Project Notes:

Project Title:
Name: Luciana Piarulli

Note Well: There are NO SHORT-CUTS to reading journal articles and taking notes from them. Comprehension is paramount. You will most likely need to read it several times, so set aside enough time in your schedule.

Contents:

Knowledge Gap	Resolved By	Information is located	Date resolved
Understanding brain waves			
Not much research between music's affect on mood			

Literature Search Parameters:

These searches were performed between August 15, 2024, and XX/XX/2019.
List of keywords and databases used during this project.

Database/search engine	Keywords	Summary of search
Google	genetic therapy for astigmatism research	Many articles about gene therapy, but few for astigmatism itself
Google Scholar	What causes astigmatism	Lots of articles about the condition itself
Oxford Academic	music	Many music journals, add in driving too

Tags:

Tag Name	
#sideeffects	#methods
#idea1	#astigmatism
#environmentalcauses	#stats
#musictherapy	#aggresivedriving
#drivereducation	#roadrage
#musicchoices	#suggestions
#simulation	#background
#drivingsafety	#method

#otherimportantfacts	#wodriving
#focus	#mysteries
#cognition	#positiveeffects
#devices	#readers
#brain	#brainwaves
#patents	#eeg
#procedure	#
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Article #1 Notes: Ocular Gene Therapy: A Literature Review with Special Focus on Immune and Inflammatory Responses

Article notes should be on separate sheets

Source Title	Ocular Gene Therapy: A Literature Review with Special Focus on Immune and Inflammatory Responses
Source citation (APA Format)	Ghoraba, H. H., Akhavanrezayat, A., Karaca, I., Yavari, N., Lajevardi, S., Hwang, J., Regenold, J., Matsumiya, W., Pham, B., Zaidi, M., Mobasserian, A., DongChau, A. T., Or, C., Yasar, C., Mishra, K., Do, D., & Nguyen, Q. D. (2022). Ocular Gene Therapy: A Literature Review with Special Focus on Immune and Inflammatory Responses. *Clinical Ophthalmology, 1753–1771*. https://doi.org/10.2147/opth.s364200
Original URL	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9173725/
Source type	Science Journal
Keywords	Ocular gene therapy, gene therapy, viral vectors, ocular inflammation, review
#Tags	#sideeffects, #methods #idea1
Summary of key points + notes (include methodology)	Eyes are typically considered good candidates for gene therapy, since they are small and therefore do not require high doses of treatment, have separate and distinct parts, and they are extremely likely to accept treatment via viruses due to certain features of their immune system. Different ways of administering this therapy include viral methods and chemical methods. Both methods can cause inflammatory response
Research Question/Problem/ Need	How can inflammation caused by administration of ocular gene therapy be managed after treatment?
Important Figures	
VOCAB: (w/definition)	tissue tropism (transduction of both retina and anterior segment), empty capsids (viral particles with no genome),
Cited references to follow up on	Bordet T, Behar-Cohen F. Ocular gene therapies in clinical practice: viral vectors

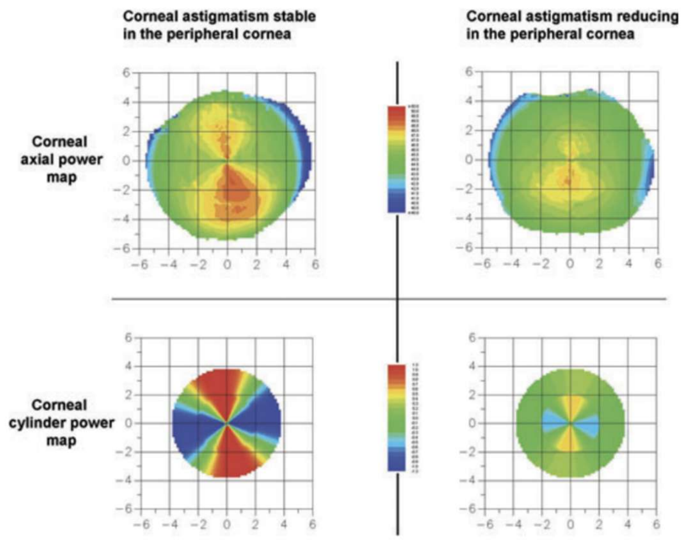
	and nonviral alternatives. Drug Discov Today. 2019;24(8):1685–1693. doi: 10.1016/j.drudis.2019.05.038 Gregory SM, Nazir SA, Metcalf JP. Implications of the innate immune response to adenovirus and adenoviral vectors. Future Virol. 2011;6(3):357–374. doi: 10.2217/fvl.11.6 Touchard E, Berdugo M, Bigey P, et al. Suprachoroidal electrotransfer: a nonviral gene delivery method to transfect the choroid and the retina without detaching the retina. Mol Ther. 2012;20(8):1559–1570. doi: 10.1038/mt.2011.304 Bucher K, Rodriguez-Bocanegra E, Dauletbekov D, Fischer MD. Immune responses to retinal gene therapy using adeno-associated viral vectors - implications for treatment success and safety. Prog Retin Eye Res. 2020;83:100915. doi: 10.1016/j.preteyeres.2020.100915 Reichel FF, Peters T, Wilhelm B, et al. Humoral immune response after intravitreal but not after subretinal AAV8 in primates and patients. Invest Ophthalmol Vis Sci. 2018;59(5):1910–1915. doi: 10.1167/iovs.17-22494 Boye SE, Boye SL, Lewin AS, Hauswirth WW. A comprehensive review of retinal gene therapy. Mol Ther. 2013;21(3):509–519. doi: 10.1038/mt.2012.280 Simunovic MP, Shen W, Lin JY, Protti DA, Lisowski L, Gillies MC. Optogenetic approaches to vision restoration. Exp Eye Res. 2019;178:15–26. doi: 10.1016/j.exer.2018.09.003 Kalesnykas G, Kokki E, Alasaarela L, et al. Comparative study of adeno-associated virus, adenovirus, bacu lovirus and lentivirus vectors for gene therapy of the eyes. Curr Gene Ther. 2017;17(3):235–247. doi: 10.2174/1566523217666171003170348
Follow up Questions	How long does it take for genetic therapy treatment to be effective? Why do different viruses have to be used to perform therapy on larger vs. smaller genes? How effective is viral therapy vs. chemical therapy?

