MASTER THESIS

EFFECTS OF NIGHTLIFE NOISE ON RESIDENTS' INTENTIONS TO TAKE ACTION

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ABSTRACT

Aim: This study investigates the effects of nightlife noise on residents' intentions to take action against the noise.

Method: An online questionnaire was conducted among 161 respondents living in inner-city nightlife areas in medium-sized cities in the Netherlands.

Results: The results showed that noise annoyance (the negative appraisal of sound) and noise disturbance (being unable to do things that are possible to do without the sound) do not significantly affect residents' intentions to escalate their nightlife noise issues to local authorities. Additionally, the results show that situational variables seem to have less effect on outcome behaviors and attitudes compared to some select personal characteristics. Being a homeowner results in more severe stress-related outcomes such as annoyance, disturbance, dissatisfaction, and taking action intentions. Trustworthiness of local authorities, and especially local authorities' ability and integrity, predicts more of the taking action construct than experiencing noise or any of the other variables in the model.

Conclusions: Reasons why people complain or take action seem to be closer related to who they are, instead of what situation they find themselves in. People owning their home are more concerned for their living environment, thus show more stress-related attitudes and behaviors. People who don't have faith in their local authorities are more inclined to complain to them and take other forms of action such as becoming politically active.

Keywords: nightlife, noise annoyance, noise disturbance, residential satisfaction, coping

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1 INTRODUCTION

Noise, which is any type of sound perceived as annoying or disturbing, has a negative effect on quality of life and health, sometimes even causing illness (Stansfeld & Matheson, 2003). Most of the environmental noise research has focused on the impact of noise from transportation such as road traffic, trains, and aircrafts. In fact, these sources of noise are deemed to be the largest contributors of noise around the globe (Navrud, 2002).

Research on combined and separate effects of environmental noise from different sources found that the source of noise has an influence on the effect of noise on people (Miedema, 2004). Nightlife noise is frequently mentioned in nightlife and noise studies; however, nightlife noise effects had not been studied using the standardized scales made to allow comparison of studies as advised by the World Health Organization (WHO) (e.g. Calafat, Juan & Duch, 2009; Roberts & Eldridge, 2009; Roberts & Turner, 2005). These scales are validated for use in transportation research, however have not yet been validated for other sources of noise.

Nightlife is a significant part of western culture, with many people enjoying bars and nightclubs every week (Bolier, Voorham, Monshouwer, Van Hasselt & Bellis, 2011; Parker & Williams, 2003). Consequently, nightlife social studies among residents have mainly focused on side-effects of nightlife, such as noise from loud music and people talking outside the nightlife venues. Although this is not something of just the last few years, there are still side effects of nightlife unexplored or underexplored.

Local residents have their own methods of coping with the nightlife noise, focusing on aspects they can control (Matthews, Zeidner & Roberts, 2015). However, people who lack the ability to overcome the effects of noise, experience stress as a response (Lazarus, 1991). Examples of coping methods to overcome effects of noise would be to wear earplugs, insulate the house, or even to complain to the neighbors to keep the volume down. However, complaining actually seldom happens, even in situations experienced by residents as highly annoying and disturbing (van Wiechen, Franssen, de Jong & Lebret, 2002).

This research looks at the relationship between noise experience in nightlife residential areas and intentions to take action against the noise. The main question this study tries to answer is:

To what extent does experiencing noise affect intentions to take action against the noise in residents living in inner-city nightlife areas in the Netherlands?

To answer this question, literature research was conducted to come up with hypotheses related to the relationship between noise experience and intentions to take action. Consequently, this resulted in a conceptual model of the relationship between experiencing noise and taking action. A quantitative research is conducted using data from an online survey distributed among residents living in nightlife areas in inner-cities in the Netherlands. The resulting data serves as input for model- and hypothesis testing using confirmatory factor analysis with IBM SPSS Amos 22. Finally, the resulting model- and hypothesis findings are reported and used to elaborate on the knowledge-base of noise experience and its effects on intentions to take action.

2 THEORETICAL FRAMEWORK

This chapter discusses the literature study and theoretical framework regarding all things related to noise. Subsequently its predecessors and effects on human behavior are looked at in relation to noise. As the research focuses on noise in residential nightlife areas, this setting will be the context for all hypotheses. This chapter starts with the concept of noise and elaborates on that by looking at the way it is perceived and the variables that are related to it. Then noise as a variable is put in an environmental stress context and explained using relationships between causes and effects. Lastly, the model used for this research is proposed and its hypotheses are stated.

2.1 NOISE

The general definition of noise, unwanted sound, demonstrates its subjective nature. As González (2014) puts it, noise is a form of environmental pollution which has a detrimental effect on physiological health and psychological well-being (González, 2014; Hurtley, 2009). Thus, noise has a profound effect on the people experiencing it. Noise is experienced differently by different people, meaning any specific sound can be music to one person, while it is noise to another. The distinction between noise and sound is based on a negative affective evaluation. Noise has direct and indirect effects on people. Direct effects generally appear after being exposed to 85-90 decibels or more of continuous noise (Stansfeld & Matheson, 2003). Direct effects include progressive loss of hearing and increased hearing sensitivity and even tinnitus. Indirect effects generally appear due to environmental noise. Environmental noise is any kind of noise present in the direct or indirect surroundings of the person affected, examples include noises such as people talking and yelling outside, the noise from traffic, or even the noise from a refrigerator in the room. Environmental noise affects people by disturbing them in their activities by making it harder to relax, communicate, focus or sleep (Guski, 1999; Marquis-Favre, Premat & Aubrée, 2005).

2.2 NOISE ANNOYANCE AND NOISE DISTURBANCE

According to research among experts in noise, noise annoyance is a *"psychological concept which describes a relation between an acoustic situation and a person who is forced by noise to do things he/she does not want to do, who cognitively and emotionally evaluates this situation and feels partly helpless*" (Guski, Felscher-Suhr &

Schuemer, 1999, p. 525). Ouis (2001) uses a similar definition, defining it as a feeling of displeasure, nuisance, or irritation. Additionally, Ouis explains that noise disturbance is a negative experience which makes it harder or impossible to do daily tasks unhindered that are possible without the noise.

This research defines noise annoyance as the negative appraisal of sound, whereas noise disturbance is defined as being unable to do things that are possible to do without the sound. The noise annoyance and noise disturbance aspects are not fully represented in the original standardized noise annoyance scales recommended by the WHO (Fields, De Jong, Gjestland, Flindell, Job, Kurra & Guski, 2001). The noise annoyance scales recommended by the WHO only consist of (long term) noise annoyance questions without asking about behavioral consequences or aspects of the noise, thus disregarding the disturbance effect of noise. However, noise disturbance is added in questionnaires in later studies supplementing the noise annoyance measurements (e.g. Miedema, 2007; Oiamo, Luginaah & Baxter, 2015).

2.3 Noise Sensitivity

Although the amount of noise logically affects noise experience, it is not the only contributor to the effects on psychological well-being. Guski found that the amount of noise only explains about 30% of the variance in noise annoyance (1999). As far as predictors for noise annoyance goes, sensitivity to noise has been found to be the next biggest predictor for general noise annoyance (e.g. Guski, 1999; Oiamo, Luginaah & Baxter, 2015; Paunović, Jakovljević & Belojević, 2009). Noise sensitivity is an evaluation of noise endurance of the respondents, measuring the extent of respondents' awareness of and emotional evaluations of the noise (Guski, 1999). Miedema and Vos (2003) found that noise sensitivity does not have a relationship with noise exposure, however it changes the influence noise exposure has on noise annoyance and noise disturbance. Additionally, noise sensitivity was found to have an effect on reactions with a strong affective component. Noise sensitivity is generally measured using self-reported answers to questions regarding overall noise sensitivity, attitudes towards noises, or regarding noise in specific contexts. In essence, noise sensitive people rate the negative qualities of noise higher than non-sensitive people. This leads to the following hypotheses:

H1: Noise Sensitivity increases Noise Annoyance

H2: Noise Sensitivity increases Noise Disturbance

2. 4 Attitude Towards Noise Source

As with some of the earlier scales measuring noise sensitivity, such as the Weinstein Noise Sensitivity scale, attitude towards the noise source can be a predictor for noise annoyance (Weinstein, 1978). A fearful attitude towards aircraft was found to be a strong predictor for noise annoyance due to aircraft noise (Fields, 1992; Guski, 1999; Miedema, 2007). This leads to the following hypotheses:

H3: Positive Attitude Towards Nightlife reduces Noise Annoyance

H4: Positive Attitude Towards Nightlife reduces Noise Disturbance

2.5 Socio-demographic factors affecting noise experience

Some additional antecedents to annoyance, as found in earlier research, are age and homeownership. Noise annoyance is believed to increase until high ages (unspecified), after which it lessens again. Homeownership is linked to higher concern regarding the direct environment of the home. These were found over the course of various studies on noise annoyance (E.g. Miedema, 2007; Miedema and Vos, 1999). This leads to the following hypotheses:

H5: Age increases Noise Annoyance

H6: Age increases Noise Disturbance

H7: Homeownership increases Noise Annoyance

H8: Homeownership increases Noise Disturbance

2.6 Environmental stress

Noise is a form of environmental pollution which, according to Lazarus (1991), causes stress. This noise-stress relationship can be approached using an environmental stress model. An earlier model to explain the effect of noise on people looks like a short loop in which noise gets followed by appraisals, which are followed up by coping behavior, looping back into the noise variable. Coping behavior is any kind of behavior or action aimed at reducing the negative effects of the noise. This model can be seen in Figure 1 below.

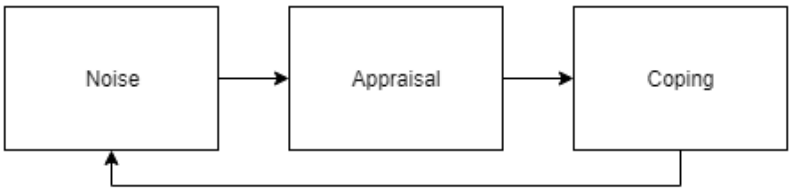

Figure 1. A conceptual model of the Psychological Stress Theory related to noise (Guski, 1999).

This conceptual model shows that noise is given an affective evaluation in the appraisal stage, which then gets followed up by coping behavior depending on the severity of the negative evaluation. After the coping behavior is complete, the negative association with the noise should be reduced. Other more recent models, such as Bell's eclectic model of human-environment interaction (Bell, Green, Fisher & Baum, 2001), seen below in Figure 2, give a more complete overview of the environmental stress model and the role coping has in the relationship between the stressor and its effect.

