

The Systematic Review on Sense of Security in Urban Neighborhoods

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Abstract: Sense of security has been highlighted as one of significant factor due improving the quality of life in urban neighborhoods in previous researches. This research's aim is to provide a holistic overview on literatures addressing the significance of sense of security and factors influencing it. To do so, 46 research articles relating to sense of security in urban neighborhoods are considered and reviewed. The results revealed the significant factors affecting sense of security in urban neighborhoods by considering the existing inconsistencies of the results. The validity and reliability of the articles with the focus on statistical strategies are examined and the possible moderation of effects are surely investigated and warranted.

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1. Introduction

DeFrances and Smith (1998) argued that with reducing the sense of security in urban neighborhoods, the increasing concerns over the urban neighborhoods' crime is occurring for people especially for American psyche that fear of becoming a victim of criminal misconduct is the main concern. Keane (1998), Ross and Jang (2000) highlighted the association among individual's sense of security with the limitations of personal freedom, social isolations and lack of trust between neighbors. According to Hamed Najafpour et al (2014), sense of security as factor influencing quality of life in urban neighborhoods is significant. Moreover, other researches also revealed the significance of socioeconomic status on urban neighborhoods' sense of security (Mohsen Ghods et al (2014), Mohsen Ghods et al (2014), Vahid Bigdeli Rad et al (2014), Mohsen Roshan et al (2014), Sharifah Salwa Syed Mahdzar, Hossein Safari (2014), Vahid Bigdeli Rad and Ibrahim Ngah (2014) and Vahid Bigdeli Rad and Ibrahim Ngah (2013)). According to Hamed Najafpour et al (2013), legible environmental of urban neighborhood also can promote the residents' sense of security there. Furthermore, Vahid Bigdeli Rad et al (2014) reviewed factors influencing safety in urban neighborhoods and they mentioned the importance of sense of security in urban neighborhoods. Therefore, this research undertook a comprehensive and holistic overview on previous articles with the focus on sense of security in urban

neighborhoods to catch the main factors associating with it.

2. Methods

Due to catch the aim of this research, the most related and extensive research articles with association to sense of security in urban neighborhoods are undertaken.

2.1 The strategy of research

Due to the aim of this research, four electronic databases such as Taylor and Francis, Web of Science, Google Scholar and Sage Publication, were considered. In addition, the research scope designed in accordance to articles with English language during 1980 to 2009. In this regard, most appropriate and well matched articles with the principles and scoop of research considering sense of security in urban neighborhoods were undertaken. Finally, extracted articles were inspected by asking the experts of architectural and urban design criteria due establishing accuracy and robustness of the research.

2.2 Selection of criteria

Investigating on factors influencing sense of security in urban neighborhoods was the aim of this research. To do so, articles with explosive association to sense of security, urban neighborhoods and crime issues were considered and interventional and qualitative studies, proceedings of conferences and the opinions of experts were undertaken.

3. Research results

3.1 The characteristics of research

The characteristics of 46 reviewed articles focusing on sense of security in urban neighborhoods are shown in Table 1. Moreover, instead of article with the number of 40 which was theoretical based (reviewed book), the other articles were structured based on statistical analysis. As illustrated in Table 1, 76 percent of reviewed articles were conducted in American urban neighborhoods and 15.2 and 8.6 percent of them were conducted in European and Australian urban neighborhoods respectively. Additionally, undertaken sample sizes were ranged from 100 to 8845 participants which 89.7 percent of them were focused on both females and males and the rest were just considered women. Furthermore, 89.13 percent of reviewed articles were conducted on urban neighborhoods and the others were investigated on urban and rural neighborhoods. As next step of this research, factors associating with sense of security in urban neighborhoods addressing different points of views are highlighted to establish a holistic overview on undertaken articles. Meanwhile, the summaries of factors affecting sense of security in urban neighborhoods are illustrated in Table 2 of this research.

