



## **Gendered Perspective on Road Crossing Behaviours: A Study of University of Cape Coast Students**

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### **Abstract**

Globally, studies have provided significant facts about pedestrian demographic characteristics influencing road crossing behaviour of pedestrians. However, there seems to be an unconcluded argument about the influence of demographic characteristics on road crossing behaviour. This study examines the gender differences in road crossing behaviour of UCC students on campus. The study was done by mapping out the road conditions of pedestrian crossing sites, identifying the perceived gender prone to indulge in bad road crossing behaviour and examine the gendered perception towards drivers' attitude on road crossing behaviour on campus. An observation checklist was used to observe the road crossing behaviour of both men and women. One Focused Group Discussion was conducted each for men and women groups on UCC campus. Results indicated that men were more prone to road crossing accidents than women. Further analysis showed differing drivers' attitudes towards pedestrians and road crossing behaviours by men and women on campus. It was found that women were relatively treated better than men. It is recommended that road users be educated to be sensitive to each other to reduce gender-biased attitude and behaviours while using the road.



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Gender;  
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### **Introduction**

Gender is a socially constructed set of roles and responsibilities associated with being male or female (Connell, 2002; Hoffman, 2006). The expectations held about the characteristics, aptitudes and likely

behaviours of both women and men (femininity and masculinity) are inclusive in the concept of gender. Femininity and masculinity are terms found in most definitions surrounding gender and gender relations (Kimmel, 2011). In trying to define these

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social constructions, Paechter (2006) observes that femininity is what girls and women do and the same applies to boys and men. These roles outline expected behaviours of both genders. To a very large extent, these gender roles are the very basis for gender relations (Kimmel, 2011). The notion about gender is vital because when applied to social analysis, it reveals how women's subordination or men's domination is socially constructed (Aguilar, 2004; Olaniran Olawole, 2017a; Tom & Granié, 2011). Evolutionary psychologists have argued that there are gender differences in risk-taking behaviours between men and women (e.g., Daly & Wilson, 2001; Wilson & Daly, 1985 as cited in O'Dowd and Pollet 2018). In line with these arguments, there is a large body of evidence from various disciplines, ranging from economic decision making to road traffic behaviours, supporting differences in risk-taking behaviours between men and women (Tom & Granié, 2011). The size of this gender difference varies by factors such as age and context (O'Dowd & Pollet, 2018). Studies have it that, there is a difference in gender and risk-taking behaviour but these differences vary amongst various fields of study (Byrnes *et al.*, 1999). Gender differences in risk-taking behaviour are also observed in everyday life. These differences in risk-taking behaviour could also be observed in how people behave in road crossing. Among other risk-taking behaviours, men are less likely to wear a seatbelt than women (Ogunleye-Adetona *et al.*, 2018). Notably, men are more likely to run red lights than women (Tom & Granié, 2011) and, perhaps unsurprisingly, are more likely to be involved in (fatal) car accidents (Waylen & McKenna, 2008). Men are more likely than women, to exhibit risk-taking behaviour (O'Dowd & Pollet, 2018) whilst cycling (Cobey *et al.*, 2013; Pai & Jou, 2014) or crossing (Pawlowski *et al.*, 2008) men are more likely than women to exhibit risk-taking behaviour (O'Dowd & Pollet, 2018).

Differences in road crossing behaviour between men and women pedestrians have been the focus of several investigations where most of the findings support the notion that road crossing behaviours vary between genders (Rosenbloom, 2003; Tiwari *et al.*, 2007). For instance, a study conducted by Tiwari *et al.* (2007) found that, the probability for a pedestrian to cross the road when it was unsafe

varied with waiting time. They found that the mean waiting time of women was 27% more than for men. Rosenbloom (2003) also ascertained that men take greater risks in road crossing than women. Parker, Manstead, Stradling, Reason, & Baxter (1992) argued that men are more competitive, optimistic, adventurous and overconfident compared to women. Based on such behavioural characteristics, men tend to violate more rules than women pedestrians do (Rosenbloom, Nemrodov, & Barkan, 2004; Yagil, 2000 as cited in Olaniran Olawole, 2017).