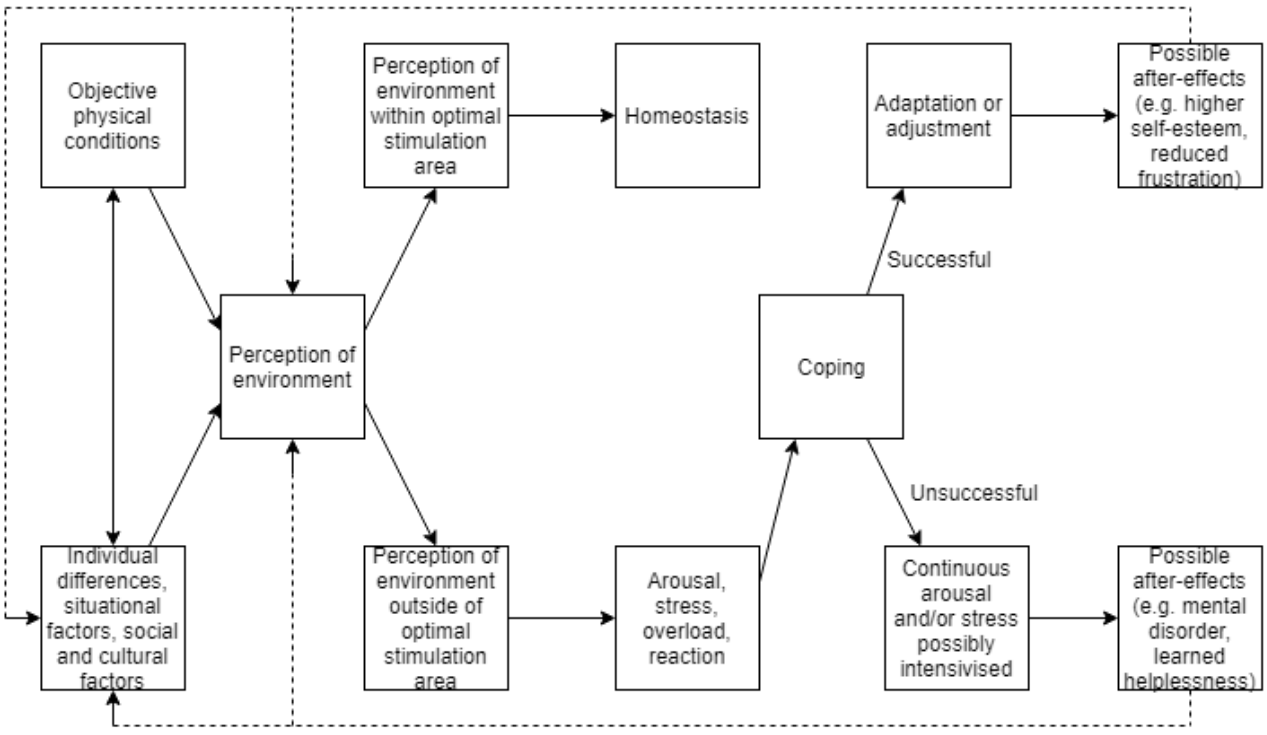

Figure 2. Bell's Eclectic Model of Human-Environment Interaction (Bell, Green, Fisher & Baum, 2001). A more complete overview of the Environmental Stress Model this research is based on.

Bell's Eclectic Model of Human-Environment Interaction shows that coping behavior can both be successful and unsuccessful. These outcomes feed back into the subjective experience of noise and will either have a positive or negative effect on the perceived stress situation. The model shows that humans strive for homeostasis, an optimal situation resulting in less stress and a more positive self-evaluation. Essentially, the successfulness of coping behavior has a defining effect on the outcomes of the environmental stressor.

2.7 COPING WITH NOISE

Coping encompasses many different behavioral and cognitive actions people perform in attempts to reduce the effects of (environmental) stress (Duhachek, 2005). As seen in the environmental stress models, coping and its successfulness is a central concept that affects the outcomes of environmental stressors. Or, as Lazarus (1991) puts it, environmental stress is a result of the inability to cope with environmental demands. Guski (1999) adds to this by mentioning that "*environmental noise sources cannot be turned off directly, but they could be negotiated or reduced, and indirect coping strategies can also be very effective in reducing the Noise Annoyance*" (p. 51). Thus, literally turning a blind eye, or deaf ear in this case, is not an option when coping with noise. As different coping behavioral and cognitive actions exist, it is interesting to study each of these coping behaviors in relation to the experience of noise and consequences of noise.

The specific type of actions performed to cope with noise differ between individuals, as coping is both influenced by situational factors and personality traits (Matthews, Zeidner & Roberts, 2015). People have preference for a subset of coping strategies and choose from these depending on the situation they are in. People's coping strategies are based on their likelihood to display certain coping behaviors, and not on the extent of displaying coping behaviors. Thus, people will either display certain coping behaviors, or they will not. According to research done by Duhachek (2005) on coping behaviors, people exhibit eight different coping behaviors, these coping behaviors including matching examples can be found in Table 1 below.

Table 1. *Coping behaviors according to Duhachek (2005) including examples.*

Coping	Example in residential nightlife area context
Active coping dimension	
Action Coping	Insulating the house to reduce the noise;
Rational Thinking Coping	Understand that living in a nightlife area comes with its challenges;
Positive Thinking Coping	Look at the bright side of living in an exciting area with bars;
Expressive Support Seeking coping dimension	
Emotional Venting Coping	Express frustrations about the noise;
Instrumental Support Coping	Ask how neighbors deal with the noise from the bar;
Emotional Support Coping	Talk to friends about the effect the noise has;
Avoidance coping dimension	
Avoidance Coping	Look for distraction through ambient music at home;
Denial Coping	Ignore the noise as much as possible.

Note: examples in the residential nightlife area context are provided by the researcher.

Additionally, Duhachek (2005) found that these eight coping behaviors could be divided over three separate coping dimensions: active coping dimension, expressive support seeking coping dimension, and avoidance coping dimension. The active coping dimension consists of action coping, rational thinking coping, and positive thinking coping. The expressive support seeking coping dimension consists of emotional support coping, instrumental support coping, and emotional venting coping. And finally, the avoidance coping dimension consists of avoidance coping and denial coping. These dimensions group the behaviors according to covariances found in Duhachek's (2005) research on the coping behaviors. Thus, showcasing coping behaviors from the active coping dimension will likely co-occur with other coping behaviors from that same dimension, likewise for the other two dimensions.

Researchers do not agree on the type of influence coping has in the environmental stress models. Guski believes coping is a moderator, believing that it was entirely down to personality traits as to which type of coping was used (1999). The coping variable covaries with the annoyance variable, thus these two might depend on each other. However, other models and theories put coping as a mediator between noise and noise annoyance, being a primary reaction to the noise itself and then looping after the noise annoyance or stress response, based on the success of the coping behavior and the severity of the noise stress response (Bell, Green, Fisher, and Baum 2001). This leads to the following hypotheses:

H9: Noise Annoyance increases likelihood of exerting Coping Behaviors

a: Action Coping, b: Rational Thinking Coping, c: Positive Thinking Coping, d: Emotional Venting Coping, e: Instrumental Support Coping, f: Emotional Support Coping, g: Avoidance Coping, h: Denial Coping

H10: Noise Disturbance increases likelihood of exerting Coping Behaviors

a: Action Coping, b: Rational Thinking Coping, c: Positive Thinking Coping, d: Emotional Venting Coping, e: Instrumental Support Coping, f: Emotional Support Coping, g: Avoidance Coping, h: Denial Coping

2.8 Residential Satisfaction

Satisfaction is a fundamental concept in social studies, especially in marketing research, as it has been studied in excess for insights in customer satisfaction and subsequent customer retention (Aigbavboa & Thwala, 2013). Satisfaction occurs when a situation is better than expected, whereas dissatisfaction occurs when a situation is worse than expected. Living in a nightlife area comes with its fair share of problems. Anti-social behavior and environmental nuisances, such as noise, are some of the main issues found in literature focusing on nightlife (e.g. Calafat, Juan & Duch, 2009; Roberts, 2004). Although nightlife noise is frequently mentioned in studies on nightlife disturbances, no studies have been done on the effect of nightlife noise on noise annoyance and noise disturbance (e.g. Bolier, Voorham, Monshouwer, van Hasselt & Bellis, 2011; Roberts, 2004). Noise experience happening within the confines of a person's home or neighborhood might logically affect their residential satisfaction. When noise is a frequent occurrence during the night, residential satisfaction might dwindle. As such residential dissatisfaction can be seen as a stress response to an unfavorable or even harmful residential situation (Hamersma, Heinen, Tillema & Arts, 2015). Residential satisfaction was found to be related to place attachment and possibility to relax (Pedersen, 2015). Residential dissatisfaction should then occur when noise annoys residents, as well as when noise disturbs the possibility to relax or rest and recover. Nightlife noise consists of a variety of sounds related to (loud) music from venues seeping into the environment and people talking outside of the bars or clubs (Roberts, 2004). Subsequently, an analysis for Internoise 2016 on recreational noise in an urban nightlife area found that people talking is the main source of annoying or disturbing noise.

This noise is more present and stays consistent throughout the night compared to the perceived music outside the pubs (Cerniglia, Bisceglie & Zambon, 2016). This leads to the following hypotheses:

H11: Noise Annoyance reduces Residential Satisfaction

H12: Noise Disturbance reduces Residential Satisfaction

H13: The relationship between Noise Annoyance and Residential Satisfaction is mediated by the likelihood of exerting Coping Behaviors

a: Action Coping, b: Rational Thinking Coping, c: Positive Thinking Coping, d: Emotional Venting Coping, e: Instrumental Support Coping, f: Emotional Support Coping, g: Avoidance Coping, h: Denial Coping

H14: The relationship between Noise Disturbance and Residential Satisfaction is mediated by the likelihood of exerting Coping Behaviors

a: Action Coping, b: Rational Thinking Coping, c: Positive Thinking Coping, d: Emotional Venting Coping, e: Instrumental Support Coping, f: Emotional Support Coping, g: Avoidance Coping, h: Denial Coping

2.9 Intention To Complain or Take Action

In consumer research, satisfaction was found to be related to customer complaints (Fornell, Johnson, Anderson, Cha & Bryant, 1996). TNO-PG and RIVM (1999) studied consequences of aircraft noise exposure surrounding Schiphol airport in the Netherlands and found a relationship between higher annoyance levels and residential satisfaction. However, the researchers did not report anything on the relationship between residential satisfaction and complaints. As in the case of residential satisfaction, complaints generally go to a third party not directly related to the cause of the dissatisfaction, complaints might not be (as strongly) related to satisfaction. However, this has yet to be mentioned in literature, thus relying on existing consumer literature this study assumes residential satisfaction is related to complaints or complain intentions.

As noise complaint studies found that there is no significant relationship between noise exposure and the intention to complain about the noise. Noise complain behavior seems to be more closely linked to individual people, as opposed to an area or situation (Guski, 1977; Luz, Raspet, Schomer 1983). Most noise complaints were found to be repeated complaints done by the same people who complained already before. However, in a more recent study on noise complaints surrounding Schiphol Airport in the Netherlands, a relationship was found between noise exposure and complaints, mediated by a variety of variables such as noise sensitivity, annoyance, and disturbance (van Wiechen, Franssen, de Jong & Lebret, 2002).

Complaining behavior does not equal complaining intentions or intention to take action, as behavior is closer related to the ability and its salience with a person's personality. The main contributor to not complain is having no faith in the outcome of complaining (Maziul, Job & Vogt, 2005). Duhachek proposes that complaining is part of any of the active coping dimension behaviors, by reducing the noise through indirect means (2005). Intentions to complain are less affected by a person's ability to complain, and more related to a person's feeling of injustice and are a result of a mental accounting-process in which the perceived outcomes are considered (Lervik-Olsen, Andreassen & Streukens, 2016). This leads to the following hypotheses:

H15: Noise Annoyance increases Intention To Take Action

H16: Noise Disturbance increases Intention To Take Action

H17: Residential Satisfaction decreases Intention To Take Action

H18: The likelihood to exert Active Coping Behaviors increases Intention To Take Action

H19: The relationship between Noise Annoyance and Intention To Take Action is mediated by the likelihood to exert Coping Behaviors

a: Action Coping, b: Rational Thinking Coping, c: Positive Thinking Coping, d: Emotional Venting Coping, e: Instrumental Support Coping, f: Emotional Support Coping, g: Avoidance Coping, h: Denial Coping

H20: The relationship between Noise Disturbance and Intention To Take Action is mediated by the likelihood to exert Coping Behaviors

a: Action Coping, b: Rational Thinking Coping, c: Positive Thinking Coping, d: Emotional Venting Coping, e: Instrumental Support Coping, f: Emotional Support Coping, g: Avoidance Coping, h: Denial Coping

2.10 Local authorities' trustworthiness in dealing with noise complaints

As complaining in the context of noise happens often to local authorities, confidence in or trustworthiness of their handling of the situation would be important in deciding whether to complain or not. Trustworthiness of local authorities is an evaluation of the ability, benevolence and integrity of the municipality or police officers (Colquitt & Rodell, 2011). An evaluation of trustworthiness is not only related to a single entity or person, but also related to an organization represented by them (Jacobsen, 1999). Thus, the evaluation of the local police's trustworthiness or the municipality's trustworthiness should be similar. Positively evaluating the Trustworthiness Of Local Authorities in dealing with noise complaints should positively affect the Intention To Take Action regarding noise. This leads to the following hypotheses:

H21: Trustworthiness Of Local Authorities increases Intention To Take Action

2.11 Hypotheses and model

All proposed hypotheses are stated below in Table 2. Additionally, the proposed conceptual model including the hypotheses can be found below in Figure 3.