Article #2 Notes: A review of astigmatism and its possible genesis

Article notes should be on separate sheets

Source Title	A review of astigmatism and its possible genesis
Source citation (APA Format)	Read, S. A., Collins, M. J., & Carney, L. G. (2007). A review of astigmatism and its possible genesis. *Clinical and Experimental Optometry, 90*(1), 5–19. https://doi.org/10.1111/j.1444-0938.2007.00112.x
Original URL	https://onlinelibrary.wiley.com/doi/pdfdirect/10.1111/j.1444-0938.2007.00112.x?casa_token=ZFHSYa6l3tUAAAAA%3AvYoI7AnqKbQsRCDhwp5XUoC86WXAhRq_EXx112VZPvT9Lzmn9eKbY6fGToeQzGl42c6aHWZiVJa1qg
Source type	Journal Article
Keywords	aberrations, astigmatism, cornea, corneal topography, refractive error
#Tags	#astigmatism #environmentalcauses #stats #idea1
Summary of key points + notes (include methodology)	While there is no known cause of astigmatism, there are theories concerning the genetics that cause astigmatism and environmental conditions that may also affect a person with the condition. This article heavily implies that environmental conditions are more likely to cause astigmatism than genes. However, astigmatism is also supposed to be linked to myopia, implying that there is a genetic factor involved in this condition too.
Research Question/Problem/ Need	What are some environmental/genetic factors that may cause astigmatism?

Important Figures	



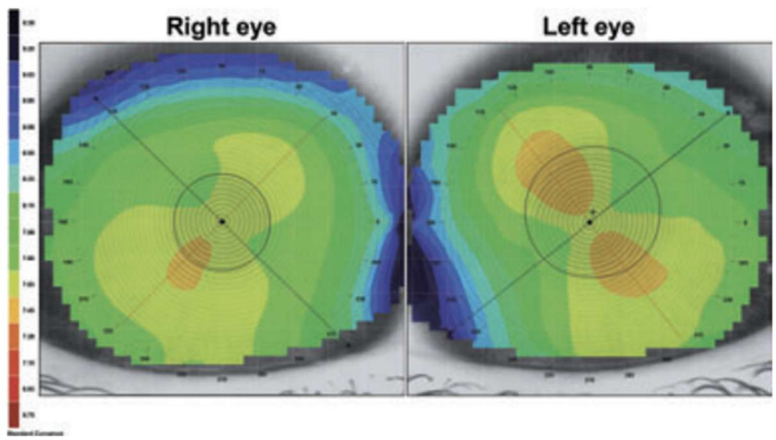
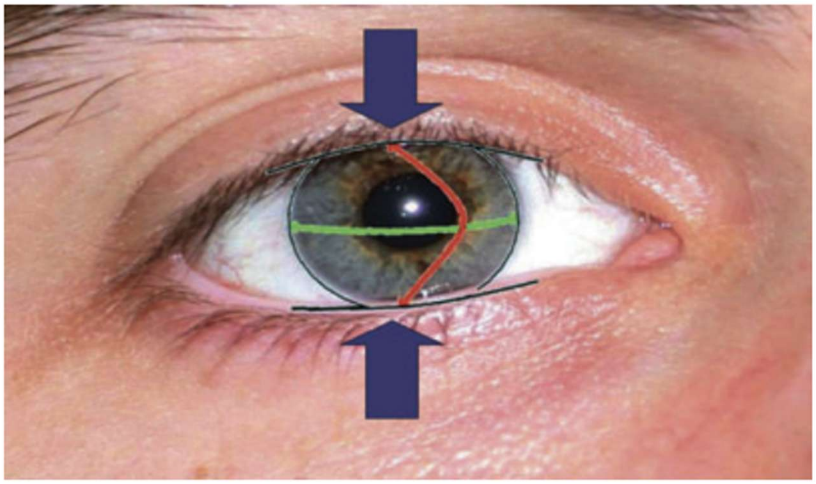


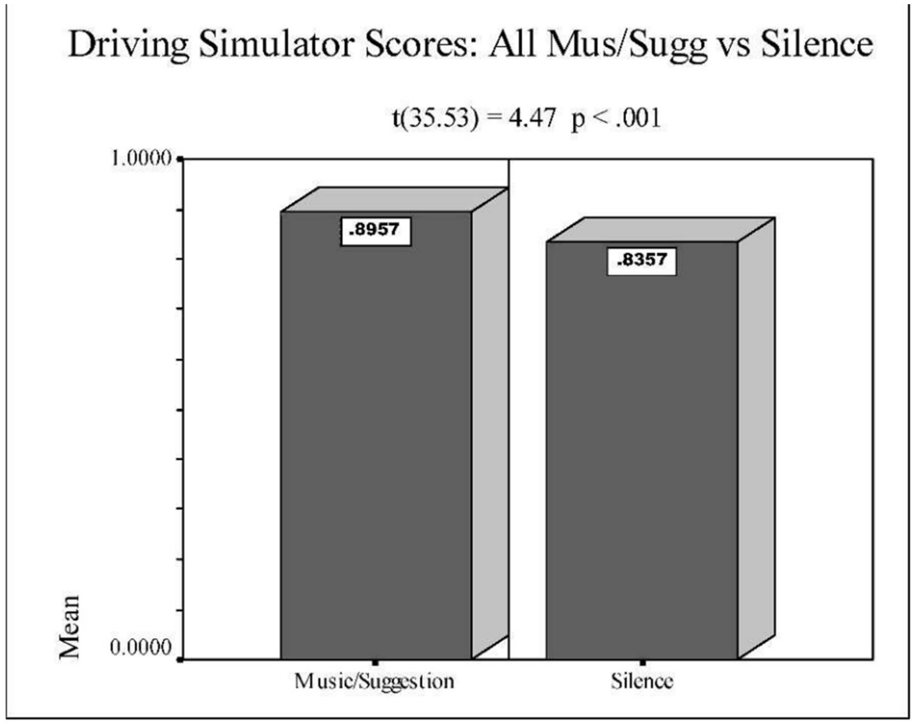
Figure 4. Axial curvature corneal topographical maps from the right and left eye of a subject who shows distinct mirror symmetry between the corneal astigmatism of the two eyes