3.2 Assessment of Factors Sense of Security in Urban Neighborhoods

Ainsworth BE et al (2003) considering the association among physical activity and social, cultural, environmental, policy and personal variables highlighted the factors affecting residents' physical activity. In addition, they highlighted the effect of physical activity on people sense of security in urban neighborhoods. Veba and Nile quoted in Allen-hays et al 2007 which focused on examining the significance of characteristic of neighborhoods and their attachment with neighborhoods' social network by simulating the residents' participation in Waterloo urban neighborhoods highlighted the association between physical participation in urban neighborhoods and sense of security. Austin, D.M et al (2002) highlighting the association among the condition of urban neighborhoods and people sense of security revealed the association among the quality of housing and neighborhood, victimization experiences with sense of security. Ball, K et al (2007) focused on the relationship between environmental, social and personal items with women's participating in urban physical activity such as walking. They pointed that diverse environmental, social and personal items and sense of security were related to people physical participation in urban neighborhoods.

Table 1: The Characteristic of Research based on 46 reviewed articles

References	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
Sample size																													
n ≤ 150		X												X															
150 (n ≤ 500)			X		X	X									X												X		
500 (n ≤ 1000)	X							X		X						X	X			X	X							X	
n ≥ 1000				X			X		X	X	X								X	X		X	X	X	X				X
Country																													
America	X	X	X	X	X		X	X	X	X	X	X	X		X		X	X		X	X		X		X	X	X	X	X
Europe													X			X													
Australia						X																							
Setting																													
Urban	X	X	X	X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Urban + rural							X					X																	
Gender																													
Female + male		X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Female	X			X																									X
Male																													

References: 1: Ainsworth BE et al (2003), 2: Allen-Hays et al (2007), 3: Austin, D.M et al (2002), 4: Ball, K et al (2007), 5: Baba, Y et al (1989), 6: Booth, M.L et al (2000), 7: Brown, B.B et al (2004), 8: Brownson, R.C et al (2001), 9: Craig, C.L et al (2002), 10: Crank, J.P et al (2003), 11: Covington et al (1991), 12: Carnegie, M.A et al (2002), 13: Doyle, S et al (2006), 14: De Bourdeaudhuij, I et al (2003), 15: Delone, G.J et al (2008), 16: Dekker, K (2007), 17: De Frances, C.J et al (1993), 18: Eyler, A.A et al (2003), 19: Foster, C et al (2004), 20: Garofalo et al (1981), 21: Greenberg et al (1984), 22: Giles-Corti et al (2002a), 23: Giles-Corti et al (2002b), 24: Harrison, R.A et al (2007), 25: Hooker, S.P et al (2005), 26: Humpel, N et al (2004), 27: Kawachi, I et al (1999), 28: King, A.C et al (2000).

References	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Total
Sample size									X					X					4
n ≤ 150																			
150 (n ≤ 500)			X				X			X						X	X	X	11
500 (n ≤ 1000)		X			X	X					X				X				14
n ≥ 1000	X			X				X											16
Country																			
America	X	X	X			X	X		X		X	X	X	X	X			X	35
Europe					X			X		X									7
Australia				X													X		4
Setting																			
Urban	X	X	X	X	X	X	X	X	X	X	X		X		X	X		X	41
Urban + rural														X			X		4
Gender																			
Female + male	X	X	X	X	X	X	X	X	X	X	X		X		X		X		39
Female														X		X		X	6
Male																			0

References: 29: Kruger, D.J et al (2007), 30: Lewis, D.A et al (1980), 31: Long, D et al (2007), 32: Li, F et al (2005), 33: Lim, K et al (2005), 34: Mannarini, T et al (2009), 35: Painter, K et al (1996), 36: Perkins, D. D et al (1996), 37: Piro, F.N et al (2006), 38: Sallis, J.F et al (1997), 39: Sooman, A et al (1995), 40: Steptoe, A et al (2001), 41: Skogan, W.G, S et al (1981), 42: Suminski, R.R et al (2005), 43: Wilcox, S et al (2003), 44: Wilbur, J (2003b), 45: Wood, L et al (2008), 46: Young, D.R et al (2003).