Table 2. *All proposed hypotheses for this research.*

	Hypothesis
H1	Noise Sensitivity increases Noise Annoyance
H2	Noise Sensitivity increases Noise Disturbance
H3	Positive Attitude Towards Noise Source reduces Noise Annoyance
H4	Positive Attitude Towards Noise Source reduces Noise Disturbance
H5	Age increases Noise Annoyance
H6	Age increases Noise Disturbance
H7	Homeownership increases Noise Annoyance
H8	Homeownership increases Noise Disturbance
H9	Noise Annoyance increases likelihood of exerting Coping Behaviors
H10	Noise Disturbance increases likelihood of exerting Coping Behaviors

H11 Noise Annoyance reduces Residential Satisfaction
H12 Noise Disturbance reduces Residential Satisfaction
H13 The relationship between Noise Annoyance and Residential Satisfaction is mediated by the likelihood of exerting Coping Behaviors
H14 The relationship between Noise Disturbance and Residential Satisfaction is mediated by the likelihood of exerting Coping Behaviors
H15 Noise Annoyance increases Intention To Take Action
H16 Noise Disturbance increases Intention To Take Action
H17 Residential Satisfaction decreases Intention To Take Action
H18 The likelihood to exert Active Coping Behaviors increases Intention To Take Action
H19 The relationship between Noise Annoyance and Intention To Take Action is mediated by the likelihood to exert Coping Behaviors
H20 The relationship between Noise Disturbance and Intention To Take Action is mediated by the likelihood to exert Coping Behaviors
H21 Trustworthiness Of Local Authorities increases Intention To Take Action

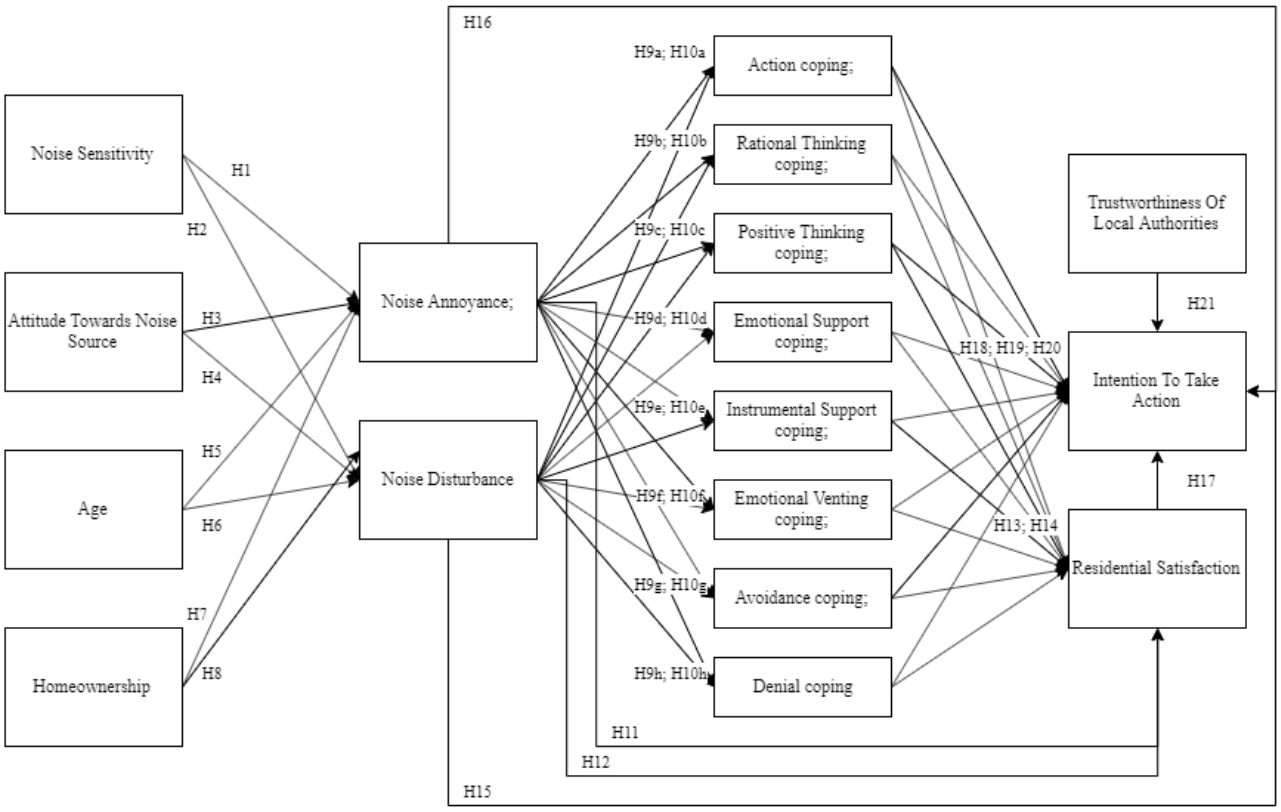

Figure 3. Conceptual model including hypotheses.

3 METHOD

This chapter explains the research design and methods used to test the model and hypotheses stated in the previous chapter. Furthermore, this chapter describes the participants included in the research and how these participants were recruited, as well as how each of the variables were measured.

3.1 RESEARCH DESIGN

To understand the noise annoyance and noise disturbance concepts in relation to residents and their appeals to the local authorities, a conceptual model was made based on existing literature. This model has been tested using a quantitative questionnaire to measure the strength of the relationships between each of the variables. This questionnaire was conducted using Qualtrics, an online survey tool. The questions were available in both English and Dutch. Existing scales were used for all variables except for the intention to take action variable.

3.2 INSTRUMENTS

All variables were measured on a 5-point scale using scales from previous literature on each of these variables and relationships. Reliability of all constructs was measured using Cronbach's Alpha. For constructs consisting of two-item scales, Pearson's correlation fails to measure reliability and coefficient alpha underestimates true reliability; thus, reliability for the two-item constructs is additionally tested using Spearman-Brown coefficient tests (Eisinga, Te Grotenhuis & Pelzer, 2013). Reliability of the scales used for the constructs can be seen in Table 3 and Spearman-Brown coefficients for two-item constructs can be found in Table 4.

RELIABILITY SCORES

Each of the reliability scores together with the means and standard deviations can be found in Table 3 below. Only the denial coping construct had one item removed to increase the coefficient from $\alpha = .67$ (N of items = 3) to $\alpha = .74$ (N of items = 2).

Table 3. *Reliability, mean and standard deviation scores for all the constructs in the model*

Variables	M	SD	α	N of items	Items deleted
Noise Annoyance	2.77	1.16		1	0
Noise Disturbance	2.32	.81	.83	4	0
Noise Sensitivity	2.66	.85	.79	2	0
Nightlife Attitude	3.39	.61	.86	6	0
Action coping	2.35	.99	.91	7	0
Rational Thinking coping	3.23	1.21	.91	5	0
Positive Thinking coping	3.08	1.09	.91	4	0
Emotional Support coping	2.10	.87	.85	4	0
Instrumental Support coping	1.84	.84	.86	3	0
Emotional Venting coping	2.32	.88	.86	6	0
Avoidance coping	3.05	1.13	.93	4	0
Denial coping	1.30	.57	.74	2	1
Trustworthiness	3.11	.82	.95	12	0
Residential Satisfaction	3.92	.83	.61	2	0
Taking Action	2.37	1.02	.86	5	0

Note: all variables are measured on a 5-point Likert scale.

Table 4 below shows the Spearman-Brown scores for the two item constructs used in this research.

Table 4. *Spearman-Brown scores for Noise Sensitivity, Denial coping, and Residential Satisfaction*

Variables	Spearman-Brown coefficient
Noise Sensitivity	.79
Denial coping	.75
Residential Satisfaction	.61

NOISE ANNOYANCE AND NOISE DISTURBANCE

Long term (12 months) noise annoyance (M = 2.77, SD = 1.16) and noise disturbance (M = 2.32, SD = .81) were measured using standardized scales advised by the WHO (Fields, De Jong, Gjestland, Flindell, Job, Kurra & Guski, 2001). The question asked for noise annoyance was: "*thinking about the last 12 months, when you are here at home, how much are you bothered, disturbed or annoyed by noise from nightlife?*" with a scale running from "*Not at all*" (1) to "*Extremely*" (5). Noise annoyance is generally reported as the percentage of highly annoyed people in relation to the amount of noise experienced. Exposure-response relationship between noise exposure expressed as day-night level (DNL) or day-evening-night level (DENL) and noise annoyance have been researched and reported by Miedema and Oudshoorn (2001). For comparison, both the overall mean level

of the noise annoyance and the percentage highly annoyed (combining the two most annoyed categories on a 5-point verbal rating scale) are reported as a function of the DNL and DENL of several sources of transportation noise. Similar research or comparison material is not available for other sources of noise. As this study did not measure noise using sound pressure levels (dB), this is not fully possible. However, the percentage of highly annoyed respondents can still be reported. 24 respondents (14.91%) replied with "Very" while 17 respondents (10.56%) reported with "Extremely." Thus, 41 respondents (25.47%) reported being highly annoyed by the noise they experience from nightlife.

Noise disturbance was measured using an adaptation of the annoyance question as proposed by Oiamo et al. (2015). As these variables are measured using only a single question or sometimes using two highly similar questions, the questions were elaborated using additional questions related to annoyance and disturbance taken from a proposal of fundamental items for social surveys on noise problems (Namba, Kuwano, Kaku, Kuno, Sasaki, Tachibana & Yamada, 2010). The noise disturbance question asked was: "*Thinking about the last 12 months when you are here at home, how frequently does noise from nightlife disturb you while you try to ...?*" with four categories consisting of sleep (M = 2.83, SD = 1.02), listen to other people or to the radio or tv (M = 2.02, SD = .92), concentrate on reading and writing (M = 2.11, SD = 1.00), and relax (M = 2.30, SD = 1.07). The scales used for these questions ranged from "*Never*" (1) to "*Almost always*" (5). Noise disturbance has an α of .83 with an N of items of 4.

Noise Sensitivity

Noise sensitivity (M = 2.66, SD = .85) was measured using two questions. The first question asked about overall noise sensitivity, which is the same question asked in other studies on noise and noise annoyance (e.g. Miedema, 2004; Pedersen, 2015). The question participants were asked was "*how sensitive to noise are you?*" The second question asked about the respondent's believed noise sensitivity compared to others. Answer options ranged from "*Not at all sensitive*" (1) to "*Extremely sensitive*" for the first question and "*Much less sensitive*" (1) to "*Much more sensitive*" (5) to the second question. Both noise sensitivity questions follow a normal distribution. The noise sensitivity construct measures .79 on the Spearman-Brown reliability coefficient.

Attitude Towards Nightlife

Attitude towards nightlife (M = 3.39, SD = .61) was measured using attitude questions aimed at nightlife in general and questions aimed at nightlife surrounding the respondent's residential area. Scales were adapted from Hamersma et al. (2015) to reflect the nightlife context as opposed to a highway context. The attitude construct had a Cronbach's Alpha score of α = .86 with 6 items. Examples of questions asked are: "*do you feel more positive or negative about nightlife in general?*" and "*do you feel more positive or negative about nightlife establishments in your neighborhood?*" Answer options ranged from "*Extremely negative*" (1) to "*Extremely positive*" (5).

Socio-demographic variables

Socio-demographic variables measured includes general socio-demographic questions such as age and gender. An additional question asked for the specific context of this study was a question regarding homeownership. This variable was dummy coded as 0 for non-homeowner and 1 for homeowner.