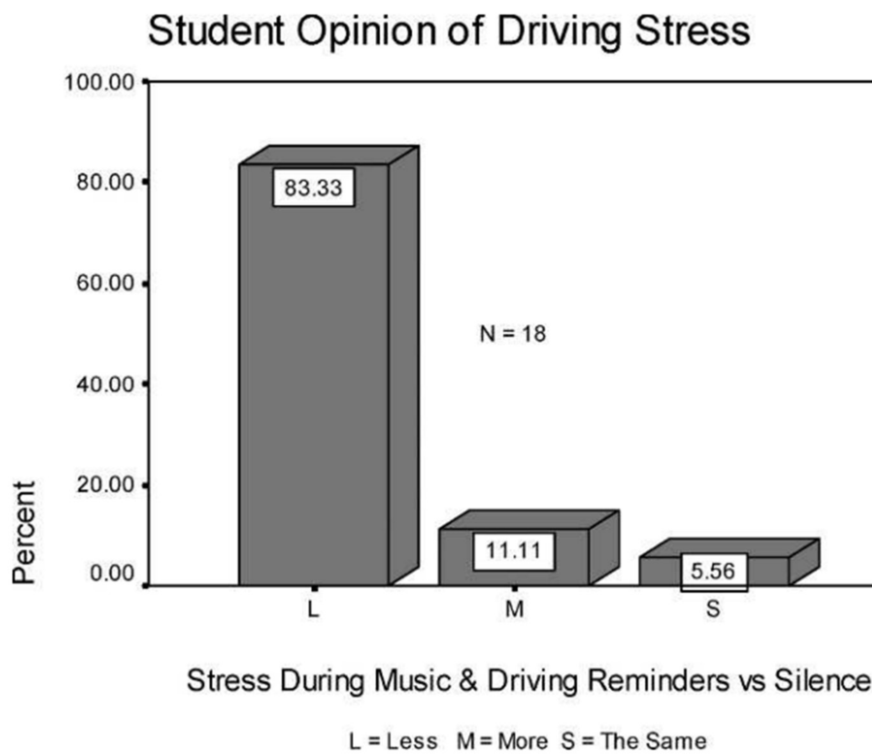
	 **Figure 6. Illustration of the eyelid pressure theory of corneal astigmatism development. According to this theory, pressure from the eyelids alters corneal shape and leads to a steepening in the cornea's vertical meridian. This results in WTR astigmatism, which is typically seen in the majority of young subjects.**
VOCAB: (w/definition)	Astigmatism-condition where a person has an oddly shaped cornea, which leads to light hitting abnormally entering the retina Cornea- the translucent layer of the eye that covers/protects the retina
Cited references to follow up on	*to be inserted at a later date*
Follow up Questions	What does a person with astigmatism's genome look like compared to a person without the condition? What gene/s cause myopia? What causes astigmatism? Are there certain genetic factors that cause a person to be more susceptible to sustaining damage to their cornea? What does the genome of a person with myopia look like compared to a person with myopia and astigmatism? How can we analyze a person's genome to find out what causes this condition? Are there multiple types of genetic astigmatism?

Article #3 Notes: The Effect of Music and Suggestion on Defensive Driving Responses of High School Students: Implications for Music Therapy

Article notes should be on separate sheets

Source Title	The Effect of Music and Suggestion on Defensive Driving Responses of High School Students: Implications for Music Therapy – Oxford Academic
Source citation (APA Format)	Groene, R., & Barrett, S. (2012). The Effect of Music and Suggestion on Defensive Driving Responses of High School Students: Implications for Music Therapy. *Music Therapy Perspectives*, *30*(1), 56–64. https://doi.org/10.1093/mtp/30.1.56
Original URL	https://academic-oup-com.ezpv7-web-p-u01.wpi.edu/mtp/article/30/1/56/1138994?searchresult=1
Source type	Journal Article
Keywords	Aggressive driving, music therapy,
#Tags	#agressivedriving #musictherapy #roadrage #drivereducation #suggestions #musicchoices
Summary of key points + notes (include methodology)	In this study, researchers were trying to determine if music therapist-composed music has an effect on adolescent stress levels while driving. Participants completed two driving sessions-one in silence, and the other with music accompanied by suggestions to deter aggressive driving behaviors. In the study, 83.33% of participants felt less stress during the music/suggestion condition.
Research Question/Problem/ Need	What types of music help to lower stress levels while driving, thus deterring aggressive driving behaviors?

Important Figures	 This graph represents the mean score drivers received for correct defensive maneuvers during each treatment. As seen, the mean driving score was higher during the music/suggestion condition, and the p-value for obtaining these results was less than .001.

<table>
<tr><td></td><td>

In this graph, it can be seen that 83.33% of participants felt less stress during the music/suggestion treatment, 11.11% felt more stressed during the music/suggestion treatment, and 5.56% felt the same amount of stress during both treatments.</td></tr>
<tr><td>VOCAB: (w/definition)</td><td>Aggressive driving-people commit a series of traffic offenses to endanger other drivers; Road rage: An incident instigated using a motor vehicle against another/an act that occurred between two motor vehicles as a result of an event that occurred while driving</td></tr>
<tr><td>Cited references to follow up on</td><td>Ernest, H. A. (1995). Emotional use of music by African American adolescents. Howard Journal of Communications, 5, 214–222.
Konecni, V. J., & Sargent-Pollock, D. (1976). Choice between melodies differing in ˇ complexity under divided attention conditions. Journal of Experimental Psychology: Human Perception and Performance, 2, 347–356.
Lesiuk, T. (2010). The effect of preferred music on mood and performance in a highcognitive demand occupation. Journal of Music Therapy, 47, 137–154.
Brodsky, W. (2002). The effects of music tempo on simulated driving performance and vehicular control. Transportation Research Part F, 4, 219–241.
Car accident statistics. (2010, November 7). Retrieved from http://www. car-accidents.com/pages/stats.html.
Pecher, C., Lemercier, C., & Cellier, J. M. (2009). ˆ Emotions drive attention: Effect on driver's behaviour. Safety Science, 9, 1254–1259.
Saarikallio, S., & Erkkila, J. (2007). The role of music in adolescents' mood regulation. Psychology of Music, 35, 88–109.
Thaut, M. H. (2008). Rhythm, music, and the brain. New York: Routledge.</td></tr>
</table>

	Wiesenthal, D. L., Hennessy, D. A, & Totten, B. (2003). The influence of music on mild driver aggression. Transportation Research Part F, 6, 125–134.
Follow up Questions	What aspect of music is most distracting for drivers? What makes music so attractive for teens? What type of music is most likely to trigger an emotional response?

Article #4 Notes: The effects of music tempo on simulated driving performance and vehicular control

Article notes should be on separate sheets

Source Title	The effects of music tempo on simulated driving performance and vehicular control
Source citation (APA Format)	Brodsky, W. (2002). The effects of music tempo on simulated driving performance and vehicular control. *Transportation Research Part F, 4*(4), 219–241. https://doi.org/10.1016/S1369-8478(01)00025-0
Original URL	https://www.sciencedirect.com/science/article/abs/pii/S1369847801000250
Source type	Journal Article
Keywords	Simulated driving, vehicular music, music tempo, driving performance, control, speed, estimates
#Tags	#background #simulation #method
Summary of key points + notes (include methodology)	Not many experiments have been conducted in the past that indicate a link between music and its effects on driving. In this article, two different studies were performed. In the first study, musicians were tasked to drive around a virtual "loop" of Chicago. Different music with different tempos were played at different points in the loop. Data was then put into an ANOVA test (Heart rate, heart rate fluctuations, red light violations, etc.) However, no statistically significant data were found. However, the second experiment was conducted with non-musicians, and data such as increases in simulated driving speed, heart rate fluctuations (with no music), etc. However, researchers acknowledged that they used a simulation to conduct their research which could influence the outcome.
Research Question/Problem/ Need	Does the tempo of music affect certain factors of someone's driving?