Table 2.2: Factors Affecting Sense of Security in Urban Neighborhoods

NO	Author(s)	Factors Influencing Sense of Security
1	Ball et al. (2007), Harrison et al. (2007), Piro et al. (2006), Doyle et al. (2006), Suminski et al. (2005), Li et al. (2005), Lim and Taylor (2005), Hooker et al. (2005), Humpel et al. (2004), Foster et al. (2004), Young and Voorhees (2003), Wilbur et al. (2003), Eyler et al. (2003), De Bourdeaudhuij et al. (2003), Ainsworth et al. (2003), Giles-Corti and Donovan (2002a), Giles-Corti et al (2002b), Craig et al. (2002), Carnegie et al. (2002), Brownson et al. (2001), King et al. (2000), Booth et al. (2000), (Veba & Nile quoted in Dekker (2007) and Allen-hays et al (2007)), Crank et al (2003) and Long and Sarason (1971) quoted in Mannarini and Tedi (2009)).	Physical Participation: <ul style="list-style-type: none"> • Walk-ability • Casual interaction between neighbors • Social Cohesion • During a Day • During a Night

2	Skogan and Maxfield (1981), Brown et al (2004), Garofalo (1981), Covington and Taylor (1991), De Frances, C.J et al (1993), Kruger (2007), Lewis and Maxfield (1980), Perkins (2007) and Sooman and Macintyre (1995).	Neighborhood Incivilities <ul style="list-style-type: none"> • Fear of Crime • Perceptions of Incivilities • Disturbances by neighbors or youngsters
3	Lewis and Maxfield (1980), Painter (1996), Austin et al (2002), Wood et al (2008) and Painter (1996), Baba and Austin (1989), Carnegie et al. (2002), De Bourdeaudhuij et al. (2003), Dekker, K (2007), Foster et al. (2004), S. W. Greenberg and Rohe (1984), Giles-Corti et al (2002b), Hooker et al. (2005), Kruger (2007), Long and Perkins (2007), Li et al. (2005), Perkins (2007), Sallis et al. (1997), Steptoe and Feldman (2001) and Wilcox et al. (2003)	Physical Environment <ul style="list-style-type: none"> • Appearance • Building design • Street Lightings • Natural surveillance
4	Perkins and Taylor (1996), De Bourdeaudhuij et al. (2003), Delone, G.J et al (2008), S. W. Greenberg and Rohe (1984), Kawachi et al (1999), King et al. (2000), Kruger (2007), Lewis and Maxfield (1980), Perkins (2007), Sooman and Macintyre (1995), Steptoe and Feldman (2001) and Wilcox et al. (2003).	Demographic Factors <ul style="list-style-type: none"> • Gender • Age • Socio economic status • Education, • Educational status
5	Skogan and Maxfield (1981), Garofalo (1981), S. W. Greenberg and Rohe (1984), Covington et al (1991), Baba and Austin (1989) and Crank et al (2003).	Victimization Experience <ul style="list-style-type: none"> • Serious crimes known as: (Murder, Non-negligent manslaughter, Forcible rape, Robbery, Aggravated assault, Burglary, Larceny-theft and motor vehicle theft people get attacked or Physically Injured)

In addition, examining the association of social participation, victimization and neighborhood satisfaction with sense of security in urban neighborhoods, Baba, Y et al (1989) revealed the association among neighborhood satisfaction and victimization experiences with sense of security and no relationship between physical participation and sense of security in urban neighborhoods. Booth, M.L et al (2000) investigated on identifying the association among environmental affects and social cognitive with old people's physical participation in urban neighborhoods. They revealed the relationship among physical activity and physical participation in

urban neighborhoods. In addition, Brown, B.B et al (2004) undertook a model to examine the association among incivilities such as unkempt lawns and litter with crime and sense of security in urban neighborhoods and resulted the negative effects of incivilities in sense of security of residents in urban neighborhoods.

Brownson, R.C et al (2001) examined the association among patterns of perceived environment of urban neighborhoods and residents behavior and revealed the relationship between physical participation and sense of security in urban neighborhoods. Craig, C.L et al (2002) highlighting