Coping behavior

Coping behavior was measured using adaptations of Duhachek's consumer coping behavior scales (2005). The scales were adapted for use within this research on coping behaviors as a result of noise, instead of as a result of negative experience with a company. The coping behavior construct consists of 36 questions representing 8 different coping behaviors. The questions were asked using the following format: "*when you are confronted with noise, to what extent do you do any of the following things?*" in which for each of the 8 different coping behaviors the categories were displayed with a scale ranging from "*Never*" (1) to "*Almost always*" (5). Cronbach's Alpha scores ranged from α = .74, N of items = 2 (Denial Coping) to α = .93, N of items = 4 (Avoidance Coping) with all-but-one of the coping behavior constructs scoring above α =.80. Furthermore, the original Denial Coping construct consisted of three items. The item: "*When you are confronted with noise, to what extent do you do any of the following things? - Pretend that this never happened*" was removed to improve reliability from α = .67 to α = .74. The Denial coping construct measures .75 on the Spearman-Brown reliability coefficient.

Residential Satisfaction

Residential satisfaction (M = 3.92, SD = .83) is measured using two questions regarding respondents' house and neighborhood. Questions asked were: "*How satisfied are you with your home?*" and "*How satisfied are you with your neighborhood?*" This is in line with how residential satisfaction is measured in previous research (e.g. Bartels, Rooney & Müller, 2018; Hamersma, Heinen, Tillema & Arts, 2015; Pedersen, 2015). Answer options ranged from "*Very dissatisfied*" (1) to "*Very satisfied*" (5). The Residential Satisfaction construct measures .61 on the Spearman-Brown reliability coefficient..

Intentions To Take Action

Intentions to take action were measured using questions that assessed the likelihood that the resident would express his or her dissatisfaction by taking action towards the problem. (Bougie, Pieters & Zeelenberg, 2003; Namba, Kuwano, Kaku, Kuno, Sasaki, Tachibana & Yamada, 2010; Singh, 1990). Examples of questions asked included: "*How likely are you to call the police?*" and "*How likely are you to file an official complaint with the municipality?*" (M = 2.37, SD = 1.02, α = .86, N of items = 5). Answer options ranged from "*Extremely unlikely*" (1) to "*Extremely likely*" (5).

Trustworthiness Of Local Authorities

Trustworthiness of local authorities (M = 3.11, SD = .83, α = .95) is measured using questions regarding ability, benevolence, and integrity. These questions were taken from Colquitt's and Rodell's research on justice, trust and trustworthiness (2011). These questions were introduced shortly by stating: "The next few questions are about the local authorities in your area, this includes (but is not limited to) the municipality and the local police." An example of a question regarding ability is: "*To what extent do you agree with the following statement? The local authorities are known to be successful at the things they try to do.*" An example of a question regarding benevolence is: "*To what extent do you agree with the following statement? The local authorities will go out of their way to help me or the neighborhood.*" An example for a question regarding integrity is: "*To what extent do you agree with the following statement? The local authorities try hard to be fair in dealing with others.*" Answers to the questions ranged from "*Strongly disagree*" (1) to "*Strongly agree*" (5).

3.3 PROCEDURE

Respondents were informed about the questionnaire through a flyer with basic information regarding the research. This flyer also contained a direct link to the questionnaire and information regarding a small prize of five pairs of earbuds for sleeping that would be randomly sent out to respondents who participated and left their contact information. In the introduction of this questionnaire respondents were again informed of the background and goal of this questionnaire. Additionally, respondents were informed of the data policy of the study and ensured their data will be collected and processed entirely anonymous. An indication for the duration to fill in the questionnaire was given, and respondents were asked for permission to use the data they share by filling in the questionnaire.

After this initial part, respondents were asked to fill in general questions regarding socio-demographic questions, distance to closest nightlife establishment, their status regarding work (being a student, working fulltime and anything in between), and their residential satisfaction. The third part of the questionnaire measured nightlife attitude and noise-related questions. Followed by coping behaviors regarding the specific nightlife noise disturbance context. The fourth part contained questions regarding trustworthiness of local authorities and intention to take action. Finally, participants were asked whether there was anything else they would like to share and asked to leave their contact information if they wanted to have a chance to win one of the earbuds for sleeping.

3.4 RECRUITMENT AND PARTICIPANTS

The population of this research consists of people over the age of 18, living in or nearby nightlife areas in inner cities in the Netherlands. Residents were contacted through a form of clustered sampling by selecting cities in the Netherlands that are part of the G40 cities, a collective of 40 medium sized cities. Flyers informing residents about the research with a direct URL to the survey were posted to mailboxes in the inner-city area of these cities. The data was collected in a time period of two months from the second week of June 2019 to the second week of August 2019. During this period, approximately 1500 flyers were posted, resulting in 214 people filling in the survey. Of all participants, 53 were excluded because they did not live in or nearby nightlife areas or had not filled in the entire questionnaire. This leaves a sample size of n = 161.

The mean age of the sample is 38.25 years old with a standard deviation of 16.47. The age in the sample is not normally distributed. Age has a median of 31 and a minimum of 19 and maximum of 77. The age group of 20-to-29-year-olds are overrepresented in the sample. This overrepresentation could be explained by considering that inner-city life is more exciting than life in the suburbs and further out, thus better suited to the life of a younger person. Distribution of men and women in the sample does not differ significantly (One-sample t-test, df = 160, t = -.71, p-value = .48). Only 29% of the sample own or co-own their home. Almost half (49%) of all respondents work fulltime with the rest of the respondents mostly working part time (19%) or studying (16%).

Table 5. *Socio-demographics of the participants in this study*

Participants	N	%
Gender		
Male	85	53
Female	76	47
Age		
10 to 19	2	1
20 to 29	73	45
30 to 39	28	17
40 to 49	16	10
50 to 59	15	9
60 to 69	15	9
70 to 79	12	8
Homeownership		
Owner	46	29
Renter or other	115	71
Work/study		
Working fulltime	79	49
Working part time	30	19
Studying	26	16
Other	26	16

Note: not all groups add up to 100% due to rounding.

4 RESULTS

This chapter explains the results from analyzing the data and answers each of the individual hypotheses using this data. At first some general information is given on the noise annoyance and noise disturbance variables, as well as on the intentions to act on the noise variable. Afterwards the total model results are discussed.

4.1 CORRELATIONS

Table 8 below shows the correlations for each of the variables included in the model. As all of the variables appear normally distributed except for denial coping, a Pearson's Correlation test was conducted featuring all the variables. All correlations regarding the noise annoyance and noise disturbance variables are weak; however, they are significant for most of the correlations besides the denial coping – noise annoyance correlation.

Table 6. *Correlations for all model variables.*

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1 Age	1																
2 Homeownership	.45**	1															
3 Noise Sensitivity	-,04	.05	1														
4 Nightlife Attitude	-.01	-.01	-.16*	1													
5 Noise Annoyance	-.11	.09	.26**	-.41**	1												
6 Noise Disturbance	.00	.15	.35**	-.34**	.75**	1											
7 Action coping	-.02	.19*	.14	-.21**	.37**	.30**	1										
8 Rational Thinking coping	-.11	-.02	.11	-.20*	.20*	.16*	.40**	1									
9 Positive Thinking coping	-.07	-.02	-.34**	.39**	-.39**	-.29**	-.05	.22**	1								
10 Emotional Support coping	-.19*	.08	.27**	-.19*	.40**	.40**	.33**	.35**	.02	1							
11 Instrumental Support coping	-.10	.13	.16*	-.10	.27**	.30**	.38**	.36**	.01	.69**	1						
12 Emotional Venting coping	-.11	.02	.33**	-.13	.32**	.34**	.39**	.51**	.03	.58**	.50**	1					
13 Avoidance coping	-.22**	-.02	.09	-.09	.23**	.27**	.22**	.35**	.17*	.39**	.31**	.45**	1				
14 Denial coping	-.18*	.09	.14	-.05	.02	.17*	-.05	.01	.10	.20*	.13	.13	.16*	1			
15 Residential Satisfaction	.12	.06	-.08	.35**	-.33**	-.31**	-.18*	-.11	.25**	-.06	-.02	-.18*	-.01	.01	1		
16 Taking Action	.45**	.48**	.17*	-.24**	.30**	.32**	.30**	.00	-.22**	.26**	.33**	.17*	.01	.00	-.04	1	
17 Trustworthiness	-.31**	-.18*	-.18*	.46**	-.46**	-.45**	-.25**	-.09	.44**	-.10	-.05	-.11	-.02	.01	.28**	-.39**	1

Note: correlation values with * are significant at 0.05 level (2-tailed), correlation values with ** are significant at 0.01 level (2-tailed).

4.2 MODEL TESTING

The model was tested using IBM SPSS Amos 22 structural equation modelling. Error terms for each of the endogenous variables were set at 1. No covariances were specified in the initial model.

The data was found to be a bad fit to the conceptual model. χ^2 (df) = 702.46 (90), χ^2 p-value = < .001, Root Mean Square Error of Approximation (RMSEA) = .21, RMSEA 90% Confidence Interval lower bound = .19, RMSEA 90% Confidence Interval upper bound = .22, p-value for close-fit model = .00, Goodness of Fit Index (GFI) = .64, Comparative Fit Index (CFI) = .31, Standardized Root Mean Square Residual (SRMR) = .19. The tested model can be found below in Figure 4. For comparison, values for each of these model fit indices should be: χ^2 p-value > .05, RMSEA ≤ .05, GFI ≥ .95, CFI ≥ .95, SRMR ≤ .08 (Kline, 2011).

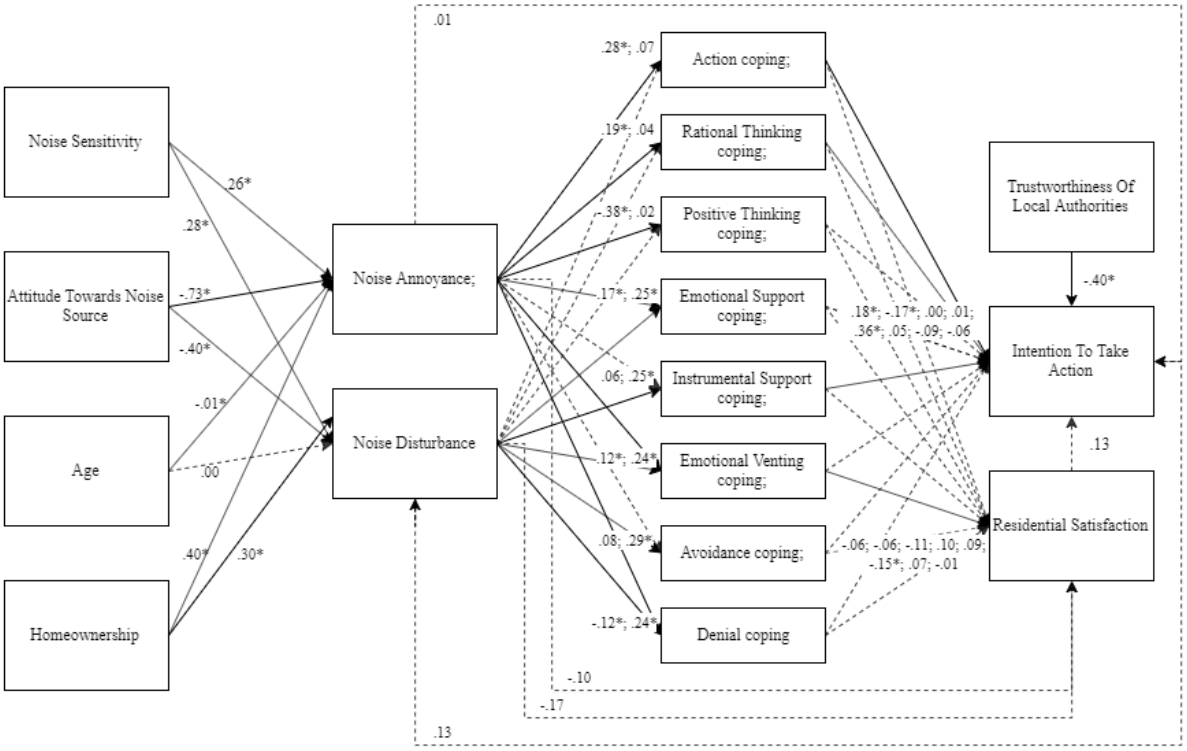

Figure 4. Results for the original research model with path coefficients. Note: values with * are significant at p-value < .05, dashed lines are non-significant. Sequential values separated by a semicolon are in order of left to right and top to bottom.