Important Figures

W. Brodsky / Transportation Research Part F 4 (2002) 219–241

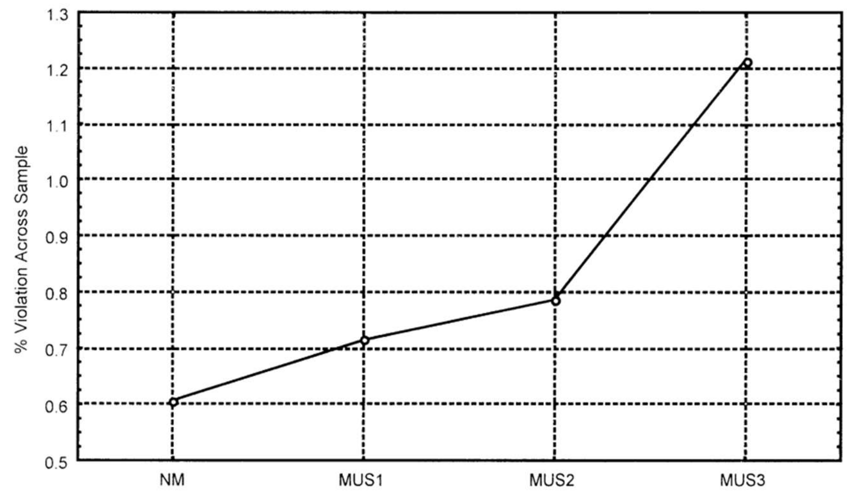


Fig. 8. Experiment 2, main effect of music tempo for disregarded RLs.

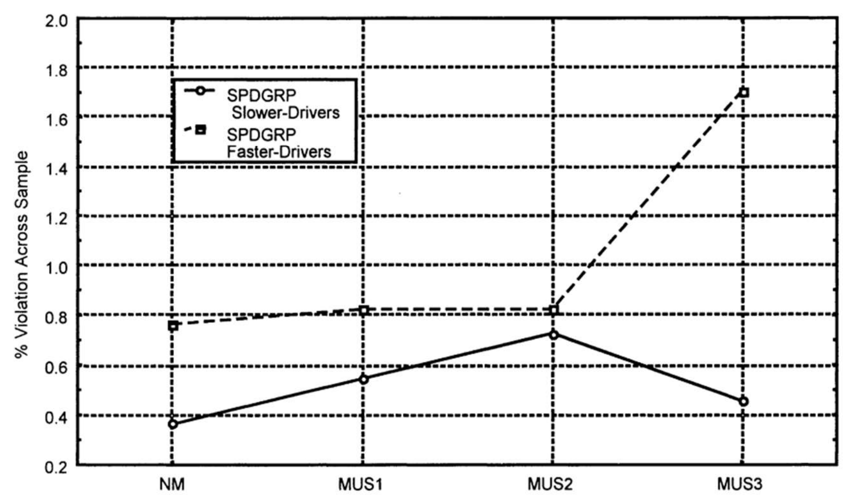


Fig. 9. Experiment 2, interaction effects between speed-group and music tempo for disregarded RLs.

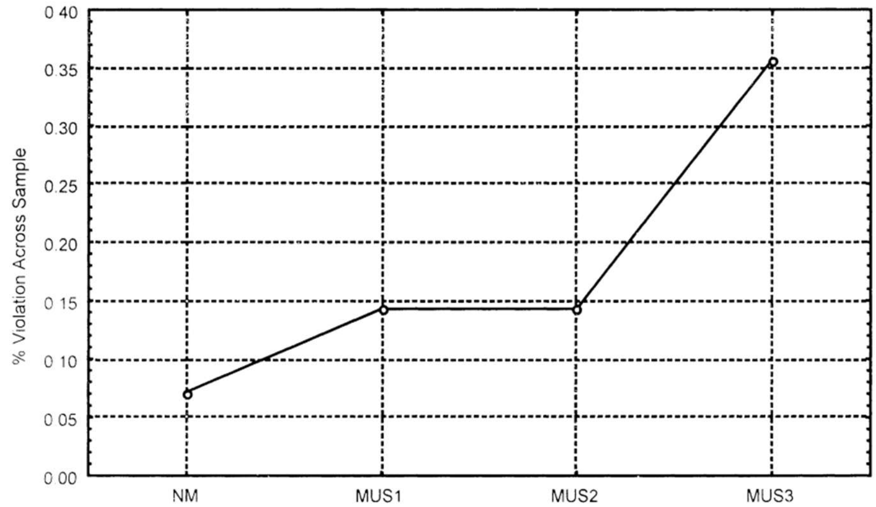


Fig. 6. Experiment 2, main effect of music tempo for ACs.

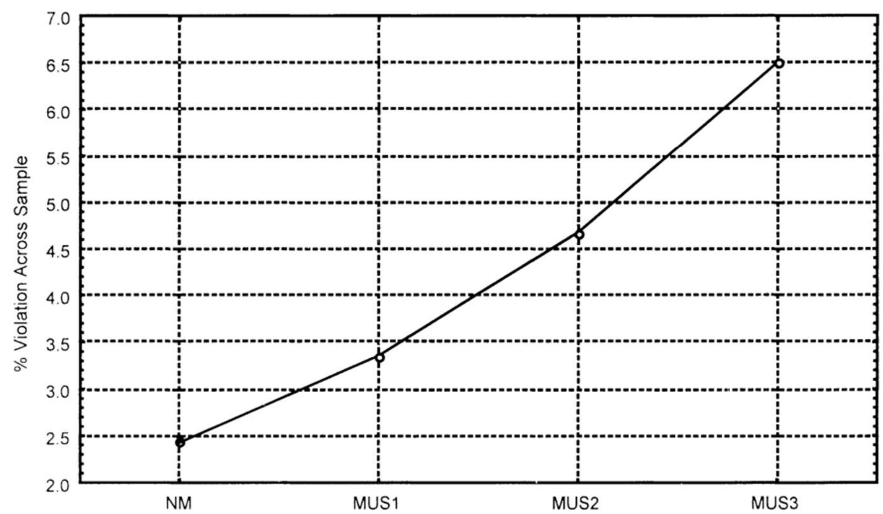


Fig. 7. Experiment 2, main effect of music tempo for LNs.