Despite mixed evidence in some pedestrian observation studies, a larger proportion of studies found an increase in unsafe crossing behaviours and gait abnormalities with distractions, including the use of mobile devices. The authors of these studies suggest that walking while distracted increases the risk of injury or death of pedestrians (Bungum, Day, & Henry, 2005; Hatfield & Murphy, 2007; Lamberg & Muratori, 2012; Lin, Goldman, Price, Sears, & Jacko, 2007; Schabrun, van den Hoorn, Moorcroft, Greenland, & Hodges, 2014; Thompson, Rivara, Ayyagari, & Ebel, 2013 as cited Piazza, 2017).

Road crossing behaviour is an important variable that aid pedestrians in travelling from one side of the road to another safely. The Walk Europe project, as quoted in Methorst *et al.*, (2017), described road crossing as a key issue for public safety as the act of crossing a road imposes a major cognitive load (mental challenge) on the pedestrian and it is, therefore, necessary to provide secure, comprehensible and convenient crossing facilities.

College students frequenting campus may be at risk of distracted walking injury due to regular street-crossing on campus (Pucher *et al.*, 2011), high regard for text-based messaging (texting) as socially acceptable means of communication (Rainie & Zickuhr, 2015), and heavy use of mobile communication technology among the traditional college student age group (Lenhart *et al.*, 2010; Pettijohn *et al.*, 2015). The vehicle and pedestrian traffic inherent of many campus environments leads to numerous instances of vehicle-pedestrian interactions and thus provide abundant opportunities for conflict (Balsas, 2003; Loukaitou-Sideris *et al.*, 2014).

In addition, Ojo, Adetona, Agyemang, and Afukaar (2019), noted that most pedestrians who used zebra crossing when crossing the road, did so while talking on the phone which influenced pedestrian road crossing behaviour. They concluded that this led to some risky behaviours exhibited by pedestrians. Such risky road crossing behaviours are gendered with O'Dowd & Pollet, (2018) confirming that men were more likely to exhibit risk taking behaviours compared to women.

Currently, lots of research has been done on the difference in risk-taking behaviour by gender. Some of these studies were done on road crossing behaviours (Hashemiparast *et al.*, 2017; Olaniran Olawole, 2017b; Tom & Granié, 2011). Studies show that pedestrian death is one of the highest recorded traffic deaths, especially in developing countries. These studies look at the reason for pedestrian behaviour, such as the use of mobile phones, why they jaywalk, among others (Baswail *et al.*, 2019; Hashemiparast *et al.*, 2015, 2016). These behaviours are predominantly among the youth. Areas dominated by the youth such as universities and colleges have been globally studied on road crossing behaviours and how genders influences such behaviours (Odame, 2016; Olaniran Olawole, 2017a; Wells *et al.*, 2018). However, in Ghana, there is little known about road crossing

behaviours of students and factors that influence those behaviours such as gender. This necessitates the need to understand road crossing behaviours of both men and women on the University of Cape Coast campus. This study sought to examine the gendered differences in road crossing behaviour of the University of Cape Coast (UCC) students on campus. Specifically, the study sought to map out the road conditions of pedestrian crossing sites; identify the perceived gender prone to indulge in bad road crossing behaviour; and examine the gendered perception towards drivers' attitude on road crossing behaviour.

### Theoretical Framework

The theory of planned behaviour (TPB) is a health behaviour theory developed by Martin Fishbein and Icek Ajzen to improve understanding of the relationships between attitude toward the behaviour, subjective norm, perceived behavioural control, behavioural intention, and behaviour (Glanz, Rimer, & Viswanath, 2008 as cited by Piazza, 2017a). The theory posits that a person's behavioural intention to engage in a behaviour is the immediate psychological antecedent to the actual behaviour. Thus, the ability to predict behavioural intention is useful in determining whether one is likely to engage in a given behaviour (Ajzen, 2011; Piazza, 2017).

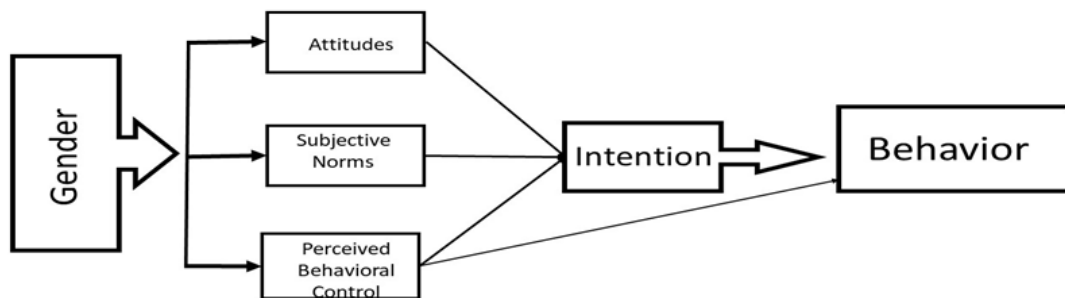


Fig.1: Graphic illustration of the theory of planned behaviour

Source: Adapted from Model adapted from Ajzen (2013) and Piazza, (2018)

