

Undergraduate Students

Effect of Pedestrian Penalty on Pedestrian Behavior in Qatar

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Problem

- **Crashes involving pedestrians** are a major concern for authorities in many developed and developing countries.
- **Jaywalking** is a cause of concern for authorities in developed as well as developing countries.
- To **improve the safety situation**, many authorities started imposing **fin**es on pedestrians

Objective

Examine the **impact of the new law amendment** on the pedestrians' **adaptive intentions** to improve their road behavior in the State of Qatar.

Respondents' perceptions about the pedestrian law amendment

Parameter	Statements	Mean	S.D.
Threat to safety	(S1) Introduction of law amendment indicates that illegal crossing is a serious threat in the State of Qatar	4.51	0.85
Likelihood of crash	(S2) There are chances of being hit if I cross illegally.	4.39	1.06
Efficacy	(S3) The law amendment clearly emphasizes the importance of crossing roads safely.	4.28	1.12
	(S4) The law amendment clearly emphasizes the importance of crossing at suitable locations.	4.30	1.12
	(S5) The law amendment clearly emphasizes the importance of obeying pedestrian signals at traffic lights.	4.28	1.14
Credibility of new law	(S6) It is clear that the law amendment is to benefit pedestrians and promote safe walking.	4.31	1.13
	(S7) Introduction of the law shows ways to better utilize crossing facilities.	4.28	1.11
	(S8) Introduction of the law amendment will help to reduce pedestrian crashes and improve pedestrian safety.	4.27	1.17
Adaptive intentions	(S9) Law amendment increases my chances to cross at designated/specified locations.	4.20	1.13
	(S10) Law amendment increases my chances to obey pedestrian signals.	4.24	1.09
	(S11) Law amendment increases my chances to refrain from illegal crossing.	4.17	1.14
Spread awareness	(S12) I will spread awareness about the law amendment with my known people.	4.14	1.15

Data Collection

Questionnaire design

- A **questionnaire survey** to collect information on residents' adaptive intentions
- Multiple choice and rating scale questions designed using **SurveyMonkey.com**.
- Questionnaire enquired about respondents' **awareness and perception of the law amendment**, enforcement of the law, perception about safety, **involvement in crashes**, and demographics

Responses collection

- Obtaining **QU-IRB approval**
- Single email announcement no reminder or follow-up
- Distributed using (**Qatar University (QU) announcements** to staff, faculties and students) and (**Twitter account of the General Directorate of Traffic at (MOI)**)

Effect of gender

Statement No	Mean rank		MW Test values	
	Male	Female	Z	p
S1	260.29	263.55	-0.243	0.808
S2	269.18	231.46	-2.778	0.005
S3	269.42	230.61	-2.744	0.006
S4	268.65	233.39	-2.506	0.012
S5	267.84	236.31	-2.237	0.025
S6	266.56	240.92	-1.848	0.065
S7	272.00	221.30	-3.589	<0.001
S8	268.22	234.92	-2.386	0.017
S9	267.57	237.26	-2.091	0.037
S10	268.40	234.28	-2.368	0.018
S11	268.75	233.03	-2.445	0.014
S12	269.06	231.92	-2.527	0.011