the physical participation in urban neighborhoods argued that physical environment of urban neighborhoods and their residents physical participation is associated with sense of security in urban neighborhoods. Moreover, Crank, J.P et al (2003) highlighted the crime's perception in growing nonurban neighborhoods by considering the association among gang problems and drug's perception with crime problems and diverse of police orders and relationship between fear of victimization with increasing problem perception, decline in recreational and social activity and perception of high level of social infrastructure. They concluded supportive association among physical participation and victimization experiences with sense of security in non urban neighborhoods. Covington et al (1991) examined the crime centre undertaking three theoretical models named as community concerns, incivilities and indirect victimization. The result revealed indirectly that there is an association among victimization experience and neighborhoods' incivilities with sense of security in urban neighborhoods. Carnegie, M.A et al (2002) considering physical environment of urban neighborhoods and physical participation revealed the relationship between them and sense of security in urban neighborhoods. Doyle, S et al (2006) also revealed the association among physical participation and sense of security in urban neighborhoods. De Bourdeaudhuij, I et al (2003) considering the effects of recreational variables and environmental design on physical activity indirectly highlighted the association among physical environment, demographic variables and physical participation with sense of security in urban neighborhoods. Delone, G.J et al (2008) examining the association among public housing policy and fear of crime revealed the linkage among demographic variables with sense of security in urban neighborhoods. Dekker, K (2007) focusing on urban neighborhoods' attachment with physical participation revealed indirectly that neighborhood's environment and physical participation are related to sense of security in urban neighborhoods. De Frances, C.J et al (1993) considering the crime of burger in United State revealed the association among fear of crime and sense of security in urban neighborhoods. Eyler, A.A et al (2003) examining physical activity among the residents of United State urban neighborhoods revealed the relationship among physical participation and sense of security in urban neighborhoods. Foster, C et al (2004) examining the association among perception of physical and social environment with physical participation highlighted the association among sense of security and physical participation and neighborhoods' environment.

Garofalo et al (1981) highlighted the association of fear of crime and victimization experience with sense of security in urban neighborhoods. Greenberg et al (1984) considering the association among various dimensions of demographic variables and crime levels in urban neighborhoods revealed relationship between sense of security in urban neighborhoods and demographic variables and physical environment of urban neighborhoods. Giles-Corti et al (2002a) focusing on relationship between physical environment, social environment and individual environment on physical participation in urban neighborhoods revealed indirectly association among physical participation and sense of security in urban neighborhoods. Giles-Corti et al (2002b) highlighting the association of physical participation in urban neighborhoods with physical environment of urban neighborhoods and recreational facilities reported indirectly the relationship between sense of security in urban neighborhoods and physical environment of them and physical participation occurring there. Harrison, R.A et al (2007) revealed association among physical participation with sense of security in UK urban neighborhoods. Hooker, S.P et al (2005) examining the safety and social relating to environmental attributes' perception with physical participation in African American urban neighborhoods revealed the association among sense of security of their urban neighborhoods and physical participation and urban neighborhoods' environment. Humpel, N et al (2004) examining the relationship among perceived environmental attributes with physical participation in urban neighborhoods highlighted indirectly the association among physical participation in urbane neighborhoods and sense of security there. Kawachi, I et al (1999) focusing on crime as indicator of collective well-being in USA revealed association among sense of security and demographic variables apecially economical differences among residents of urban neighborhoods. King, A.C et al (2000) focusing on environmental barriers for physical participation in US urban neighborhoods highlighted indirectly association among sense of security in urban neighborhoods and demographic variables such as gender and physical participation. Kruger, D.J et al (2007) highlighting the fear of crime in urban neighborhood regarding residents' social context, assault injuries and local rates revealed the association of demographic variables, urban neighborhoods' environment with sense of security in urban neighborhoods. Lewis, D.A et al (1980) focusing on association among fear of crime and reported crime rates in Chicago Urban neighborhoods revealed the association among perception of urban neighborhoods' environment, demographic variables, incivilities and fear of crime