According to the TPB, as indicated in Figure 1, behavioural intention is predicted by attitude towards the behaviour, subjective norm, and perceived behavioural control. Attitude toward the behaviour is the degree to which the performance of the behaviour is positively or negatively valued (Piazza,

2017). Subjective norm represents an individual's perceived social pressure to engage or not to engage in a given behaviour (Ajzen, 2011). Perceived behavioural control involves a person's perception of their ability to perform a given behaviour (Ajzen, 2011). Therefore, the TPB as employed in the

present study posits that a person's attitude toward the behaviour, subjective norm, and perceived behavioural control will predict behavioural intention, which, in turn, predicts behaviour. In addition to being useful predictors of a given behaviour, the TPB constructs of attitude toward the behaviour, subjective norm, and perceived behavioural control are often modifiable. Eliciting change in one or more of the theory's constructs is posited to bring about change in behavioural intention and subsequent behaviour (Fishbein & Ajzen, 2010). Given limited resources and varying difficulty in influencing certain TPB constructs related to a given behaviour, Fishbein and Ajzen (2010) advised that planners prioritise intervention activities based on TPB constructs data collected from the target population. Information gleaned from a well-designed TPB questionnaire gives intervention planners an idea of the relative importance of each construct as a target of change. Additionally, a well-designed questionnaire based on the TPB provides a tool by which to evaluate intervention activities (Fishbein & Ajzen, 2010). The TPB has also been used to investigate pedestrian behaviours (Barton *et al.*, 2016; Diaz, 2002; Evans & Norman, 1998, 2003; Holland & Hill, 2007; Lennon *et al.*, 2017; Xu, Li, & Zhang, 2013; Zhou & Horrey, 2010; Zhou, Horrey, & Yu, 2009). Figure 1 depicts a graphical representation of the TPB as used in the present study.

## **Methodology**

### **Study Area**

This study was conducted in the University of Cape Coast, Ghana. The University of Cape Coast is regarded as one of the top public universities in Ghana, which was established in 1962 as a university college. It is primarily mandated to train teachers at all levels of education for the country. It was affiliated to the University of Ghana, Legon (Odame, 2016). After some years, it met the requirements to become a full-fledged university. The University has expanded its curriculum and added other programmes of interest to national development. Some of these additions include Bachelor of Art, Business Programmes, Law, Medicine, Pharmacy and other related Science programmes including Forensic Science. Approximately 40% of students are admitted into the Faculty of Education to pursue Bachelor of Education programmes qualifying as professional teachers, while the rest get into

non-education programmes in the other Faculties (Odame, 2016). The University is organised into five (5) Colleges and fourteen (14) Faculties/Schools headed by Provosts and Deans respectively.

The University shares boundaries with Akotokyir, Kwaprow, Amamoma, Apewosika and Duakor. In a broader view, it is found within the Cape Coast Metropolis which has Cape Coast as the capital (Refer to Figure 2). The metropolis is bound on the south by the Gulf of Guinea, west by the Komenda-Edina-Eguafo-Abirem (KEEA) Municipality, east by the Abura-Asebu-Kwamankese District and the north by the Twifo-Hemang Lower Denkyira District.

For this study, the University of Cape Coast was divided into four. We had the Student Representative Council (SRC) area which houses some student residents, the school farm and other faculties; the Science area which is considered as the busiest part of the UCC campus and holds a majority of the faculties and some other school facilities; New site or the Social Security and National Insurance Trust (SSNIT) Hostel area which holds most halls of residence and few school facilities; and Old site area which also holds the traditional halls, the administrative block of UCC and some school facilities. Figure 2 is a map of the University of Cape Coast showing the study area.