Seeing the bad fit indices of the data to the original model, the model modification indices were consulted to further understand the lack of fit between the data and the model. Subsequently, the

proposed modifications were considered and compared to the literature used as input for the original model. The results are covariances between the error terms for noise annoyance and noise disturbance based on the lack of noise or sound measurements, as well as covariances between the error terms for coping behaviors within their own coping dimensions as proposed by Duhachek (2005). Additionally, the modification indices suggested relationships between age and homeownership, the socio-demographic variables, and intentions to take action. These were not considered for the re-specification of this model as this changes the model fundamentally and would require more literature research to implement accurately.

The new model fit indices are: χ^2 (df) = 420.78 (84), χ^2 p-value = < .001, RMSEA = .16, RMSEA 90% Confidence Interval lower bound = .14, RMSEA 90% Confidence Interval upper bound = .17, p-value for close-fit model = .00, GFI = .77, CFI = .62, SRMR = .15. Figure 5 below shows the re-specified model.

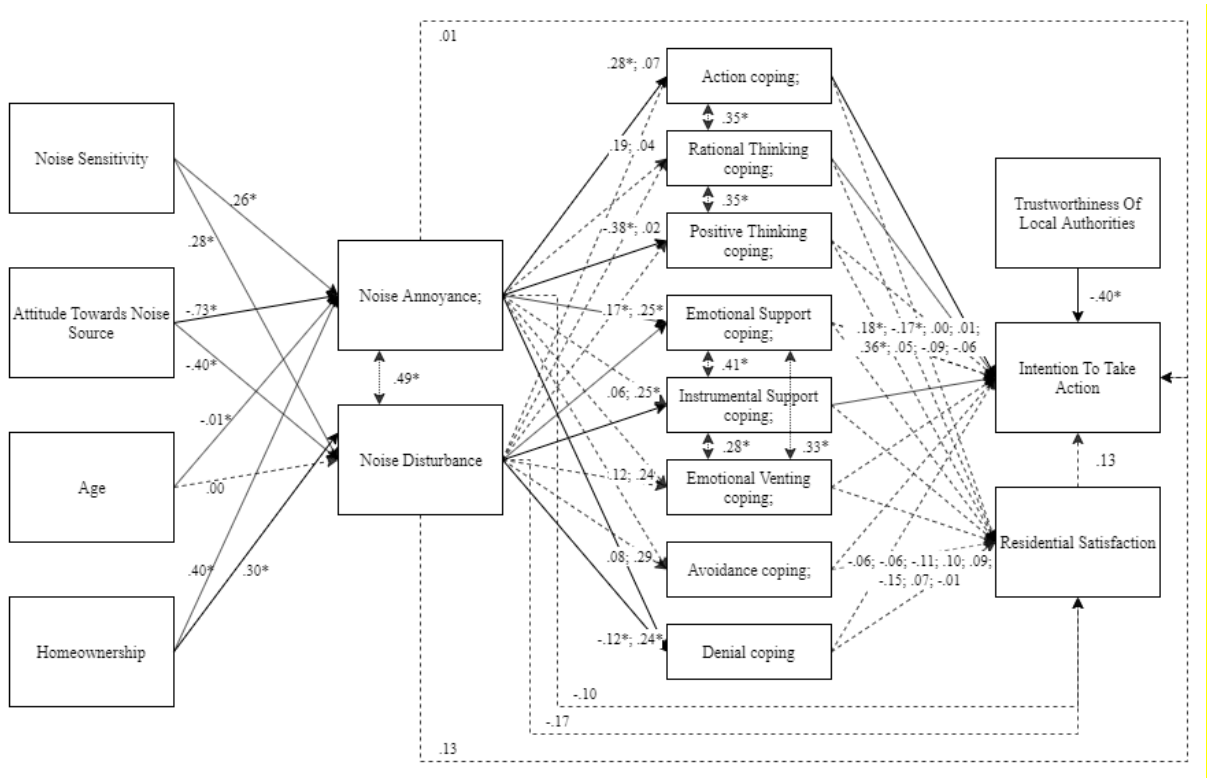

Figure 5. Results for the re-specified research model with path coefficients. Note: values with * are significant at p-value < .05, dashed lines are non-significant, dotted covariances are between error terms. Sequential values separated by a semicolon are in order of left to right and top to bottom.

Table 9 below shows the model fits for the original proposed conceptual model and the re-specified model and their comparison to the required model fit values for a good model fit.

Table 7. *Model fit for the proposed conceptual model and the respecified model.*

	χ^2 (df)	p-value	RMSEA	GFI	CFI	SRMR
Conceptual model	702.46 (90)	< .001	.21	.64	.31	.19
Re-specified model	420.78 (84)	< .001	.16	.77	.62	.15
Required fit values		> .05	≤ .08	≥ .90	≥ .95	≤ .08

Note: models were tested using IBM SPSS Amos 22 structural equation modelling. Required fit values are derived from Principles and Practice of Structural Equation Modeling (Kline, 2011).

4.3 DIRECT AND INDIRECT EFFECTS

The direct effects of the variables shown in Figure 5 above are expanded on in Table 10 below by stating the corresponding Critical Ratios and p-values.

Table 8. *Direct effects of each of the model relationships.*

Independent Variable	Dependent Variable	Estimate	C.R.	p-value
Age	Noise Annoyance	-.01	-2.30	.02
Age	*Noise Disturbance*	*.00*	*-.90*	*.37*
Homeownership	Noise Annoyance	.40	2.04	.04
Homeownership	Noise Disturbance	.30	2.15	.03
Noise Sensitivity	Noise Annoyance	.26	2.69	.01
Noise Sensitivity	Noise Disturbance	.28	4.17	< .001
Attitude Towards Nightlife	Noise Annoyance	-.73	-5.45	< .001
Attitude Towards Nightlife	Noise Disturbance	-.40	-4.23	< .001
Noise Annoyance	Action	.28	2.98	< .001
Noise Annoyance	*Rational Thinking*	*.19*	*1,55*	*.12*
Noise Annoyance	Positive Thinking	-.38	-3.67	< .001
Noise Annoyance	Emotional Support	.17	2.07	.04
Noise Annoyance	*Instrumental Support*	*.06*	*0.77*	*.44*
Noise Annoyance	*Emotional Venting*	*.12*	*1.41*	*.16*
Noise Annoyance	*Avoidance*	*.08*	*.68*	*.50*
Noise Annoyance	Denial	-.12	-2.10	.04
Noise Annoyance	*Residential Satisfaction*	*-.10*	*-1.21*	*.23*
Noise Annoyance	*Intention To Take Action*	*.01*	*.07*	*.94*
Noise Disturbance	*Action*	*.07*	*.50*	*.62*
Noise Disturbance	*Rational Thinking*	*.04*	*.22*	*.82*
Noise Disturbance	*Positive Thinking*	*.02*	*.12*	*.90*
Noise Disturbance	Emotional Support	.25	2.17	.03
Noise Disturbance	Instrumental Support	.25	2.11	.04
Noise Disturbance	*Emotional Venting*	*.24*	*1.97*	*.05*
Noise Disturbance	*Avoidance*	*.29*	*1.80*	*.07*
Noise Disturbance	Denial	.24	3.02	< .001
Noise Disturbance	*Residential Satisfaction*	*-.17*	*-1.45*	*.15*

Noise Disturbance	*Intention To Take Action*	*.13*	*.99*	*.32*
Action	*Residential Satisfaction*	*-.06*	*-.83*	*.41*
Rational Thinking	*Residential Satisfaction*	*-.06*	*-.94*	*.35*
Positive Thinking	*Residential Satisfaction*	*.11*	*1.70*	*.09*
Emotional Support	*Residential Satisfaction*	*.10*	*.98*	*.33*
Instrumental Support	*Residential Satisfaction*	*.09*	*.93*	*.35*
Emotional Venting	*Residential Satisfaction*	*-.15*	*-1.57*	*.12*
Avoidance	*Residential Satisfaction*	*.07*	*1.09*	*.28*
Denial	*Residential Satisfaction*	*-.01*	*-.13*	*.09*
Action	Intention To Take Action	.18	2.20	.03
Rational Thinking	Intention To Take Action	-.17	-2.4	.02
Positive Thinking	*Intention To Take Action*	*.00*	*-.02*	*.99*
Emotional Support	*Intention To Take Action*	*.01*	*.12*	*.90*
Instrumental Support	Intention To Take Action	.36	3.07	< .001
Emotional Support	*Intention To Take Action*	*.05*	*.50*	*.62*
Avoidance	*Intention To Take Action*	*-.09*	*-1.27*	*.20*
Denial	*Intention To Take Action*	*-.06*	*-.46*	*.65*
Residential Satisfaction	*Intention To Take Action*	*.13*	*1.46*	*.14*
Trustworthiness	Intention To Take Action	-.40	-3.92	< .001

Note: not-significant relationships are in italics. Results are taken from the IBM SPSS AMOS 22 Output of the model.

Mediation effects are found below in Table 11 and Table 12. However, (complete) mediation effects should be tested using four requirements 1) the cause affects the outcome, 2) the cause affects the mediator, 3) the mediator affects the outcome, and 4) the effect of the cause on the outcome is 0 in the combined model for complete mediation (Baron & Kenny, 1986). As can be seen in the results in Table 9 above, not all coping behaviors have a significant effect on the outcome variable. Additionally, AMOS is unable to predict the specific indirect effects for each of the variables (Perera, 2013). Thus, mediation effects for each of the individual coping behaviors are unable to be specified. Regardless, the results are reported below.

The direct, indirect and total effects of the noise annoyance and noise disturbance variables on residential satisfaction can be seen in Table 11 below, together with the direct effects of each of the coping behaviors.

Table 9. *Direct, indirect and total effects of model variables on Residential Satisfaction*

Variables	Direct β	Indirect β	Total β
Noise Annoyance	-.10	-.06	-.16
Noise Disturbance	-.17	.03	-.14
Coping			
Action	-.06	-	-.06
Rational Thinking	-.06	-	-.04
Positive Thinking	.11	-	.11
Emotional Support	.10	-	.10
Instrumental Support	.09	-	.09
Emotional Venting	-.15	-	-.15
Avoidance	.07	-	.07
Denial	-.01	-	-.01

Note: results are taken from the IBM SPSS AMOS 22 Output of the model.

Noise annoyance has a direct effect on residential satisfaction of β = -.10 and an indirect effect of β = -.06, making the total effect β = -.16. Noise disturbance has a direct effect on residential satisfaction of β = -.17 and an indirect effect of β = .03, making the total effect β = 0.14. However, the direct effect of noise annoyance and noise disturbance on residential satisfaction are not significant as well as all of the coping behaviors' effects on residential satisfaction.

The direct, indirect and total effects of the noise annoyance, noise disturbance, and coping behavior variables on intention to take action can be seen in Table 12 below, together with the direct effects of residential satisfaction and trustworthiness.

Table 10. *Direct, indirect and total effects of model variables on Intention To Take Action.*

Variables	Direct β	Indirect β	Total β
Noise Annoyance	.01	.03	.04
Noise Disturbance	.13	.05	.19
Coping			
Action	.18	-.01	.17
Rational Thinking	-.17	-.01	-.18
Positive Thinking	.00	.01	.01
Emotional Support	.01	.01	.03
Instrumental Support	.36	.01	.37
Emotional Venting	.05	-.02	.03
Avoidance	-.09	.01	-.08
Denial	-.06	.00	-.06
Residential Satisfaction	.13	-	.13
Trustworthiness	-.40	-	-.40

Note: results are taken from the IBM SPSS AMOS 22 Output of the model.

Noise annoyance has a direct effect on intention to take action of β = .01 and an indirect effect of β = .03, making the total effect β = .04. Noise disturbance has a direct effect on intention to take action of β = .13 and an indirect effect of β = .05, making the total (rounded) effect β = .19. However, the direct effect of noise annoyance and noise disturbance on intention to take action are not significant as well as some of the coping behaviors' effects on intention to take action. The effect of residential satisfaction on intention to take action is β = .13, however this effect is not significant either. Lastly, the effect of trustworthiness of local authorities on intention to take action is β = -.40.