Correlations of pedestrian law amendment and adaptive intentions

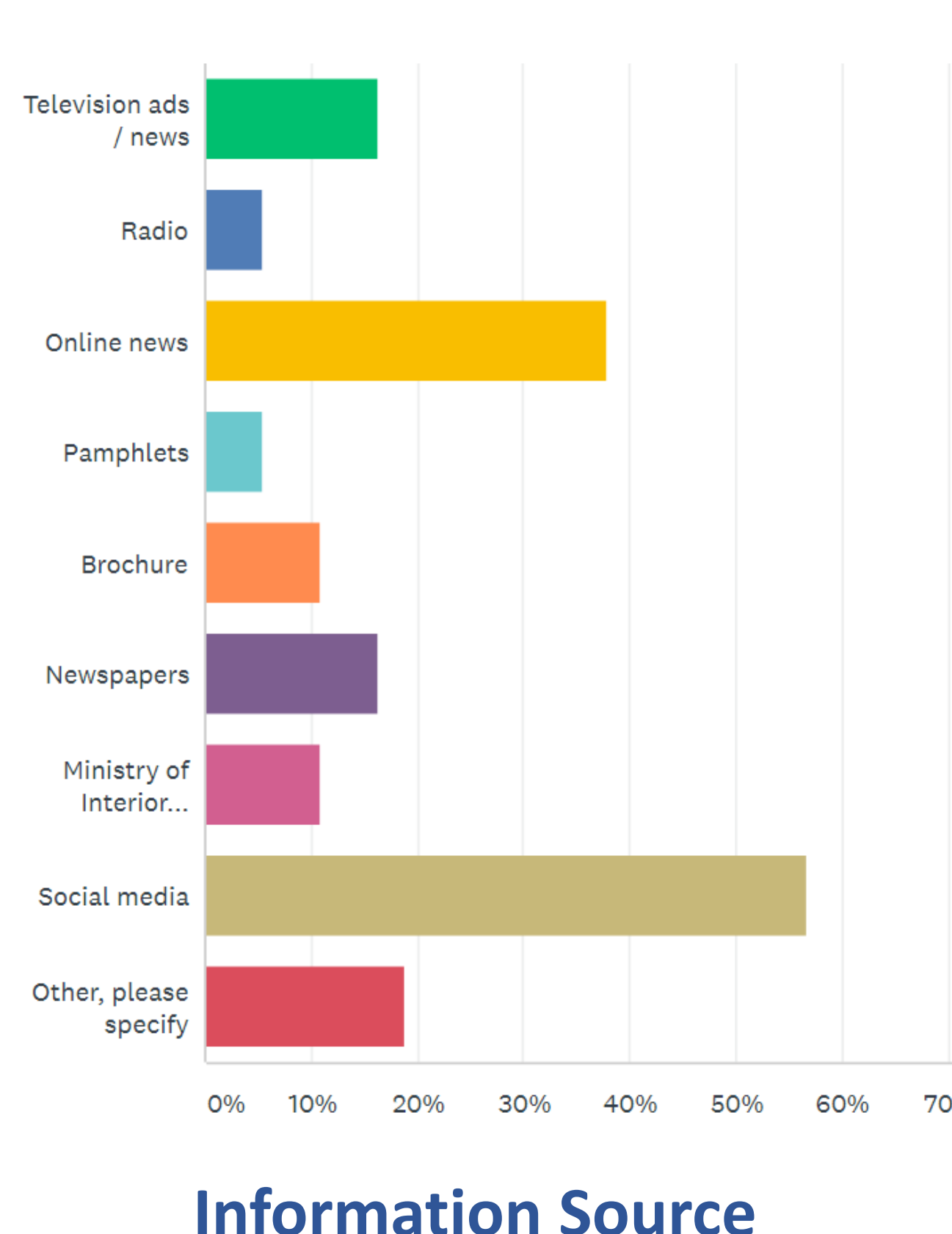
Perception characteristic	Cross at designated locations	Obey pedestrian signals	Refrain from crossing illegally	Spread awareness
Illegal crossing is serious threat	0.446	0.440	0.442	0.359
Chances of being hit if I cross illegally.	0.541	0.570	0.560	0.517
Crossing roads safely is important.	0.646	0.644	0.658	0.582
Crossing at suitable locations is important.	0.644	0.650	0.634	0.550
Obeying pedestrian signals at traffic lights is important.	0.647	0.665	0.645	0.537
Law amendment is to benefit to pedestrians and promotes safe walking.	0.692	0.707	0.660	0.593
Law amendment shows better ways to utilize crossing facilities.	0.707	0.703	0.636	0.613
Law amendment helps to reduce pedestrian crashes and improve pedestrian safety.	0.796	0.758	0.710	0.633

Note: all correlations are significant at the **0.001** level (2-tailed)

Results

Overview of respondents' characteristics

Characteristic	Frequency	Proportion
Gender		
Male	408	78.3
Female	113	21.7
Age group		
18-25 years	144	27.6
26-40 years	263	50.5
41-55 years	96	18.4
Above 55 years	18	3.5
Nationality		
Qatari	322	61.8
GCC national	19	3.6
Arab	116	22.3
Asian	39	7.5
European/American	8	1.5
Other	17	3.3
Level of education		
Below high school	23	4.4
High school	224	42.9
Bachelor degree	191	36.6
Higher degree	82	15.7



Conclusions

- ✓ A dataset of **521** complete responses was used for analysis collected using an online surveys.
- ✓ **Two-thirds of respondents** were **not aware** of the penalties introduced.
- ✓ The majority of the respondents, who were aware of the law, got information from **social media and MOI website**.
- ✓ The scores about the responses indicated that the respondents were **familiar with the safety situation** and believed that the **implementation will lead to improved pedestrian safety**
- ✓ **Male and female** perceived the law and adaptive intentions differently

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