with sense of security in urban neighborhoods. Long, D et al (2007) investigating on sense of community in urban neighborhoods indirectly highlighted the association among sense of security in urban neighborhoods and physical environment of urban neighborhoods. Li, F et al (2005) examining the association among built environment characteristics and physical participation in urban neighborhoods pointed the positive relationship among urban neighborhoods environment and physical participation with sense of security in urban neighborhoods. Lim, K et al (2005) considering the physical participation factors in New South Wales urban neighborhoods revealed no association among physical participation and sense of security in urban neighborhoods. Sarason (1971) quoted in Mannarini and Tedi (2009) that investigated on sense of community indirectly revealed the association among physical participation and sense of security in urban neighborhoods. Painter, K et al (1996) focusing on relationship between street lighting and fear of crime and actual crime in urban neighborhoods revealed the positive association among street lighting and sense of security in urban neighborhoods. Perkins, D. D et al (1996) highlighting the relationship between fear of crime and physical disorder, physical and social environment of urban neighborhoods claimed that there is an association among physical environment, demographic variables and fear of crime with sense of security in urban neighborhoods. Piro, F.N et al (2006) considering the association among fear of violence with physical participation in urban neighborhoods revealed physical participation was related to sense of security just for women inhabitants in urban neighborhoods. Sallis, J.F et al (1997) evaluating a measure of perception of physical environment and physical participation in urban neighborhoods indirectly highlighted the association among physical environment of urban neighborhoods and sense of security there. Sooman, A et al (1995) focusing on the perception of urban neighborhoods' residents on their local environment in Glasgow City neighborhoods revealed association of incivilities related factors and demographic variables with sense of security in urban neighborhoods. Steptoe, A et al (2001) investigating on association among neighborhood environment and sense of security in urban neighborhoods revealed the linkage among demographic variables such as socioeconomic items and urban neighborhoods' environment with sense of security in urban neighborhoods. Skogan, W.G, S et al (1981) focusing on fear of crime variables in urban neighborhoods revealed association among sense of security in urban neighborhoods and fear of crime and victimization experience there. Suminski, R.R et al (2005) highlighting physical environment of urban

neighborhoods due promoting physical activity revealed association among urban neighborhoods' physical environment with sense of security for women there. Wilcox, S et al (2003) examining the correlations of physical participation for women African American highlighted association among socio-demographic variables and physical environment of urban neighborhoods with sense of security there. Wilbur, J (2003b) examining the relationship among social, personal environment and physical environment of urban neighborhoods with physical participation in Mexico urban neighborhoods revealed association among physical participation and sense of security in urban neighborhoods. Wood, L et al (2008) exploring the association among urban neighborhoods' environment and social capital with physical participation in Perth, WA urban neighborhoods highlighted the linkage between urban neighborhoods' environment and sense of security. Young, D.R et al (2003) focusing on physical participation variables among African American women indirectly revealed the association among physical participation and sense of security in urban neighborhoods.

4. Conclusion

This research considered forty-six research articles relating to sense of security in urban neighborhoods. Five main factors and their sub-factors relating to sense of security in urban neighborhoods are revealed. There were very few scholars providing the groups of indicators associating to sense of security in urban neighborhoods. The significant of sense of security for urban neighborhoods was highlighted as the first step of this research and then factors such as Physical Participation (Walk-ability, Casual interaction between neighbors, Social Cohesion, During a Day and During a Night), Neighborhood Incivilities (Fear of Crime, Perceptions of Incivilities and Disturbances by neighbors or youngsters), Physical Environment (Appearance, Building design, Street Lightings and Natural surveillance), Demographic Factors (Gender, Age, Socio economic status, Education and Educational status) and Victimization Experience (Serious crimes known as: (Murder, Non-negligent manslaughter, Forcible rape, Robbery, Aggravated assault, Burglary, Larceny-theft and motor vehicle theft people get attacked or Physically Injured)) associating with sense of security in urban neighborhoods are highlighted.