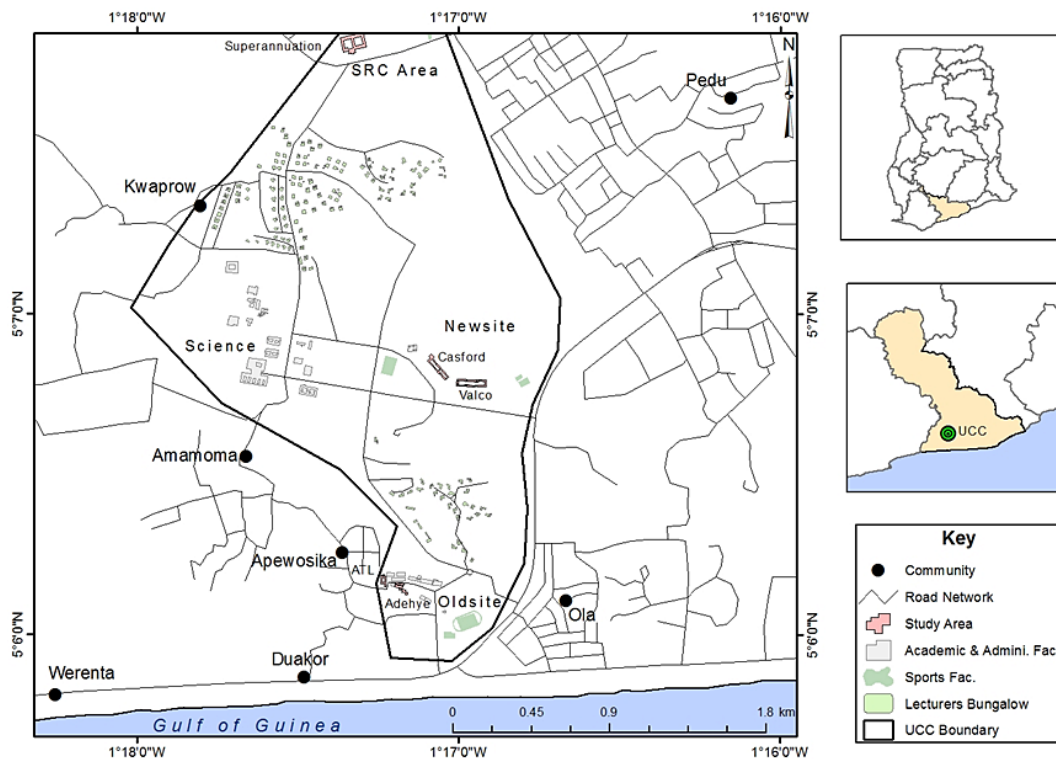
### **Materials and methods**

Methods in gender research have mostly focused on qualitative methods, research designs, modes of data collection, analysis and discussion of results. Qualitative methods provide in-depth investigations into the complexities of gendered identities and inequalities in society (Moss, 2002). This paper employed the qualitative method in order to generate in-depth gender data on the road crossing behaviour of men and women on campus. The case study design was therefore employed for this study (Creswell, 2012).

The target population for the study constituted all regular students of the University of Cape Coast. There are a total of 19,758 with 18,746 undergraduates and 1,012 postgraduate students. Of this number, 12,643 were men and 7,115 were women (UCC Basic Statistics Report 2018). Primary data was collected using Focus Group Discussions (FGD)

and observations. Focus group discussions were conducted each for men and women groups. Each focus group was made up of a total of 6 members. Members comprised of students from different year groups. In addition to this, an observation checklist was used to gather data on men and women's road crossing behaviour. The data gathered from the FGD were analysed manually through coding, categorization and theming of transcripts.

The observational data gathered from the field were in different formats. Some were in coordinates and these were for streetlights, pedestrian crossings and road signs. This type of data was processed and used to generate a map using ArcGIS v.10.5. The data gathered from the use of the observation checklist were entered in Microsoft Excel to generate frequencies. Captured images were used in explaining the realities observed from the field.