Table 2
Experiment 2, differences between simulated driving speed (KPH) and perceived speeds (P-KPH)

Condition	KPH		P-KPH		DIF				
	M	S.D.	*M*	S.D.	*M*	S.D.	*t*	d*f*	*p*
NM	144.50	30.18	91.71	10.54	52.79	29.81	7.717	18	.000
MUS1	141.13	32.10	93.88	10.33	47.26	35.16	5.856	18	.001
MUS2	143.11	26.97	95.39	10.65	47.71	28.42	7.319	18	.000
MUS3	147.43	30.98	101.84	12.19	45.59	32.02	6.186	18	.000
Total cases	$N = 19$								

Table 3
Experiment 2, virtual traffic violations – ACs, LNs, and disregarded RLs

Condition	ACs			LNs			RLs		
	MN[a]	SD	Range	MN[a]	S.D.	Range	MN[a]	S.D.	Range
NM	.07	0.2623	0–1	2.43	3.3602	0–14	.61	0.7880	0–2
MUS1	.14	0.4484	0–2	3.36	3.9927	0–16	.72	0.8968	0–3
MUS2	.14	0.3563	0–1	4.68	4.0373	0–14	.79	1.1661	0–4
MUS3	.36	0.7310	0–3	6.50	6.9735	0–25	1.21	1.2280	0–3

[a] MN = violation % of total sample.

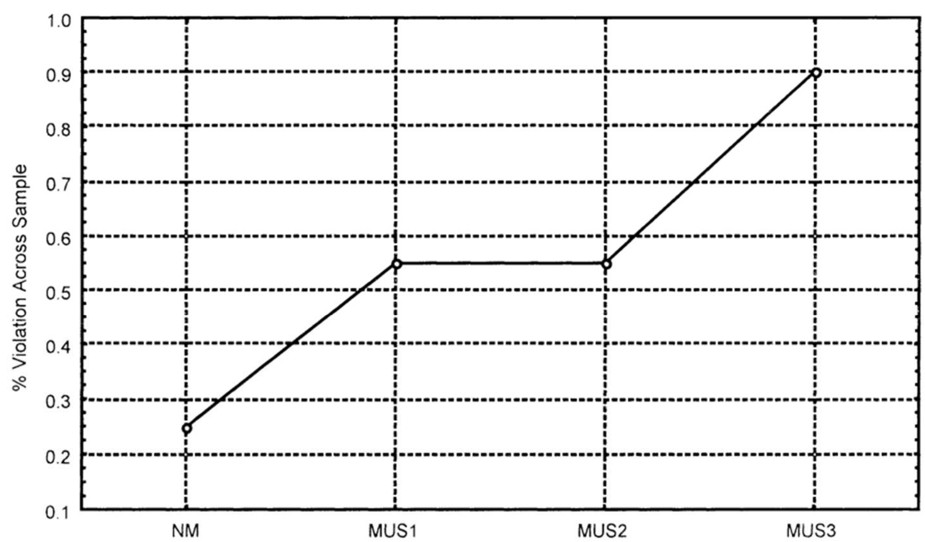


Fig. 2. Experiment 1, main effect of music tempo for disregarded RLs.

VOCAB: (w/definition)

HR: Heart Rate; RL: Disregarded Red Lights; LN: Lane Crossings; AC: Collisions; HRF: Heart Rate Fluctuations

Cited references to follow up on

Ayres, T. J., & Hughes, P. (1986). Visual acuity with noise and music at 107 dbA. *Journal of Auditory Research*, *26*, 165–174.

Brown, I. D. (1965). Effect of car radio on driving in traffic. *Egronomics*, *8*, 475–479.

Iwamiya, S. (1997). Interaction between auditory and visual processing in car audio: simulation experiment using video reproduction. *Applied Human Science*, *16*, 115–119.

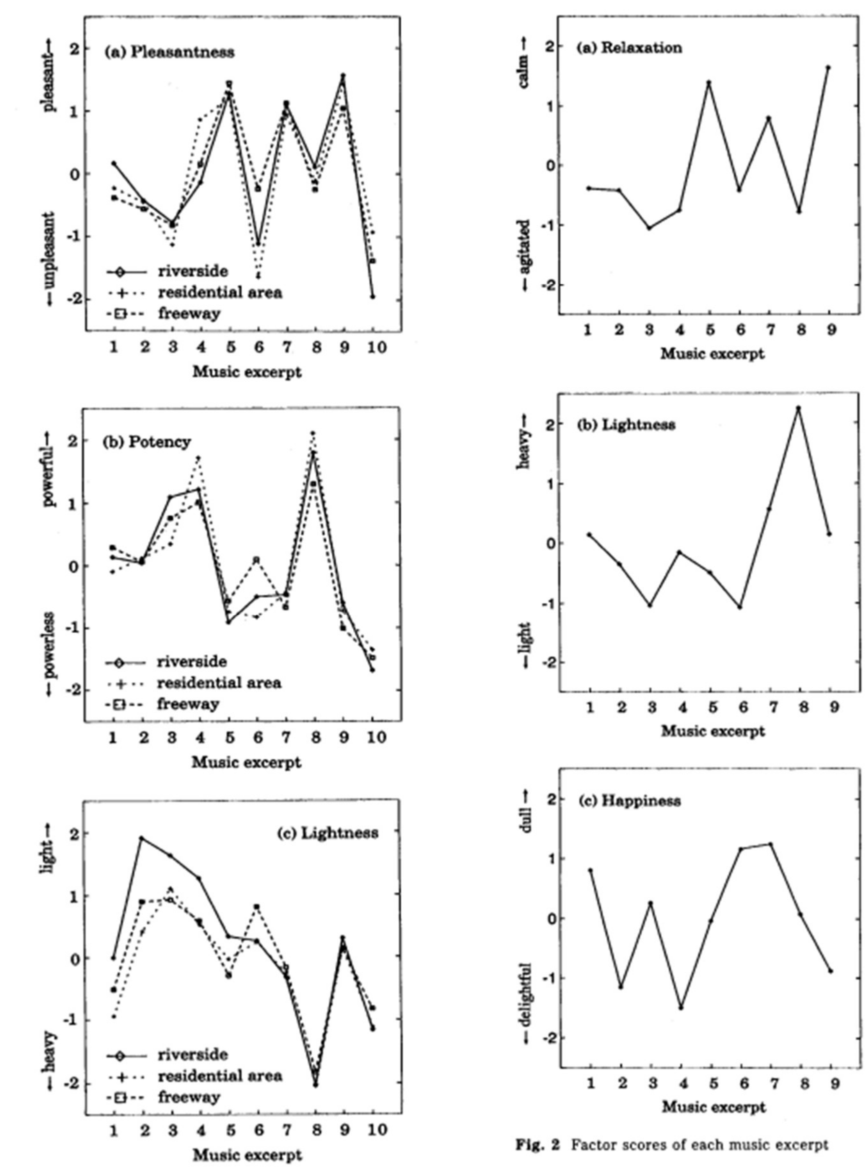
North, A., & Hargreaves, D. (1997). Experimental aesthetics and everyday music listening. In D. J. Hargreaves, & A. C. North (Eds.), *The social psychology of music* (pp. 84–106). Oxford, UK: Oxford University Press.