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References

- Ainsworth BE, Wilcox S, Thompson WW, Richter DL, Henderson KA: Personal, social, and physical environmental correlates of physical activity in African American women in South Carolina. *American Journal of Preventive Medicine*. 2003, 25(Suppl. 1):23–29.
- Allen-Hays, R & Kogl, A.M. (2007). Neighborhood attachment, social capital building and political participation; a case study of low and moderate-income residents of Waterloo, Iowa. *Journal of Urban Affairs*, 29 (2), 181-205.
- Austin, D.M., Furr, L.A., Spine, M., 2002. The effects of neighborhood conditions on perceptions of safety. *J. Crim. Justice* 30, 417–427.
- Ball, K., Timperio, A., Salmon, J., Giles-Corti, B., Roberts, R., Crawford, D., 2007. Personal, social and environmental determinants of educational inequalities in walking: a multilevel study. *J. Epidemiol. Comm. Health* 61, 108–114.
- Baba, Y. & Mark Austin, D. (1989). Neighborhood environmental satisfaction, victimization and social participation as determinants of perceived neighborhood safety. *Environment and Behavior*, 21, 763-780.
- Bigdeli Rad V and Ngah I (2014), ASSESSMENT OF QUALITY OF PUBLIC URBAN SPACES." *SCIENCE INTERNATIONAL-Lahore* 26(1): 335-338. [http://www.sci-int.com/pdf/200550752865-335-338--Bigdeli%20Rad--SS--MALAYSIA--PAID\[2\]%20GP%20Revised%20Back.pdf](http://www.sci-int.com/pdf/200550752865-335-338--Bigdeli%20Rad--SS--MALAYSIA--PAID[2]%20GP%20Revised%20Back.pdf).
- Bigdeli Rad V and Ngah I (2013). The Role of Public Spaces in Promoting Social Interactions. *International Journal of Current Engineering and Technology* 3(1): 184-188. <http://inpressco.com/wp-content/uploads/2013/11/Paper26184-188.pdf>.
- Bigdeli Rad V, Najafpour H, Ngah I, Shieh E, Bigdeli Rad H. The Systematic Review on Physical Activity in Urban Neighborhoods. *Life Sci J* 2014; 11(9):14-22, http://www.lifesciencesite.com/ljsj/life1109/003_24590life110914_14_22.pdf.
- Booth, M.L., Owen, N., Bauman, A., Clavisi, O., Leslie, E., 2000. Social–cognitive and perceived environment influences associated with physical activity in older Australians. *Prev. Med.* 31, 15–22.
- Brown, B.B., Perkins, D. D., Brown, G., 2004. Crime, new housing, and housing incivilities in a first-ring suburb: multilevel relationships across time. *Hous.PolicyDebate*15, 301–345.
- Brownson, R.C., Baker, E.A., Housemann, R.A., Brennan, L.K., Bacak, S.J., 2001. Environmental and policy determinants of physical activity in the United States. *Am. J. Public Health* 91, 1995–2003.
- Craig, C.L., Brownson, R.C., Cragg, S.E., Dunn, A.L., 2002. Exploring the effect of the environment on physical activity: a study examining walking to work. *Am. J. Prev. Med.* 23, 36–43.
- Crank, J.P. et al (2003). Fear of crime in a nonurban setting, *Journal of Criminal Justice*, 31, 249-263.
- Covington, Jeanette, & Taylor, Ralph B. (1991). Fear of crime in urban residential neighborhoods. *The Sociological Quarterly*, 32(2), 231-249.
- Carnegie, M.A., Bauman, A., Marshall, A., Mohsin, M., Westley-Wise, V., Booth, M.L., 2002. Perceptions of the physical environment, stage of change for physical activity, and walking among Australian adults. *R. Q. Exerc. Sport* 73, 146–155.
- Covington, J.M., Taylor, R.B., 1991. Fear of crime in urban residential neighborhoods: implications of between and within-neighborhood sources for current models. *Sociol. Q.* 32, 231.
- Doyle, S., Kelly-Schwartz, A., Schlossberg, M., Stockard, J., 2006. Active community environments and health: the relationship of walkable and safe communities to individual health. *J. Am. Plan. Assoc.* 72, 19–31.
- De Bourdeaudhuij, I., Sallis, J.F., Saelens, B.E., 2003. Environmental correlates of physical activity in a sample of Belgian adults. *Am. J. Health Promot.* 18, 83–92.
- Delone, G.J. (2008). Public housing and the fear of crime. *Journal of Criminal Justice*, 36, 115-125.
- Dekker, K. (2007). Social capital, neighborhood attachment in distressed urban areas. a case