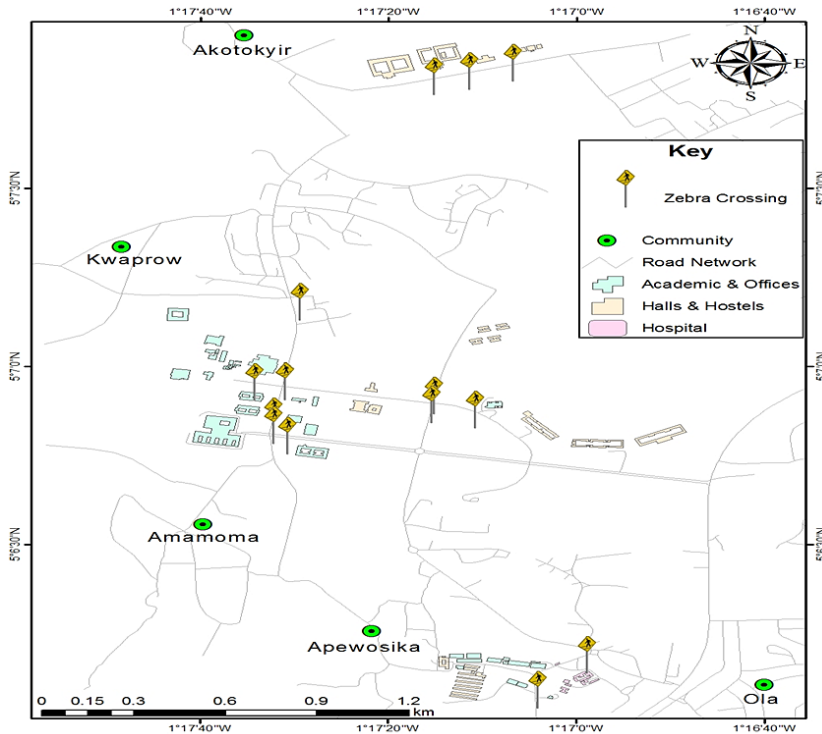
**Fig.2: Map of the University of Cape Coast**

Source: Department of Geography and Regional Planning, UCC (2019)

**Results and Discussions**

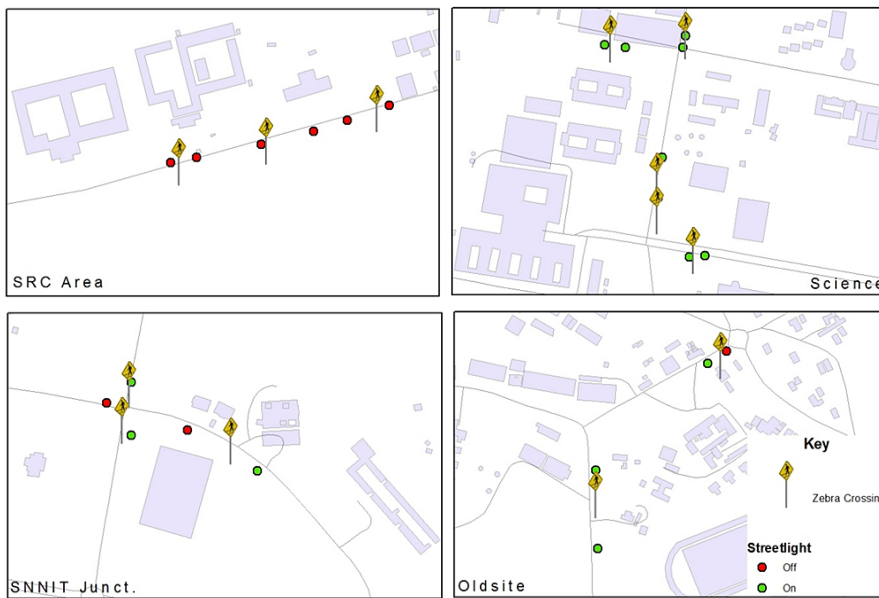
The study started by mapping out road crossing infrastructure on campus. The main infrastructure for road crossing was pedestrian crossing sites. With the use of a Global Positioning System (GPS), pedestrian crossing sites on campus were mapped (Refer to Fig. 3 and 4). A total of 14 pedestrian crossing sites were on campus. From figure 3, there seemed to be an equal spatially distributed

pedestrian crossing sites with the majority located at Science where most of the academic facilities are located. There were other road infrastructures such as streetlights mounted close to these pedestrian crossing facilities to ensure easy usage at night. However, some of these streetlights were not functioning (displayed as red dots in figure 4), at the time of data collection.