Follow up Questions

Why does the type of music that's considered pop music change over time? How distracting is music in other tasks besides driving? What percentage of the brain is used while listening to music, and how much space does that leave for driving?

Article #5 Notes: Interaction Between Auditory and Visual Processing in Car Audio: Simulation Experiment Using Video Reproduction

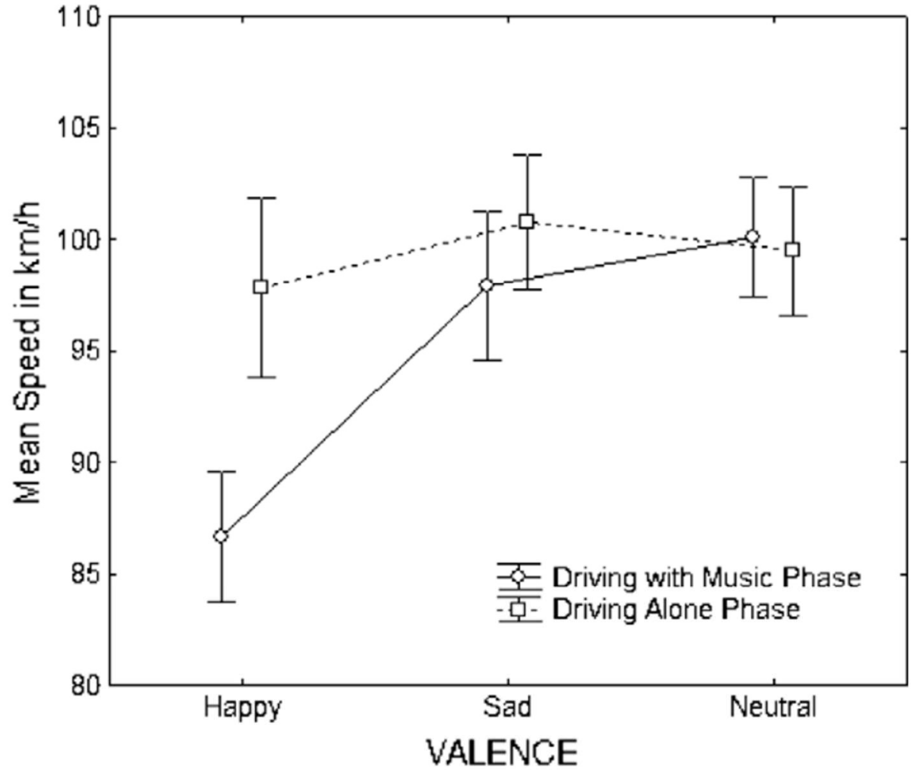
Source Title	Interaction Between Auditory and Visual Processing in Car Audio: Simulation Experiment Using Video Reproduction
Source citation (APA Format)	Iwamiya, S. (1997). Interaction between auditory and visual processing in car audio: simulation experiment using video reproduction. *Applied Human Science, 16*(3), 115-119.
Original URL	https://pubmed.ncbi.nlm.nih.gov/9230524/
Source type	Journal Article
Keywords	Car audio, audio-visual interaction, music, landscape, semantic differential method
#Tags	#background
Summary of key points + notes (include methodology)	A video of a car driving down in different cameras was recorded, and then played for 10 different people with different music. The peoples perception of the scenery during the simulation were recorded and tested to see if these results are statistically significant.
Research Question/Problem/ Need	Does the music played in the car affect someone's perception of the scenery outside of the car?

Important Figures	118 Interaction between Auditory and Visual Processing in Car Audio  **Fig. 1** Factor scores of each landscape with each music. The music excerpt numbers are the same as shown in Table 1. The number "10" means the without-music condition. **Fig. 2** Factor scores of each music excerpt
VOCAB: (w/definition)	Semantic differential (SD) method: a scale that measures someone's subjective response to something
Cited references to follow up on	
Follow up Questions	Are some landscapes just naturally more pleasant than others? Can a quiet landscape (such as a countryside) be perceived as unpleasant with the right music? Can the right music help to make a freeway perceived as relaxing, leading people to be less stressed on the freeway?

Article #6 Notes: Emotions drive attention: Effects on driver's behaviour

Article notes should be on separate sheets

Source Title	Emotions drive attention: Effects on driver's behaviour
Source citation (APA Format)	Pecher, C., Lemercier, C., & Cellier, J. M. (2009). Emotions drive attention: Effect on driver's behaviour. *Safety Science,* 47(9), 1254–1259. https://doi.org/10.1016/j.ssci.2009.03.011
Original URL	https://www-sciencedirect-com.ezpv7-web-p-u01.wpi.edu/science/article/pii/S0925753509000691
Source type	Journal Article
Keywords	Emotion, Emotional valence, Attention processes, Driving, Music
#Tags	#background #drivingsafety #method
Summary of key points + notes (include methodology)	In this study, researchers tested whether different types of music affect driving performance. To do this they have participants listen to music in a driving simulation for 5 minutes, drive without music for a few minutes and then listen to a differently connotated music. This was done with happy music, then neutral music, then sad music. The results showed an association between the car speeding up & have having less control over driving near the line with happy music. They also found that drivers tended to driver closer to the line and with safer speeds when listening to sad music. However, these results should be generalized with caution, since the study was only tested with French people, and the sample size was only 17 people.
Research Question/Problem/ Need	How does listening to music with different connotations affect an individual's performance driving a car?