- study in the Hague and Utrecht, the Netherlands. *Housing Studies*, 22 (3), 355-379.
21. DeFrances, C.J., Titus, R.M., 1993. Urban planning and residential burglary outcomes. *Landsc. Urban Plan.* 26, 179–191.
 22. Eyster, A.A., Brownson, R.C., Bacak, S.J., Houseman, R.A., 2003. The epidemiology of walking for physical activity in the United States. *Med. Sci. Sports Exerc.* 1529–1536.
 23. Foster, C., Hillsdon, M., Thorogood, M., 2004. Environmental perceptions and walking in English adults. *J. Epidemiol. Commu. Health* 58, 924–928.
 24. Garofalo, James. (1981). The fear of crime: Causes and consequences. *The Journal of Criminal Law and Criminology* (1973-), 72(2), 839-857.
 25. Ghods M, Najafpour H, Lamit H, Abdolahi, N, Rosley M. Evaluation of the Effective Factors on Online Internet Usage in Organizations. *Life Sci J* 2014;10(1):58-63, http://www.lifesciencesite.com/ljsj/life1101/008_22333life1101_58_63.pdf.
 26. Ghods M, Najafpour H, Abdolahi N, Lamit H, Sazvar R, Jamshidi M. H. M, Sadoughvanini S, Mehdiabadi A, (2014). Comparison of the Factors that Affect the Design of Traditional and New Systems Due Improving the Level of Organizations' Performance (A Case Study of Tehran, Iran). *J. Basic. Appl. Sci. Res.*, 4(3)134-142, TextRoad Publication. [http://www.textroad.com/pdf/JBASR/J.%20Basic.%20Appl.%20Sci.%20Res.,%204\(3\)134-142,%202014.pdf](http://www.textroad.com/pdf/JBASR/J.%20Basic.%20Appl.%20Sci.%20Res.,%204(3)134-142,%202014.pdf).
 27. Greenberg, Stephanie W, & Rohe, William M. (1984). Neighborhood Design and Crime A Test of Two Perspectives. *Journal of the American Planning Association*, 50(1), 48-61.
 28. Giles-Corti, B., Donovan, R.J., 2002a. The relative influence of individual, social and physical environment determinants of physical activity. *Soc. Sci. Med.* 54, 1793–1812.
 29. Giles-Corti, B., Donovan, R.J., 2002b. Socioeconomic status differences in recreational physical activity levels and real and perceived access to a supportive physical environment. *Prev. Med.* 35, 601–611.
 30. Harrison, R.A., Gemmell, I., Heller, R.F., 2007. The population effect of crime and neighbourhood on physical activity: an analysis of 15 461 adults. *J. Epidemiol. Comm. Health* 61, 34–39.
 31. Hooker, S.P., Wilson, D.K., Griffin, S.F., Ainsworth, B.E., 2005. Perceptions of environmental supports for physical activity in African American and White adults in a rural county in South Carolina. *Prev. Chronic Dis.* 2, 1–10.
 32. Humpel, N., Owen, N., Iverson, D., Leslie, E., Bauman, A., 2004. Perceived environment attributes, residential location, and walking for particular purposes. *Am. J. Prev. Med.* 26, 119–125.
 33. Kawachi, I., Kennedy, B.P., Wilkinson, R.G., 1999. Crime: social disorganization and relative deprivation. *Soc. Sci. Med.* 48, 719–731.
 34. King, A.C., Castro, C., Wilcox, S., Eyster, A.A., Sallis, J.F., Brownson, R.C., 2000. Personal and environmental factors associated with physical inactivity among different racial– ethnic groups of US middle-aged and older-aged women. *HealthPsychol.* 19, 354–364.
 35. Kruger, D.J. et al (2007). Assault injury rates, social capital and fear of neighbourhood crime. *Journal of Community Psychology*, 35(4), 483-498.
 36. Keane, C, (1998). Evaluating the influence of fear of crime as an environmental mobility restrictor on women's routine activities. *Environment and Behavior*, 30(1), 60-74.
 37. Lewis, D.A., Maxfield, M.G., 1980. Fear in the neighborhoods: an investigation of the impact of crime. *J. Res. Crime Delinq.* 160–189.
 38. Long, D. & Perkins, D.D. (2007). Community social and place predictors of sense of community: a multilevel and longitudinal analysis. *Journal of Community Psychology*, 35 (5), 563-581.
 39. Li, F., Fisher, K.J., Brownson, R.C., Bosworth, M., 2005. Multilevel modeling of built environment characteristics related to neighborhood walking activity in older adults. *J. Epidemiol. Comm. Health* 59, 558–564.
 40. Lim, K., Taylor, L., 2005. Factors associated with physical activity among older people, a population-based study. *Prev. Med.* 40, 33–40.
 41. Mannarini, T & Fedi, A (2009). Multiple senses of community: the experience and meaning of community. *Journal of Community Psychology*. 37 (2), 211-2271.
 42. Najafpour H, Lamit H, Roshan M, Malekinezhad F, Ghahramanpouri A, Rosley M. Finding Ways in an Unfamiliar Tourist Destination: Salient Clues for Visitors to a Malaysian Town. *Life Sci J* 2013;10(4):1514-1525, http://www.lifesciencesite.com/ljsj/life1004/200_21455life1004_1514_1525.pdf.
 43. Najafpour H, Bigdeli Rad V, Lamit H, Fitry S. M. The Systematic Review on Quality of Life in Urban Neighborhoods. *Life Sci J* 2014;11(7):355-364,

