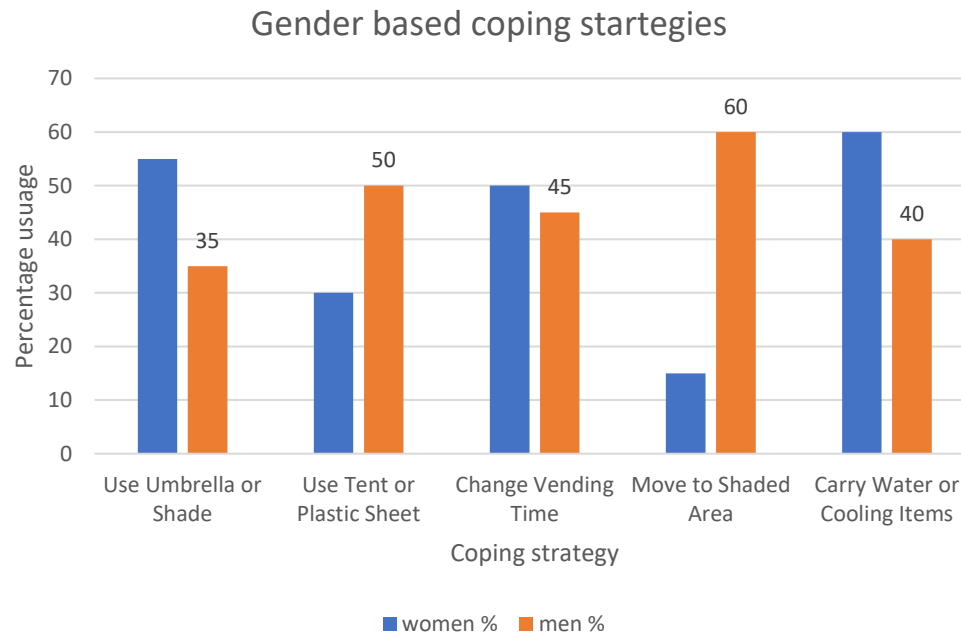
- **Low-income vendors (earning ₹200–₹400/day):** Represent the largest group (40%).
 - 33% of vendors in this group spend only ₹0–₹500/year on health.
 - Most avoid or delay treatment due to limited income and affordability issues.
 - **Middle-income vendors (earning ₹400–₹800/day):** Include vendors earning ₹400–₹600 (30%) and ₹600–₹800 (10%).
 - 28% spend ₹500–₹2000/year, indicating moderate access to healthcare.
 - **High-income vendors (earning above ₹800/day):**
 - Represent 10% of vendors. 14% spend more than ₹2000/year, showing ability to afford repeated or advanced medical care.
- ❖ Higher income leads to higher health spending, showing better access to care.
- ❖ Low-income vendors remain most vulnerable, often managing health issues without proper treatment.

Education Vs Awareness



- Only 11% of vendors with no formal education were aware of climate change. This shows that people with little or no schooling often miss out on important information.
- Among those who studied up to 5th grade, 25% had heard about climate-related issues. Basic education seems to make some difference, but awareness still remains low.
- Awareness increased to 38% among vendors who studied till 10th grade. These vendors were more likely to understand weather changes and their effects.
- Vendors with education beyond 11th class had the highest awareness (46%). They were more informed and better able to connect climate change with its impact on their work and health.
- Overall Insight: As the education level goes up, awareness about climate change also improves.
- There is a strong need to create awareness among vendors with low or no education, as they are often the most affected but least informed.