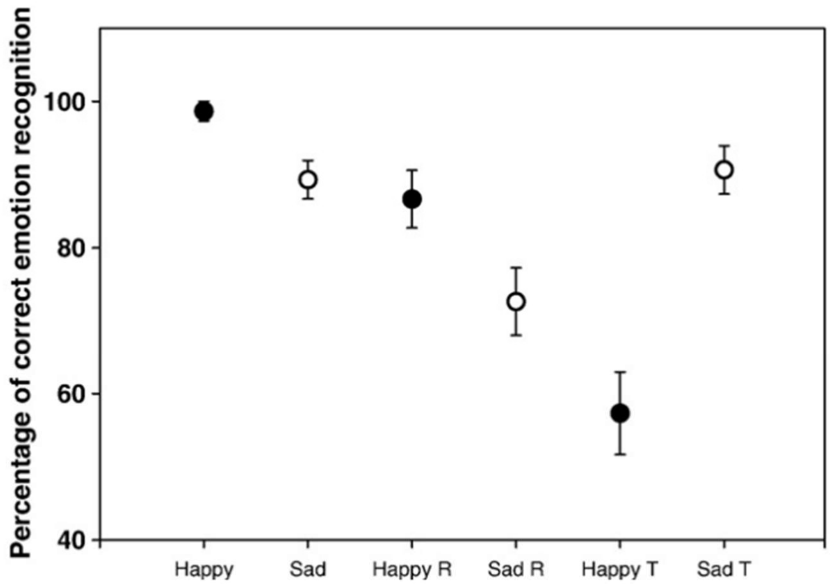
Important Figures	 **Fig. 2.** Mean Speed in km/h as a function of the emotional valence of music (happy, sad and neutral) and the phase (Driving with Music and Driving Alone phases).
VOCAB: (w/definition)	DM- driving with music phase DA- driving without music phase Emotion-an individual evaluation of an emotional relevant event (Pecher et. al). Arousal-degree of physiological activation depicted in a vertical column stretching from the lowest to highest degree (Pecher et. Al) Valence-way people experience a situation (Pecher et. Al.)
Cited references to follow up on	Blanco, M., Biever, W.J., Gallagher, J.P., Dingus, T.A., 2006. The impact of secondary task cognitive processing demand on driving performance. Accident Analysis and Prevention 38, 895–906. Chepenik, L.G., Cornew, L.A., Farah, M.J., 2007. The influence of sad mood on cognition. Emotion 7 (4), 802–811. Deffenbacher, J.L., Deffenbacher, D.M., Lynch, R.S., Richards, T.L., 2003. Anger, aggression, and risky behavior: a comparison of high and low anger drivers. Behaviour Research and Therapy 41, 701–718 Dibben, N., Williamson, V.J., 2007. An exploratory survey of in-vehicle music listening. Psychology of Music, 1–19. Khalfa, S., Roy, M., Rainville, P., Dalla Bella, S., Peretz, I., 2008. Role of tempo entrainment in psychophysiological differentiation of happy and sad music. International Journal of Psychophysiology 68 (1), 17–26.

Follow up Questions	Do different types of music have different effects on a person while driving? What type of music is most influential on a person's mood? What mood of music is most influential on a person's mood?

Article #7 Notes: Role of tempo entrainment in psychophysiological differentiation of happy and sad music

Article notes should be on separate sheets

Source Title	Role of tempo entrainment in psychophysiological differentiation of happy and sad music
Source citation (APA Format)	Khalfa, S., Roy, M., Rainville, P., Dalla Bella, S., Peretz, I., 2008. Role of tempo entrainment in psychophysiological differentiation of happy and sad music. *International Journal of Psychophysiology 68* (1), 17–26. https://doi.org/10.1016/j.ijpsycho.2007.12.001
Original URL	https://www.sciencedirect.com/science/article/pii/S0167876007002504#fig1
Source type	Journal Article
Keywords	Tempo, Emotion, Music, Skin conductance, Heart rate, Respiration rate, Diastolic blood pressure, Zygomatic activity
#Tags	#background #otherimportantfacts #wodriving
Summary of key points + notes (include methodology)	In this experiment, researchers were trying to see if the tempo or rhythm of a song determines whether a song is happy or sad. To test this, they had people listen to 3 happy songs, then 3 sad songs, then 3 happy, and then 3 sad. Participants were asked to rate the valence and arousal level of the song. The researchers also monitored blood pressure, skin conductance, and respiration rates during the experiment. However, many of their results turned back inconclusive results individually, and conclusive results when combined.
Research Question/Problem/ Need	Does the tempo/rhythm of a song distinguish it as happy or sad?

Important Figures	 Fig. 1. Means and standard errors of the percentage of emotion recognition according to each stimuli categories. Black filled circles represents fast tempo stimuli and white filled circles represents slow tempo stimuli.

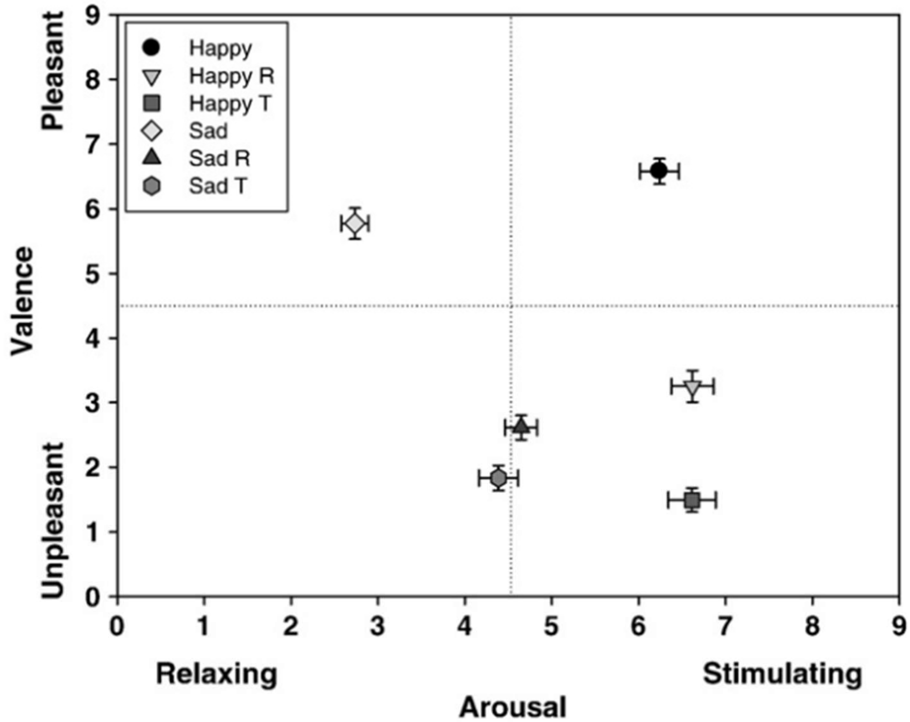
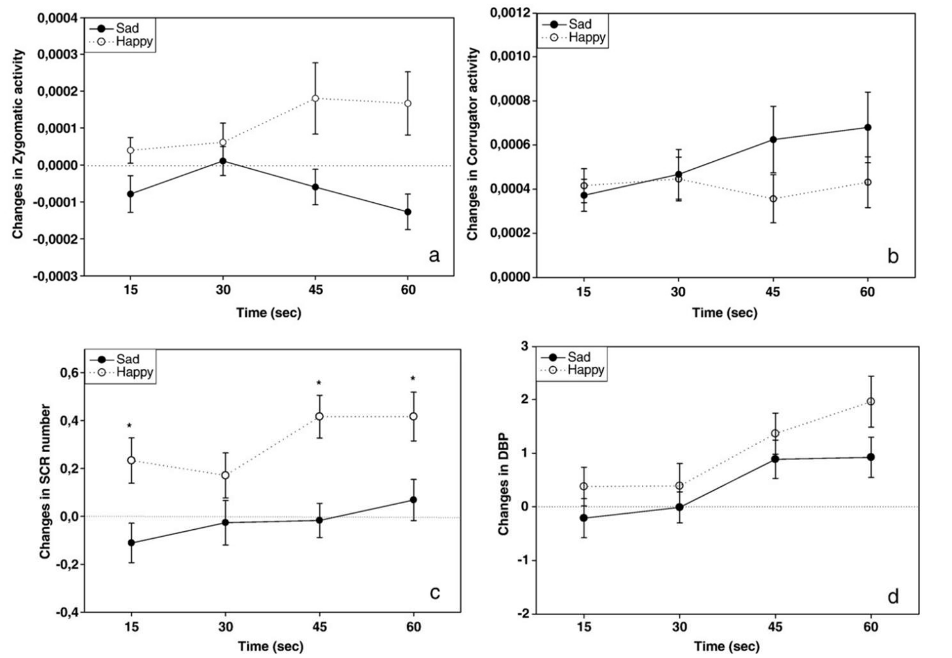