- http://www.lifesciencesite.com/ljs/life1107/041_24027life110714_355_364.pdf.
44. Newman, Oscar, & Space, Defensible. (1972). *People and Design in the Violent City'*: London: Architectural Press.
 45. Painter, K., 1996. The influence of street lighting improvements on crime, fear and pedestrian street use, after dark. *Landsc. Urban Plan.* 35, 193–201.
 46. Perkins, D. D., & Taylor, R. B. (1996). Ecological assessment of community disorder: Their relationship to fear of crime and theoretical implications. *American Journal of Community Psychology*, 24, 63–107.
 47. Piro, F.N., Noess, O., Claussen, B., 2006. Physical activity among elderly people in a city population: the influence of neighborhood level violence and self perceived safety. *J. Epidemiol. Comm. Health* 60, 626–632.
 48. Roshan M, Kandar MZ, Najafpour H, Ossen DR, Ghasemi M, Gharakhani A, Torabi M. Analysis of Anidolic Daylighting System Parameters in Tropical Climate. *Life Sci J* 2014;11(8):171-176, http://www.lifesciencesite.com/ljs/life1108/022_24099life110814_171_176.pdf.
 49. Ross, C.E., 2000. Walking, exercising and smoking: does neighbourhood matter? *Soc. Sci. Med.* 51, 265–274.
 50. Sallis, J.F., Johnson, M.F., Calfas, K.J., Caparosa, S., Nichols, J.F., 1997. Assessing perceived physical environmental variables that may influence physical activity. *Res. Q. Exerc. Sport* 68, 345.
 51. Sharifah Salwa Syed Mahdzar, Hossein Safari. Legibility as a Result of Geometry Space: Analyzing and Comparing Hypothetical Model and Existing Space by Space Syntax. *Life Sci J* 2014; 11(8):309-317, http://www.lifesciencesite.com/ljs/life1108/042_24489life110814_309_317.pdf.
 52. Sooman, A., Macintyre, S., 1995. Health and perceptions of the local environment in socially contrasting neighborhoods in Glasgow. *Health Place* 1, 15–26.
 53. Steptoe, A., Feldman, P., 2001. Neighborhood problems as sources of chronic stress: development of a measure of neighborhood problems, and associations with socioeconomic status and health. *Ann. Behav. Med.* 23, 177–185.
 54. Skogan, W.G., Maxfield, M.G., 1981. *Coping with Crime: Individual and Neighborhood Reactions*. Sage Publications, Beverley Hills.
 55. Suminski, R.R., Walker, S., Poston, C., Petosa, R., Stevens, E., Katzenmoyer, L., 2005. Features of the neighborhood environment and walking by US adults. *Am. J. Prev. Med.* 28, 149–155.
 56. Smith, V. K. (1977) "Residential location and environmental amenities: a review of the evidence," *Regional Studies* 11 (1): 47-61.
 57. Wilcox, S., Bopp, M., Oberrecht, L., Kammermann, S., McElmurray, C., 2003. Psychosocial and perceived environmental correlates of physical activity in rural and older African-American and White women. *J. Gerontol. Psychol. Sci.* 58, 329–337.
 58. Wilbur, J., Chandler, P.J., Dancy, B., Lee, H., 2003b. Correlates of physical activity in urban mid-western Latinas. *Am. J. Prev. Med.* 25, 69–76.
 59. Wood, L. et al (2008). The anatomy of the safe and social suburb: an exploratory study of the built environment, social capital and residents' perceptions of safety. *Health and place*, 14, 15-31.
 60. Young, D.R., Voorhees, C.C., 2003. Personal, social, and environmental correlates of physical activity in urban African-American women. *Am. J. Prev. Med.* 25, 38–44.

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