**Fig.3: A map showing the distribution of pedestrian (Zebra) crossings on the University of Cape Coat campus**

Source: Fieldwork, 2019



**Fig. 3: A map showing the distribution of pedestrian (Zebra) crossings on the University of Cape Coat campus**

Source: Fieldwork, 2019



After mapping out the various pedestrian crossing sites on the UCC campus, we went further to observe the use of these crossing sites. For this, we sampled five out of the fourteen crossing sites on campus according to the divisions made from the initial map work. We sampled one from the Students Representative Council (SRC) area, one from the Social Security and National Insurance

Trust (SSNIT) area, one from Old site and two from science which deemed as the busiest part of the UCC campus. From our observation, we found that even though science was deemed as the busy part of campus, SRC had the highest usage with a percentage of 30.7 and the lowest being SSNIT area with a percentage of 5.0. This is shown in table 1.

**Table 1: Observational sites**

Location	Frequency	Percent
Library - Admin	224	22.5
Old Site	240	24.1
Shuttle station	176	17.7
SSNIT	50	5.0
SRC	305	30.7
Total	995	100.0

Source: Fieldwork, 2019

During our observation, we noticed that even though UCC had lots of pedestrian crossings they did not have both warning and informative signs for drivers and other road users. We also found out that some of these pedestrian crossing sites on UCC

campus were faded which may cause problems for pedestrians and other road users. Plate 1, shows one of the many faded pedestrian crossing sites on UCC campus.



**Plate 1: Faded Pedestrian Crossing Site**

Source: Fieldwork, 2019

To understand men and women’s perception of good and bad road crossing behaviours, it was necessary to delve into their knowledge of best road crossing behaviours. Respondents were first asked to express their opinions on how they understood the concept

‘road crossing behaviour’. In response, a 23-year-old man stated that:

*‘What I think of road crossing behaviour is that it is the attitude you put up when you’re crossing the road’.*

Again, a 26-year-old woman stated that:

*'When we say road crossing behaviour I think it has to do with how you behave or our attitude towards crossing the road no matter the state we are in, whether holding your phone, whether in a haste... how we act towards crossing the road'.*

*'I remember when I was in primary school, I was taught to look left, right and left again before crossing the road. This is what good road crossing behaviour is all about, ensuring it was safe before crossing the road'.*

Also, a 22-year-old man added that:

Further, a 24-year-old woman stated that:

*'I also think it's the individual or group actions or attitude towards crossing roads'.*

*'I think a good road crossing behaviour is when one chooses to use a pedestrian crossing when crossing the road.'*

This implies that the respondents knew what road crossing behaviour was. When respondents were asked what good road crossing behaviour was, a 25-year-old woman indicated that:

However, some observations were made to confirm if students really practiced good road crossing behaviours. The results indicated that many men and women did not apply this knowledge in road crossing.

**Table 2: Use of pedestrian crossing site**

Location	Used pedestrian crossing	Jaywalking	Total
Library - Admin	187	37	224
Old Site	62	178	240
Shuttle station	78	98	176
SSNIT	27	23	50
SUP & SRC	2	303	305
Total	356	639	995

Source: Fieldwork, 2019



**Plate 2: Road crossing signs on UCC campus**

Source: Fieldwork, 2019



In Table 2, we went further to observe the number of students who used the zebra crossing and those jaywalked. It was observed that even though the SRC area had more students using the road, majority (303 out of 305) jaywalked. Amongst the sampled sites it was observed that students using the pedestrian crossing between the library and new administration block mostly crossed using the pedestrian crossing (187 out of 224).

It was also observed that there were several road signs mounted on UCC campus such as speed ramp ahead, traffic light ahead and bus stop. However, there was none for pedestrian crossing (Plate 2). In the absence of the pedestrian road crossing sign, the only option was the pedestrian crossing site (zebra crossing).

**Table 3: Gender differences in road crossing time**

Gender	Gender differences in crossing time					
	0-4s (%)	5-9s (%)	10-14 (%)	15-19 (%)	20+ (%)	Total
Man	60.5	50.3	52.8	50.7	33.3	51.0
Woman	39.5	49.7	47.2	49.3	66.7	49.0
Total	4.3	71.0	16.4	7.1	1.2	100

Source: Fieldwork, 2019.

An observation was made to check which of the genders used the pedestrian crossing and jaywalked the most. It was revealed that women used the pedestrian crossing more than the men. This can be justified by the time spent in crossing the road by both men and women. It was observed that majority of the women (66.7%) spent an average time of 20 seconds in crossing the road while a majority of the men (60.5%) spent an average of 4 seconds in crossing the road. The time spent in road crossing depicted that men spent shorter time in crossing the road because most of them jaywalked (Refer to Table 3).