4.4 Overview of hypotheses

The hypotheses and their validation are reported in Table 13 below.

Table 11. *All the hypotheses and their validation according to the data.*

	Hypothesis	β	p-value	Validation
H1	Noise Sensitivity increases Noise Annoyance	.26	< .001	Supported
H2	Noise Sensitivity increases Noise Disturbance	.28	< .001	Supported
H3	Positive Attitude Towards Noise Source reduces Noise Annoyance	-.73	< .001	Supported
H4	Positive Attitude Towards Noise Source reduces Noise Disturbance	-.40	< .001	Supported
H5	Age increases Noise Annoyance	-.01	.02	Rejected
H6	Age increases Noise Disturbance	.00	.37	Rejected
H7	Homeownership increases Noise Annoyance	.40	.04	Supported
H8	Homeownership increases Noise Disturbance	.30	.03	Supported
H9	Noise Annoyance increases likelihood of exerting Coping Behaviors			Partially supported
a	Action coping	.28	< .001	Supported
b	Rational Thinking coping	.19	.12	Rejected
c	Positive Thinking coping	-.38	< .001	Rejected
d	Emotional Support coping	.17	.04	Supported
e	Instrumental Support coping	.06	.44	Rejected
f	Emotional Venting coping	.12	.16	Rejected
g	Avoidance coping	.08	.50	Rejected
f	Denial coping	-.12	.04	Rejected
H10	Noise Disturbance increases likelihood of exerting Coping Behaviors			Partially supported
a	Action coping	.07	.62	Rejected
b	Rational Thinking coping	.04	.82	Rejected
c	Positive Thinking coping	.02	.90	Rejected
d	Emotional Support coping	.25	.03	Supported
e	Instrumental Support coping	.25	.04	Supported
f	Emotional Venting coping	.24	.05	Rejected
g	Avoidance coping	.29	.07	Rejected
h	Denial coping	.24	< .001	Supported
H11	Noise Annoyance reduces Residential Satisfaction	-.10	.23	Rejected
H12	Noise Disturbance reduces Residential Satisfaction	-.17	.15	Rejected

H13	The relationship between Noise Annoyance and Residential Satisfaction is mediated by the likelihood of exerting Coping Behaviors	-	-	Rejected
H14	The relationship between Noise Disturbance and Residential Satisfaction is mediated by the likelihood of exerting Coping Behaviors	-	-	Rejected
H15	Noise Annoyance increases Intention To Take Action	.01	.94	Rejected
H16	Noise Disturbance increases Intention To Take Action	.13	.32	Rejected
H17	Residential Satisfaction decreases Intention To Take Action	.13	.14	Rejected
H18	The likelihood to exert Active Coping Behaviors increases Intention To Take Action	-	-	Rejected
H19	The relationship between Noise Annoyance and Intention To Take Action is mediated by the likelihood to exert Coping Behaviors	-	-	Rejected
H20	The relationship between Noise Disturbance and Intention To Take Action is mediated by the likelihood to exert Coping Behaviors	-	-	Rejected
H21	Trustworthiness Of Local Authorities increases Intention To Take Action	-.40	< .001	Rejected

4.5 ELABORATING ON STRIKING RELATIONSHIPS IN THE MODEL

This chapter showcases the significant relationships between attitude towards noise source and noise annoyance, coping behaviors and intention to take action, and between trustworthiness of local authorities and intention to take action. The re-specified model shows that these relationships are stronger than the other relationships in the model; thus, this chapter takes an extra look at these

The relationship between attitude towards noise source and noise annoyance (and less so, but still noise disturbance) is a clear strong negative relationship of $\beta = -.73$ (and for Noise disturbance $\beta = -.40$). The correlations Table below in Table 14 shows the questions belonging to each of the variables and the correlations to the other variable questions involved.

Table 12. *Correlations for each of the Attitude, Annoyance, and Disturbance questions.*

Variable: Question	1	2	3	4	5	6	7	8	9	10	11
1 Q14.1 Attitude question: Nightlife in general	-										
2 Q14.2 Attitude question: Nightlife establishments in general	.65**	-									
3 Q14.3 Attitude question: Nightlife visitors in general	.46**	.47**	-								
4 Q14.4 Attitude question: Nightlife in my neighborhood	.46**	.52**	.45**	-							
5 Q14.5 Attitude question: Nightlife establishments in my neighborhood	.38**	.52**	.35**	.78**	-						
6 Q14.6 Attitude question: Nightlife visitors in my neighborhood	.34**	.38**	.61**	.64**	.59**	-					
7 Q17 Noise Annoyance	-.09	-.04	-.21**	-.46**	-.44**	-.47**	-				
8 Q18.1 Noise Disturbance: Sleep	-.02	-.08	-.16*	-.42**	-.39**	-.45**	.72**	-			
9 Q18.2 Noise Disturbance: Listen to other people or to the radio or tv	.00	-.01	-.07	-.21**	-.18*	-.21**	.49**	.38**	-		
10 Q18.3 Noise Disturbance: Concentrate on reading and writing	-.05	-.05	-.13	-.27**	-.22**	-.25**	.58**	.46**	.59**	-	
11 Q18.4 Noise Disturbance: Relax	-.11	-.12	-.18*	-.37**	-.31**	-.37**	.63**	.50**	.62**	. 71**	-

Note: correlation values with * are significant at 0.05 level (2-tailed), correlation values with ** are significant at 0.01 level (2-tailed). Full questions including means and standard deviations for each of the questions can be found in appendix A.

Questions regarding nightlife in the residents' neighborhood correlate stronger with the noise effect questions (with all significant correlations ranging from r = -.18 to r = -.47) compared to the questions regarding nightlife in general (with correlations ranging from r = .00 to r = -0.21). Furthermore, the noise disturbance: sleep variable correlates stronger with the neighborhood nightlife attitude questions (with correlations ranging from r = -.39 to r = -.45) than the other noise disturbance questions (all correlations of the other disturbance variables range from r = -.18 to r = -.37). Residents' noise annoyance and noise disturbance are stronger related to attitudes towards nightlife in their own environment than to residents' general nightlife attitudes. Additionally, sleep is most related to negative attitudes towards residents' nightlife attitude regarding their own neighborhood.

The relationship between coping behaviors and intention to take action differs for each of the coping behaviors. The coping behaviors that have a significant relationship with intention to take action are instrumental support coping (β = .36), action coping (β = .18), and rational thinking coping (β = -.17). The correlations Table below in Table 15 shows the questions belonging to each of these coping behaviors and intention to take action variables and the correlations to the other variable questions involved.

Table 13. Correlations for each of the Instrumental Support Coping, Action Coping, Rational Thinking Coping, and Intention To Take Action questions.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 Q20.1 Action	-																			
2 Q20.2 Action	.54**	-																		
3 Q20.3 Action	.79**	.56**	-																	
4 Q20.4 Action	.60**	.40**	.54**	-																
5 Q20.5 Action	.78**	.59**	.75**	.63**	-															
6 Q20.6 Action	.63**	.43**	.60**	.63**	.76**	-														
7 Q20.7 Action	.53**	.59**	.57**	.49**	.62**	.51**	-													
8 Q21.1 Rational thinking	.48**	.24**	.35**	.39**	.39**	.35**	.37**	-												
9 Q21.2 Rational thinking	.34**	.21**	.26**	.38**	.28**	.21**	.29**	.70**	-											
10 Q21.3 Rational thinking	.30**	.11	.20*	.33**	.23**	.21**	.19*	.64**	.69**	-										
11 Q21.4 Rational thinking	.31**	.10	.20*	.33**	.26**	.21**	.21**	.64**	.65**	.89**	-									
12 Q21.5 Rational thinking	.31**	.16*	.23**	.39**	.29**	.20*	.21**	.50**	.57**	.67**	.67**	-								
13 Q24.1 Instrumental Support	.32**	.23**	.27**	.25**	.34**	.28**	.27**	.24**	.24**	.29**	.26**	.32**	-							
14 Q24.2 Instrumental Support	.33**	.29**	.28**	.25**	.33**	.25**	.29**	.29**	.25**	.27**	.25**	.35**	.75**	-						
15 Q24.3 Instrumental Support	.26**	.15	.27**	.25**	.31**	.23**	.25**	.19*	.20*	.28**	.28**	.33**	.58**	.68**	-					
16 Q31.1 Intention To Take Action	.25**	.34**	.26**	.04	.23**	.15	.16*	.08	-.01	.01	-.02	.00	.27**	.26**	.22**	-				
17 Q31.2 Intention To Take Action	.30**	.31**	.31**	.18*	.31**	.19*	.18*	.05	.01	.00	-.04	.05	.26**	.26**	.23**	.73**	-			
18 Q31.3 Intention To Take Action	.15	.26**	.16*	.02	.12	-.02	.14	.03	-.06	-.05	-.08	-.02	.13	.21**	.17*	.42**	.44**	-		
19 Q31.4 Intention To Take Action	.18*	.32**	.31**	.12	.20*	.10	.23**	.05	-.03	-.02	-.04	.03	.25**	.25**	.26**	.46**	.52**	.68**	-	
20 Q31.5 Intention To Take Action	.23**	.27**	.30**	.14	.23**	.10	.15	.07	-.01	-.04	-.06	.02	.28**	.27**	.15	.47**	.49**	.63**	.73**	-

Note: correlation values with * are significant at 0.05 level (2-tailed), correlation values with ** are significant at 0.01 level (2-tailed). Full questions including means and standard deviations for each of the questions can be found in appendix A.

The instrumental support questions consistently correlate with the intention to take action questions, all significant correlations lie between r = .17 and r = .28, with the lowest not significant r = .13 (Instrumental Support Q1 – Intention To Take Action Q3). The significant action questions correlations with intention to take action questions vary within the Action questions going from r = .16 to r = .34, with the lowest not significant r = .02/-.02 (Action Q4 – Intention To Take Action Q3/Action Q6 – Intention To Take Action Q3). The rational thinking questions all do not significantly correlate with the intention to take action questions and consistently score very low with all correlations between r = -.08 and r = .08. Intention To Take Action Q3 is consistently the weakest correlated question in the Intention To Take Action Construct with correlations to the three coping behaviors questions ranging from -.07 to .26, with only 4 out of 15 coping behaviors questions correlating significantly. It seems that intentions to take action are a combination of action coping behaviors and instrumental coping behaviors.

The relationship between trustworthiness of local authorities and intention to take action is a negative relationship of $\beta = -.40$. The correlations Table below in Table 16 shows the correlations between questions belonging to the trustworthiness of local authorities and intentions to take action variables.

Table 14. *Correlations for the Trustworthiness and Intention To Take Action questions.*

	1	2	3	4	5	6	7	8	9	0	11	12	13	14	15	16	17
1 Q28.1 Ability	-																
2 Q28.2 Ability	.81**	-															
3 Q28.3 Ability	.78**	.79**	-														
4 Q29.1 Benevolence	.69**	.63**	.65**	-													
5 Q29.2 Benevolence	.66**	.59**	.67**	.82**	-												
6 Q29.3 Benevolence	.56**	.47**	.56**	.56**	.53**	-											
7 Q29.4 Benevolence	.63**	.55**	.61**	.79**	.83**	.57**	-										
8 Q29.5 Benevolence	.66**	.60**	.62**	.78**	.79**	.59**	.86**	-									
9 Q30.1 Integrity	.66**	.62**	.60**	.58**	.65**	.50**	.60**	.65**	-								
10 Q30.2 Integrity	.59**	.61**	.57**	.59**	.58**	.55**	.61**	.57**	.56**	-							
11 Q30.3 Integrity	.63**	.60**	.62**	.53**	.57**	.57**	.54**	.59**	.69**	.59**	-						
12 Q30.4 Integrity	.57**	.55**	.51**	.55**	.53**	.42**	.50**	.49**	.57**	.61**	.61**	-					
13 Q31.1 Intention To Take Action	-.23**	-.29**	-.20*	-.18*	-.19*	-.09	-.14	-.13	-.17*	-.26**	-.24**	-.22**	-				
14 Q31.2 Intention To Take Action	-.27**	-.29**	-.18*	-.21**	-.24**	-.13	-.23**	-.20*	-.26**	-.22**	-.24**	-.25**	.73**	-			
15 Q31.3 Intention To Take Action	-.38**	-.38**	-.36**	-.36**	-.40**	-.30**	-.32**	-.32**	-.33**	-.33**	-.36**	-.38**	.42**	.44**	-		
16 Q31.4 Intention To Take Action	-.33**	-.36**	-.26**	-.24**	-.29**	-.18*	-.22**	-.23**	-.32**	-.29**	-.31**	-.41**	.46**	.52**	.68**	-	
17 Q31.5 Intention To Take Action	-.25**	-.25**	-.24**	-.19*	-.27**	-.15	-.16*	-.17*	-.26**	-.24**	-.24**	-.32**	.47**	.49**	.63**	.73**	-

Note: correlation values with * are significant at 0.05 level (2-tailed), correlation values with ** are significant at 0.01 level (2-tailed). Full questions including means and standard deviations for each of the questions can be found in appendix A.