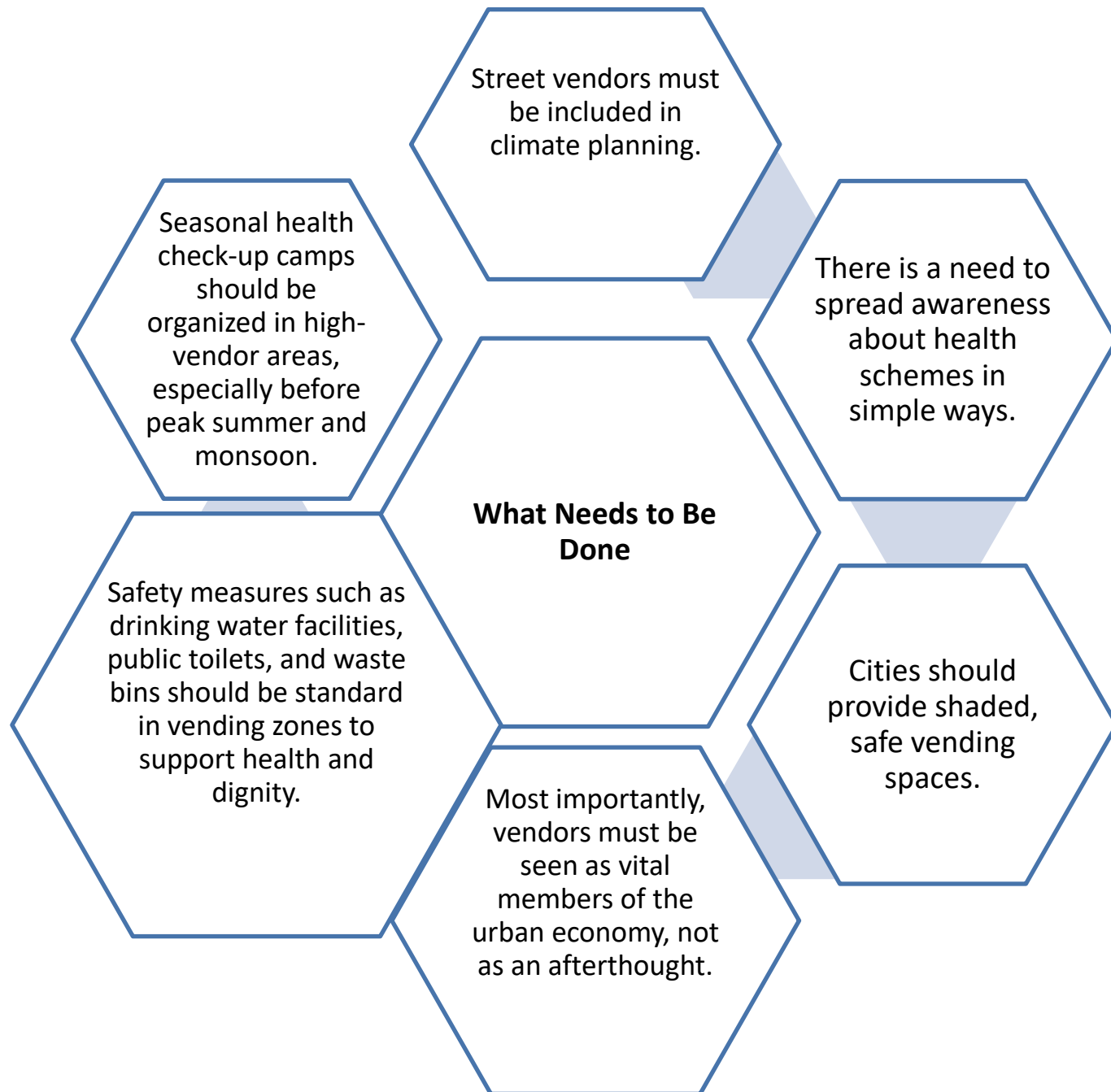
Gender coping strategies



- The data shows clear gender differences in how vendors manage weather challenges.
- Women vendors mainly used umbrellas (55%) and carried water or cooling items (60%), reflecting a preference for simple, portable methods.
- Men vendors were more likely to use tents (50%) and relocate to shaded areas (60%), indicating access to more space and flexibility.
- Adjusting vending time was common for both women (50%) and men (45%).
- Fewer women (15%) moved to shaded areas, likely due to safety or movement limitations.
- Overall, women rely more on personal coping tools, while men prefer space-based strategies.

Conclusion

- This study showed that **street vendors in Jaipur face serious challenges** due to climate change. Rising heat, sudden rain, and dust storms directly affect their work and safety.
- Many vendors **lose 4 to 6 days of work every month**, which is a big setback for those earning just ₹200–₹400 a day. This makes their income unstable and stressful.
- **Health issues like headaches, dehydration, and skin infections** are common, but treatment is often avoided because **32% of vendors spend less than ₹500 a year** on healthcare.
- Even though government schemes like **Chiranjeevi Yojana** exist, only **43%** of vendors use them. Many are **unaware of the process**, lack documents, or face confusion at hospitals.
- The study found a clear pattern—**vendors with higher income spend more on healthcare**, while **lower-income vendors either delay or skip treatment**, which puts them at greater risk.
- **Awareness of climate change is linked to education**. Only 11% of vendors with no formal education understood the impact, while awareness was much higher among those who studied up to Class 10 or beyond.
- Despite all these struggles, vendors have shown **strength and adaptability**. They adjust their timings, use shade, carry water or ORS, and try their best to keep working.
- However, these **personal efforts are not enough**. There is **very little policy support**—no shaded spaces, rest areas, or emergency help in place for them.



“Thank You”