The data from the field showed that, several factors affected the road crossing behaviours of men and women on campus. One of these factors was driver's attitude towards pedestrian crossing the road. The attitude of drivers towards pedestrian's crossing the road was observed. This was to clarify some claims made by some respondents about drivers' attitude towards men and women when crossing the road.

From the data, it was observed that drivers treated men and women differently. It further showed that women were treated better than the men while

crossing the road. This suggests that drivers were relatively more patient with women crossing the road than with men. There were however some contrasting views raised by some women respondents during the FGD. It was observed that one's gender did not affect how they were treated by drivers while crossing the road. For instance, a 24-year-old woman stated that:

*'Drivers, especially the commercial drivers, if you are a lady they will insult you. I've personally experienced such acts so many times and I also insult them too. One day I was crossing and a driver said "hw3 ne sp3s bi 1". Women are abused verbally when it comes to crossing the road.'*

For clarity, a 26-year-old woman also stated:

*"I would say that it's not all the women they will do that to. There are varieties of women that they will not even dare to insult or verbally abuse. Some of them would only stop if the woman is a 'nice girl'<sup>2</sup> A driver once said, "twamu, ma menhwe bi<sup>3</sup>" but for some of them, they don't care whether you are nice or not, they will just insult you or they will not let you pass unless you stand there saaa<sup>4</sup>"*

<sup>1</sup>Look at her spectacles

<sup>2</sup>Pretty girl

<sup>3</sup>Cross, so that I can admire you

<sup>4</sup>For a long time

The claims by the ladies were not biased as a 24-year-old man stated that:

*"... I was in a taxi and there was a group of ladies crossing, this driver was like, and I quote what he said: "oh ma me ngyina na me nhwe bi"<sup>5</sup>. These ladies were crossing around the Valco hall area. I guess he wanted to look and appreciate God's creation. But I questioned myself, what if they were a group of men? Would this driver have stopped the same way he just did for these group of ladies?"*

Subjective norm represents an individual's perceived social pressure to engage or not to engage in a given behaviour (Ajzen, 2017). In connection to a component of the Theory of Planned Behaviour, thus subjective norm, the submission from a 21-year-old woman confirms that subjective norm plays a role in an individual's behaviour even in terms of road crossing.

*'...we have been raised not to retaliate against elderly people even when we are right. So when drivers (who are mostly older than me) do not stop for me to cross the road I just keep quiet and wait for the right time to cross.'*

However, only one respondent raised a different view of the driver's attitude towards gender in terms of road crossing. A 22-year-old man stated that:

*"Ok, I think drivers act the same way towards men and women. This is my observation".*

Inferring from the trend of analysis so far, there were differing views of drivers' attitudes towards men and women in road crossing. From the FGDs, some respondents did not agree to the observation that drivers gave preferential treatment to women while crossing the road. One person was of the view that the attitude was the same across genders.

Further probing was made to understand some of the reasons why drivers treated men and women differently while crossing the road. A 24-year-old man also stated that:

*"Personally if am to be the one driving, I would*

*rather stop for a woman to cross. This is because I feel that if it is a woman, I should be a gentleman to allow her to cross the road. As for a man he can wait for me to pass before crossing the road."*

Further submissions were made on factors influencing drivers' attitude towards women. A 21-year-old woman stated that:

*"..., they know we ladies are vulnerable and just even want the chance to cross. So if they stop for us to cross, that is a good chance for us because it is to our advantage."*

Another woman of age 24, stated that:

*"Most guys are no-nonsense people. It doesn't matter who you against, they will just confront you the driver and they would not care. But we girls are considered to be fragile and so they will just walk over you"<sup>6</sup>*

Respondents noted that the type of car (that is commercial or private) affected drivers' attitude towards a specific gender. A 23-year-old man stated that:

*"If I'm rating the private and commercial car drivers, I'll rate the private 70% and give the commercial driver just 30%. This is because commercial drivers hardly stopped for pedestrians to cross. I've never witnessed them stop before, but the private cars do stop".*

Another 24-year-old man supported this argument by saying that:

*"I'll give the private vehicles 40% and commercial vehicles like 10%"*

A 23-year-old man who shared his encounter with a taxi driver stated that:

*"I once experienced a case where a taxi driver complained that we the students obeyed the pedestrian crossing but we did not respect them, the taxi drivers"*

<sup>5</sup> Let me stop and admire her

<sup>6</sup> Disrespect you

Deducing from the analysis, it was observed that there was a little distinction between the commercial and private transport drivers based on their attitude towards road users. Majority of the respondents stated that commercial drivers such as taxi drivers hardly stopped for men and women to cross compared to private car drivers. The differences amongst the attitude of drivers who did stop for pedestrians to cross was gendered. Considering the views of the respondents so far, male drivers treated women better than men. The findings of Ojo *et al.*, (2019) showed that; a majority of the drivers on campus are men, hence a strong case for such views.