The trustworthiness questions correlate quite differently with the intention to take action questions depending on the part of the trustworthiness construct. trustworthiness: benevolence questions correlated less (not only significant, correlations range from r = -.09 to r = -.40) with the majority of the intention to take action questions than the trustworthiness: ability (only significant correlations which range from r = -.18 to r = -.38) and trustworthiness: integrity (only significant correlations which range from r = -.17 to r = -.41) questions. From these correlations it seems that benevolence correlate the least with each of the intention to take action variables, meaning it has less influence on outcome variables than the other trustworthiness subconstructs.

5 DISCUSSION

This chapter concludes the research by comparing the results to existing literature related to the topic. Furthermore, the limitations of this research and suggestions for future research are stated. Theoretical and practical implications follow. Finally, this chapter ends with the conclusion to this research.

5.1 MAIN FINDINGS

The primary goal of this research was to increase understanding of the effects of noise annoyance and noise disturbance on residents living in nightlife areas in the Netherlands. Additionally, this research tried to explain the relationship between the noise reaction variables and complaining- or taking action intentions aimed at local authorities. The research question asked to achieve this goal was: to what extent does noise affect intention to take action against the noise in residents living in inner-city nightlife areas in the Netherlands? This question has been answered in parts by looking at existing research and relevant literature, after which hypotheses were formulated and a conceptual model was constructed.

The model and hypotheses were tested through a quantitative survey held among residents living in inner-city nightlife areas in the Netherlands. The proposed model has been rejected due to bad fit of the data to the model. A new, re-specified, model was presented in the results. The original model missed noise measurements that this new model takes into account. The re-specified model has shown a better fit, albeit still insufficient. However, the individual hypotheses were tested as well, which showed some promising relationships between variables.

The individual hypotheses showed that noise annoyance (the negative appraisal of sound) and noise disturbance (being unable to do things that are possible to do without the sound) are experienced differently based on several factors such as homeownership (e.g. Miedema, 2007; Miedema and Vos, 1999), sensitivity to noise (e.g. Guski, 1999; Oiamo, Luginaah & Baxter, 2015; Paunović, Jakovljević & Belojević, 2009), and attitude towards the noise source (e.g. Fields, 1992; Miedema, 2007). This is in line with what is already known from existing research on noise effects. Noise annoyance and noise disturbance are primary responses to experiencing noise and relate to people's socio-demographic factors and their attitudes and beliefs of the noise source.

No effects of noise annoyance and noise disturbance on residential satisfaction were found, which differs from previous literature (Hamersma, Heinen, Tillema & Arts, 2015). Similarly, no effects of noise annoyance and noise disturbance on intentions to take action were found in this study, this seems to be in line with some previous research (e.g. Guski, 1977; Luz, Raspet, Schomer 1983), however it contrasts more recent research which studied the relationship between noise and complaints, mediated by psychological responses to noise such as annoyance and disturbance (van Wiechen, Franssen, de Jong & Lebret, 2002). This study did not measure actual noise, nor did it measure actual complaints, so true comparisons cannot be made. Noise annoyance and noise disturbance do not seem to affect residential satisfaction and intention to take action, both of these outcomes seem to relate stronger to age and homeownership than with experiencing noise. Thus, not only do primary responses to noise relate strong to socio-demographic factors, the same could be said for intention to take action and residential satisfaction.

Intention to take action is negatively affected by trustworthiness of local authorities (the same authorities that would be appealed to in the intention to take action construct). Interestingly, this is well against the expectations from literature, as Maziul, Job and Vogt (2005) claim that the main contributor to not complain is having no faith in the outcome of the complaining. Opposite from the negative relationship between intentions to take action and trustworthiness of local authorities found in this research. Especially local authorities' ability and integrity seemed to affect intention to take action. Thus, instead of not complaining due to low trustworthiness of local authorities, these residents actually start complaining more when they perceive their local authorities as not trustworthy. Furthermore, age and homeownership seem to have a stronger effect on intention to take action than even trustworthiness of local authorities. Thus, it seems that residents' age and homeownership situation matter the most for complaining or taking action, while the evaluation of trustworthiness comes next.

The likeliness to exhibit each of the coping behaviors differ based on noise annoyance and noise disturbance. All coping behaviors are affected by at least one of the two noise reaction variables. Additionally, it is still not clear whether intention to take action could be deemed a part of a coping behavior or of a coping behavior dimension; Duhachek (2005) saw complaining as an indirect form of the active coping dimension, however the intention to take action variable encompasses more than just

complaining. The intention to take action variable was affected in the model by action coping,, positive thinking coping, and instrumental support coping. Interestingly, positive thinking coping belongs to the same coping dimension as action coping (active coping dimension) but has a negative relationship with intention to take action. Furthermore, instrumental support coping had the strongest relationship with intention to take action even though it belongs to a different coping dimension. Personal factors related to coping behaviors were not studied, however this research has found strong effects of socio-demographic factors on just about all of the variables in the model. Existing literature also supports the notion that coping should be affected by both personality traits, as well as the situation at hand (Matthews, Zeidner & Roberts, 2015).

The findings seem to suggest that people have personal tendencies to do or feel certain things depending on their socio-demographic status and preconceived attitudes and beliefs. Situational characteristics such as noise and the subsequent reactions to noise do not necessarily make people exhibit behavior that is outside of their personality- or character traits. On a broader level, these findings imply that certain outcomes such as complaints and residential satisfaction cannot be influenced easily and should be accepted to a certain extent. On the other hand, this also means that plenty of people will just not complain about noise or other nuisances even though they might experience stress due to the noise.

5.2 THEORETICAL AND PRACTICAL IMPLICATIONS

The theoretical implications of this study revolve around the main constructs in this research: noise annoyance, noise disturbance, intention to take action, but are not necessarily in relation to each other. The use of both the noise annoyance and noise disturbance variables and measuring them separately shows that these constructs are affected differently by antecedents and show varying results depending on the outcome variable. Thus, measuring both adds value and information to research regarding effects of noise. Additionally, intention to take action has been shown to be somewhat related to the coping construct of instrumental coping, its alikeness with complain intentions shows promise for specific research on complaining to third parties such as governing bodies. This research shows that the physical circumstances do not necessarily influence complaints as seen in previous literature on noise effects (e.g. Guski, 1977; Luz, Raspet, Schomer 1983). Additionally, this research seems to contradict the

findings that noise does affect complaints when taking into account the psychological effects it has on the people (van Wiechen, Franssen, de Jong & Lebret, 2002). Although the contradiction from this research is based on intentions instead of actual behavior.

Practical implications of this study are aimed at policy makers and local authorities dealing with noise complaints. Municipalities and other local authorities would do best to improve residents' view of their trustworthiness, to reduce or prevent potential complaints and other intentions of taking action. Previous research also shows that most complaints are repeat complaints made by the same people over and over again, thus people tend to either complain or not complain, mostly independent of the situation at hand. This raises another issue, which is that it seems like some residents will just not complain regardless of the situation they are in. Thus, municipalities should not sit by passively and rely solely on complaints or other forms of expressions of dissatisfaction. Municipalities would do best to play an active role in mitigating environmental-related annoyances and disturbances. This could be done by constantly engaging in a dialogue with their residents to signal issues and act on them.

5.3 Limitations and recommendations for future research

There are some limitations to this research, which are in part due to a small sample size and restrictions of the data collection. For the model testing, a larger sample size is preferred as χ^2 is highly sensitive to sample size. Additionally, as this study tried to test a model, causality has to be assumed which cannot be done using survey studies. Reverse time-order and confounding influences cannot be ruled out for this research. Furthermore, this research would have benefitted from objective noise measurements (noise pressure level in dB) to compare these to the noise annoyance and noise disturbance variables and use these as input for the rest of the model. Additionally, complaints or complaint behavior would have been a more accurate outcome variable than complain intentions or intentions to take action.

Future research should aim for longitudinal data to capture the fluctuations in the data over time, matching the self-reported data to objective data such as noise pressure levels (in dB) and complaints registered at the municipality. Additionally, the field of research regarding nightlife disturbances could use a comparison study with regular residential disturbances in non-nightlife areas to determine the actual effects nightlife noise has on residents compared to other sources of noise.

Residents in nightlife areas experience noise at night that is not experienced anywhere else, however this seems to be accepted by residents as part of the deal of living in the exciting city-centers. Nevertheless, complaints do seem to get more attention lately and understanding the cause of complaints and complaining should improve problem solving capabilities of local governments. Furthermore, people who do not complain still experience nightlife disturbances they would rather not experience. Reasons why people do not complain are not yet studied much. This could be important in anticipating future complaints and tailoring public policy to everyone's best interest.

5.4 Conclusion

In conclusion, noise annoyance (the negative appraisal of sound) and noise disturbance (being unable to do things that are possible to do without the sound) have very little or no effect on residential satisfaction and intentions to complain or take action. Interestingly, personal and attitudinal characteristics seem to affect residents' satisfaction and intentions to complain more than the situation residents find themselves in. Especially homeownership seems to affect all the noise reaction and stress outcomes such as residential satisfaction and intention to take action. Furthermore, residents evaluation of local authorities' trustworthiness influence intention to take action, however the effect is opposite of what previous literature stated as this research found that increased trustworthiness lowers intention to take action. Finally, the data collected for this research was found to be a bad fit to the proposed models. However, the individual relationships in the model provided valuable insight in the relationships between personal- and situational characteristics, and intentions to complain or take action.

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APPENDICES

APPENDIX A – QUESTIONNAIRE INCLUDING MEAN AND STANDARD DEVIATION SCORES

N = 159

Introduction

Welcome to my master thesis research! I am interested in understanding the effect of nightlife noise on residents living in nightlife areas. You will be presented questions related to your experiences and situation related to nightlife noise. You can leave your e-mail address at the end to partake in the raffle for the sleep enhancing earbuds. Leaving your e-mail address also means you will receive anonymized tips shared by you and your fellow participants on how to best deal with nightlife noise.

-- new page

Informed consent

Your participation in this research is entirely voluntary. Your answers will be used to study the effect nightlife noise has on residents. You have the right to withdraw at any point during the study, for any reason, without any prejudice. Please be assured that your responses will be kept completely confidential. If you would like to contact the Principal Investigator in the study to discuss this research, please e-mail Enno Wigger at e.f.j.wigger@student.utwente.nl. By clicking the button below, you acknowledge that your participation in the study is voluntary, that you are at least 18 years of age, that you are aware that you may choose to terminate your participation in the study at any time for any reason.

- I consent, begin the study.

Comment: if the participant does not consent, the survey cannot be continued.

-- new page

Socio-demographics

Q1 What is your age? (M = 38.25, SD = 16.47)

Q2 What is your gender?

- Male (N = 85, 53%)

- Female (N = 76, 47%)

- Other (N = 0)

- I would rather not say (N = 0)

Q3 What is your highest attended education?

- Lbo, vso (lts, leao, vbo, huishoudschool, ambachtsschool) (N = 2, 1%)

- Vmbo, lwoo (inclusief theoretische leerweg) (N = 1, 1%)

- Mavo (ulo, mulo) (N = 5, 3%)

- Havo (mms) (N = 6, 4%)

- Vwo, gymnasium, atheneum, (hbs, lyceum) (N = 5, 3%)

- Mbo (mts, meao, middenstandsdiploma, pdb, mba) (N = 24, 15%)

- Hbo (hts, heao, kweekschool, associate degree) (N = 63, 39%)

- Universitaire opleiding, inclusief postdoctorale opleidingen en promotieonderzoek (N = 55, 34%)

Q4 What is your marital status?

- Unmarried (N = 120, 75%)

- Married (N = 33, 21%)

- Divorced (N = 6, 4%)

- Widowed (N = 2, 1%)

Q5 How many people live in your household including yourself? (family, partner, housemates, roommates, etcetera) (M = 2.23, SD = 2.12)

Q6 Do you have kids who still live with you? If yes, how many do you have?

- Yes (N = 11, 7%, → M = 1.33, SD = .65)

- No (N = 86, 53%)

MISSING (64, 40%)

Q7 What is most applicable to your situation?

- Working part time (N = 30, 19%)

- Working fulltime (N = 79, 49%)

- Studying (N = 26, 16%)

- Without a job, looking for work (N = 6, 4%)

- Without a job, not looking for work (N = 4, 3%)

- Taking care of the home, taking care of children, or taking care of other people (N = 0)

- Other (N = 16, 10%)

Q8 What is your living situation?

- (co) owner of house (N = 46)

- renter of house (N = 111)

- other (N = 4)

Q9 What city do you live in?

Almelo 3 (2%), Amersfoort 35 (22%), Amsterdam 1 (1%), Apeldoorn 7 (4%), Arnhem 16 (10%), Deventer 11 (7%), Enschede 17 (11%), Hengelo 9 (6%), Nijmegen 15 (9%), Utrecht 24 (15%), Zwolle 23 (14%)

Q10 Do you live in or nearby a nightlife area?

- Yes (N = 161, 100%)

- No (N = 0)

Comment: This question above was used as a control question, respondents answering "No" were excluded from the dataset.

Q11 How far do you think you live from the nearest nightlife area or nightlife area or nightlife establishment? (M = 4.23, SD = .49)

5-point scale (Very close by – Close by – Not close by not far away – Far away – Very far away)

-- new page

Residential Satisfaction

Q12 How satisfied are you with your home? (M = 4.06, SD = .98)

5-point scale (Very dissatisfied – Dissatisfied – Neither – Satisfied – Very satisfied)

Q13 How satisfied are you with your neighborhood? (M = 3.78, SD = .98)

5-point scale (Very dissatisfied – Dissatisfied – Neither – Satisfied – Very satisfied)

-- new page

Noise Experience

The next few questions are about your personal situation. There are no right or wrong answers. Answer the questions as truthfully as possible. When in doubt, your first thought is usually the best one.

Nightlife attitude

Q14 Do you feel more positive or more negative about the following?

5-point scale (Extremely negative – negative – neither – positive – extremely positive)

Q14.1 Nightlife in general (M = 3.83, SD = .60)

Q14.2 Nightlife establishments in general (M = 3.74, SD = .58)

Q14.3 Nightlife visitors in general (M = 3.16, sd = .78)

Q14.4 Nightlife in my neighborhood (M = 3.34, SD = .89)

Q.14.5 Nightlife establishments in my neighborhood (M = 3.36, SD = .91)

Q14.6 Nightlife visitors in my neighborhood (M = 2.91, SD = .95)

Noise sensitivity

Q15 How sensitive to noise are you? (M = 2.47, SD = .94)

5-point scale (Not at all sensitive, slightly sensitive, moderately sensitive, very sensitive, extremely sensitive)

Q16 Do you believe you are more or less sensitive to noise than other people? (M = 2.84, SD = .93)

5-point scale (Much less sensitive – less sensitive – equally sensitive – more sensitive – much more sensitive)

Noise Annoyance

Q17 Thinking about the last 12 months, when you are here at home, how much are you bothered, disturbed or annoyed by noise from nightlife? (M = 2.77, SD = 1.16)

5-point scale (Not at all – a little – somewhat – very – extremely)

Noise Disturbance

Q18 Thinking about the last 12 months when you are here at home, how frequently does noise from nightlife disturb you while you try to ...?

5-point scale (Never – seldom – sometimes – often – almost always)

Q18.1 Sleep (M = 2.83, SD = 1.02)

Q18.2 Listen to other people or to the radio or tv (M = 2.02, SD = .92)

Q18.3 Concentrate on reading and writing (M = 2.11, SD = 1.00)

Q18.4 Relax (M = 2.30, SD = 1.07)

Nightlife noise experience

Q19 Could you share which specific noises related to nightlife you experience? (In order, the noise you experience the most on 1 and so on) If you do not experience any noise related to nightlife you can leave this empty

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Action Coping

Q20 When you are confronted with noise, to what extent do you do any of the following things?

5-point scale (Never – seldom – sometimes – often – almost always)

Q20.1 Concentrate on ways the problem could be solved (M = 2.43, SD = 1.26)

Q20.2 Try to make a plan of action (M = 1.71, SD = 1.02)

Q20.3 Generate potential solutions (M = 2.40, SD = 1.21)

Q20.4 Think about the best way to handle things (M = 3.02, SD = 1.23)

Q20.5 Concentrate my efforts on doing something about it (M = 2.26, SD = 1.28)

Q20.6 Do what has to be done (M = 2.52, SD = 1.35)

Q20.7 Follow a plan to make things better, more satisfying (M = 2.07, SD = 1.18)

Rational Thinking Coping

Q21 When you are confronted with noise, to what extent do you do any of the following things?

5-point scale (Never – seldom – sometimes – often – almost always)

Q21.1 Analyze the problem before reacting (M = 3.01, SD = 1.45)

Q21.2 Try to step back from the situation and be objective (M = 3.11, SD = 1.33)

Q21.3 Try to control my emotions (M = 3.44, SD = 1.40)

Q21.4 Try to keep my feelings from controlling my actions (M = 3.41, SD = 1.39)

Q21.5 Would use restraint to avoid acting rashly (M = 3.16, SD = 1.54)

Positive Thinking Coping

Q22 When you are confronted with noise, to what extent do you do any of the following things?

5-point scale (Never – seldom – sometimes – often – almost always)

Q22.1 Try to look at the bright side of things (M = 3.01, SD = 1.24)

Q22.2 Focus on the positive aspects of the problem (M = 2.82, SD = 1.28)

Q22.3 Look for the good in what happened (M = 2.76, SD = 1.31)

Q22.4 Try to make the best of the situation (M = 3.75, SD = 1.11)

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Emotional support coping

Q23 When you are confronted with noise, to what extent do you do any of the following things?

5-point scale (Never – seldom – sometimes – often – almost always)

Q23.1 Seek out others for comfort (M = 1.75, SD = .94)

Q23.2 Tell others how I feel (M = 2.30, SD = 1.07)

Q23.3 Rely on others to make me feel better (M = 1.80, SD = .97)

Q23.4 Share my feelings with others I trusted and respected (M = 2.55, SD = 1.20)

Instrumental support coping

Q24 When you are confronted with noise, to what extent do you do any of the following things?

5-point scale (Never – seldom – sometimes – often – almost always)

Q24.1 Ask friends with similar experiences what they did (M = 1.99, SD = .97)

Q24.2 Try to get advice from someone about what to do (M = 1.93, SD = 1.05)

Q24.3 Have a friend assist me in fixing the problem (M = 1.58, SD = .80)

Emotional venting coping

Q25 When you are confronted with noise, to what extent do you do any of the following things?

5-point scale (Never – seldom – sometimes – often – almost always)

Q25.1 Take time to express my emotions (M = 2.09, SD = 1.05)

Q25.2 Let my feelings out somehow (M = 2.15, SD = 1.01)

Q25.3 Delve into my feelings to understand them (M = 1.88, SD = 1.01)

Q25.4 Would take time to Figure out what I am feeling (M = 1.94, SD = 1.07)

Q25.5 Would realize that my feelings are valid and justified (M = 2.88, SD = 1.34)

Q25.6 Would acknowledge my emotions (M = 2.95, SD = 1.29)

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Avoidance Coping

Q26 When you are confronted with noise, to what extent do you do any of the following things?

5-point scale (Never – seldom – sometimes – often – almost always)

Q26.1 Try to take my mind off of it by doing other things (M = 3.16, SD = 1.22)

Q26.2 Distract myself to avoid thinking about it (M = 3.01, SD = 1.24)

Q26.3 Avoid thinking about it (M = 2.95, SD = 1.26)

Q26.4 Find satisfaction in other things (M = 3.09, SD = 1.24)

Denial Coping

Q27 When you are confronted with noise, to what extent do you do any of the following things?

5-point scale (Never – seldom – sometimes – often – almost always)

Q27.1 Deny that the event happened (M = 1.34, SD = .68)

Q27.2 Refuse to believe that the problem had occurred (M = 1.25, SD = .58)

Q27.3 Pretend that this never happened (M = 1.37, SD = .81)

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The next few questions are about the local authorities in your area, this includes (but is not limited to) the municipality and the local police.

Trustworthiness Of Local Authorities: Ability

Q28 To what extent do you agree with the following statements?

5-point scale (strongly disagree – disagree – undecided – agree – strongly agree)

Q28.1 The local authorities are very capable of performing their job (M = 3.29, SD = 1.02)

Q28.2 The local authorities are known to be successful at the things they try to do (M = 3.14, SD = .93)

Q28.3 The local authorities have a lot of knowledge about the work to be done (M = 3.25, SD = 1.02)

Trustworthiness Of Local Authorities: Benevolence

Q29 To what extent do you agree with the following statements?

5-point scale (strongly disagree – disagree – undecided – agree – strongly agree)

Q29.1 The local authorities are very concerned about my or the neighborhood's welfare (M = 3.01, SD = 1.12)

Q29.2 My or the neighborhood's needs and desires are very important to the local authorities (M = 3.02, SD = 1.07)

Q29.3 The local authorities would not knowingly do anything to disadvantage me or the neighborhood (M = 3.43, SD = 1.08)

Q29.4 The local authorities really look out for what is important to me or the neighborhood (M = 2.99, SD = 1.07)

Q29.5 The local authorities will go out of their way to help me or the neighborhood (M = 3.11, SD = 1.08)

Trustworthiness Of Local Authorities: Integrity

Q30 To what extent do you agree with the following statements?

5-point scale (strongly disagree – disagree – undecided – agree – strongly agree)

Q30.1 The local authorities have a strong sense of justice (M = 3.07, SD = .90)

Q30.2 I or the neighborhood never have to wonder whether the local authorities will stick to their word (M = 2.86, SD = 1.00)

Q30.3 The local authorities try hard to be fair in dealing with others (M = 3.19, SD = .93)

Q30.4 The local authorities' actions and behavior are very consistent (M = 2.94, SD = .95)

Intentions To Take Action

Q31 How likely are you to take the following actions when the nightlife noise continues?

5-point scale (Extremely unlikely – unlikely – neither – likely – extremely likely)

Q31.1 Call the police (M = 2.81, SD = 1.43)

Q31.2 File an official complaint with the municipality (M = 2.84, SD = 1.45)

Q31.3 Contact local news media about the noise (M = 1.76, SD = 1.07)

Q31.4 Try to directly influence local legislation or policy regarding the noise (M = 2.20, SD = 1.22)

Q31.5 Combine forces with the neighborhood to influence local legislation or policy regarding the noise (M = 2.26, SD = 1.19)

Q32 Would you take any other actions when the nightlife noise continues?

- Yes (N = 61, 58%)

- No (N = 94, 38%)

Missing (N = 6, 4%)

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Q37 Do you have any tips you want to share with other respondents on how to best deal with nightlife noise?

Q38 Is there anything related to living with nightlife noise you wish to share with the researcher that has not yet been discussed or asked?

- Yes (N = 59, 37%)

- No (N = 98, 61%)

Missing (N = 4, 3%)

Q39 If you would like to receive the results of this questionnaire, get tips from other residents of nightlife areas on how to deal with noise, partake in the raffle please leave your email address below

APPENDIX B – TABLE OF FIGURES