The results showed that women were prone and more vulnerable to road crossing accidents. The findings of Tiwari *et al.* (2007), confirmed that women were 27% more likely to be involved in road crossing accidents than men.

A 23-year-old man, however, had a contrary view. He stated that:

*"I think men are more prone to road crossing accidents. This is because our muscular physique makes us feel bossy when crossing the road. However, ladies, are more careful when crossing the road. So for me, I will pick men over women"*

One 25-year-old man also asserted that:

*"Throughout the three years I have been on campus, the few observed road accidents (mostly not fatal) on our campus have been caused by either men pedestrians or men drivers."*

The data showed that men relied on their masculinity as a shield of protection which allowed them to take risks when crossing the road. These submissions confirm the assertion made by Rosenbloom (2009) that men took a greater risk in road crossing. The outcomes of many gender studies in relation to road crossing behaviour suggest that gender influenced one's behaviour in road crossing. Other studies have shown that men tend to violate more rules than women (Rosenbloom, Nemrodov, & Barkan, 2004; Yagil, 2000; Olawole, 2017).

There have been reports on a few road accidents on campus which has been related to drivers and pedestrian behaviour. Results from the field indicated some of the factors that caused road crossing accidents on campus included the use of phones while crossing the roads, carelessness, non-compliance to road signs and group conversations. However, the predominant concern was the use of mobile phones while crossing roads. Data from the FGD raised some of these concerns. For instance, a 24-year-old man stated that:

*"People use their mobile phones while crossing the street on campus"*

Another 22-year-old man further explained:

*"... I see students use their mobile phones and texting on social media wherever they are."*

It was observed that some pedestrians used their mobile phones while crossing the road. More than half (52.9%) of those who used their mobile phones while crossing the road were women. This was in contrary to the study conducted by Diaz (2002) where it was found that one's gender did not affect crossing behaviour.

### **Conclusions**

In conclusion, it was realized that through the mapping of pedestrian crossings, there were relatively a good number of pedestrian crossing sites on the University of Cape Coast campus. However, some of them were faded, while others had little to no road crossing signs. This promoted jaywalking and the violation of road crossing rules amongst students on campus. It was also observed that the majority of the students knew the difference between bad and good road crossing behaviours. It was found that there were differing behaviours for men and women based on their expected gender conducts in road crossing. It can also be concluded that the attitude of drivers towards pedestrians was gendered. Women were relatively treated better than men because it was assumed that women were feeble and less likely to take risk while crossing the road. Findings from this research provide a concluding evidence that one's demographic characteristics (specifically one's

gender) can influence the road crossing behaviour of a pedestrians. The study adds on to the theory of planned behaviour where gender affected attitude, subjective norms and perceived behavioural control which moulded ones road crossing intension and behaviour.

### Recommendations

It is recommended that the Transport Section of the university should undertake the repainting of the road markings annually to ensure its visibility throughout the year. Road signs should be mounted where they are absent and also, faulty ones should be replaced. The university management should embark on education on road traffic regulations with an integral part addressing road crossing behaviour for all freshmen and freshwomen. Finally, all road users (inclusive university staff, visitors, etc) should be educated to be sensitive to all road users to reduce gender bias in road crossing by the different genders.

### Policy Implication

This research was timely because, it captured the gender issues in road crossing behaviour. Unfortunately, such gendered behaviours have been overlooked over the years. There is the need to

create road traffic regulations that will cater for such gendered behaviours. This study raises a number of opportunities for policy makers as well as research in gender studies. A similar research can be conducted in a different environmental setting such as in the Central Business District (CBD) of a highly urbanized district to understand how the dynamics could affect road crossing behaviour of both genders. Differences in the gender of drivers could also be studied to understand how gender affects drivers behaviours.

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### Conflict of interest

The authors declare that there is no conflict of interest.

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