Fig. 2. Bi-dimensional representation of means and standard errors bars of t
arousal and valence assessment of the stimuli.

Table 1
Means (SD) changes in RMS values of the zygomatic and corrugator muscles from the pre-stimulus baseline during the 60-s of all stimuli categories listening

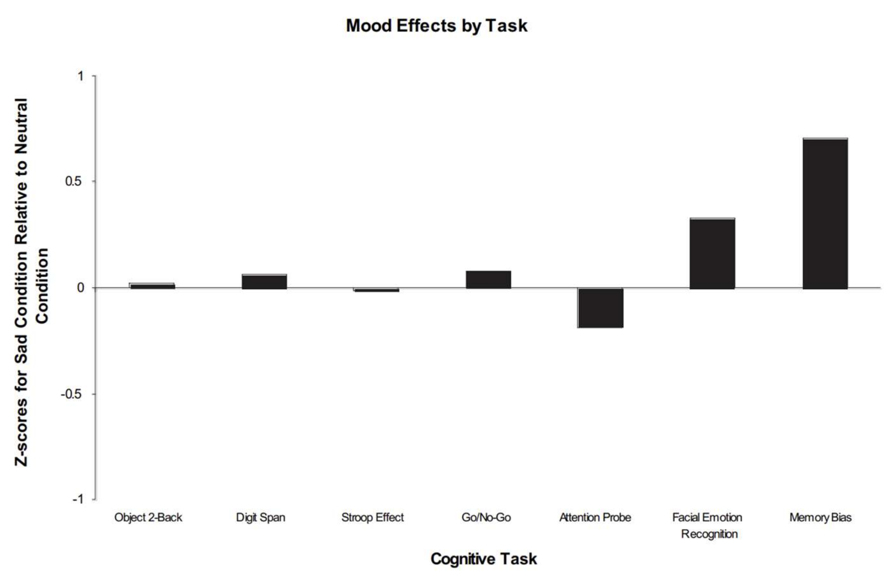
Mean RMS (±SD)	Conditions	60 s	Mean RMS (±SD)	Conditions	60 s
Zygomatic (10^{-1})	Sad	−0.43 (±1.52)	Corrugator (10^{-4})	Sad	6.25 (±7.82)
	Happy	1.13 (±3.00)		Happy	4.19 (±4.02)
	Sad R	−0.27 (±3.55)		Sad R	5.87 (±4.44)
	Happy R	−0.54 (±2.73)		Happy R	4.55 (±5.86)
	Sad T	0.59 (±3.68)		Sad T	3.56 (±10.62)
	Happy T	−0.10 (±3.24)		Happy T	2.80 (±14.08)

Changes of facial muscles activity.

	 Fig. 3. Means (and standard errors) changes in zygomatic activity (a), corrugator activity (b), skin conductance responses (c), diastolic blood pressure (d) from the pre-stimulus baseline ($y=0$) during successive 15-s epochs of happy and sad excerpts. * indicates statistically significant differences ($p<.05$).
VOCAB: (w/definition)	Zygomatic activity: facial activity Mode: subset of pitches used to write a song Tempo: BPM of a song rhythm: temporal patterning conveyed by tones' perception
Cited references to follow up on	Bartlett, D.L., 1999. Physiological responses to music and sound stimuli. In: Hodges, D.A. (Ed.), Handbook of Music Psychology (2nd ed). IMR press, San Antonio. Dalla Bella, S., Peretz, I., Rousseau, L., Gosselin, N., 2001. A developmental study of the affective value of tempo and mode in music. Cognition 80, 1–9. Gabrielsson, A., Lindstrom, E., 2001. The influence of musical structure on emotional expression. In: Juslin, P.N., Sloboda, J.A. (Eds.), Music and Emotion: Theory and Research. Oxford University Press, Oxford, pp. 223–248. Khalfa, S., Schon, D., Anton, J.L., Liégeois-Chauvel, C., 2005. Brain regions involved in the recognition of sadness and happiness in music. Neuroreport 16 (18), 1981–1984 Thayer, J.F., Faith, M.L., 2001. A dynamic system of musically induced emotions. Ann. N.Y. Acad. Sci. 930, 452–456.
Follow up Questions	Can the structure of two different happy songs with different structures lead one to be percieved as sad and one as happy? Could sad songs with fast tempo lead to a person driving faster in a car? What are the implications of fast-tempo music on driving?

Article #8 Notes: The Influence of Sad Mood on Cognition

Article notes should be on separate sheets

Source Title	The Influence of Sad Mood on Cognition
Source citation (APA Format)	Chepenik, L.G., Cornew, L.A., Farah, M.J., 2007. The influence of sad mood on cognition. *Emotion 7* (4), 802–811. DOI: 10.1037/1528-3542.7.4.802
Original URL	https://www.sas.upenn.edu/~mfarah/Emotion-SadMoodCognition.pdf
Source type	Journal Article
Keywords	mood, cognition, mood induction, memory
#Tags	#focus #mysteries #cognition
Summary of key points + notes (include methodology)	The affect of mood on memory is widely unknown, so the purpose of this study was to try and solve this mystery. In the experiment, all participants participated in two different pieces. First, participants were asked to imagine the death of a loved one while listening to sad music, and then completing a series of tasks. In another session, participants were tasked with doing the same thing but with listening to neutral music before. Tasks completed included matching shapes to a previous picture, reciting the color of a word displayed on the screen, reacting to something on a computer, among other tests. Sad mood was found to have a statistically significant effect on the recognition tasks.
Research Question/Problem/ Need	What affect does a sad mood have on memory compared to a neutral mood?
Important Figures	 *Figure 2.* Profile of sad mood effect across tasks, with positive difference scores indicating that sadness caused impaired performance (executive tasks) or more negatively biased performance (attention, perception and memory tasks).

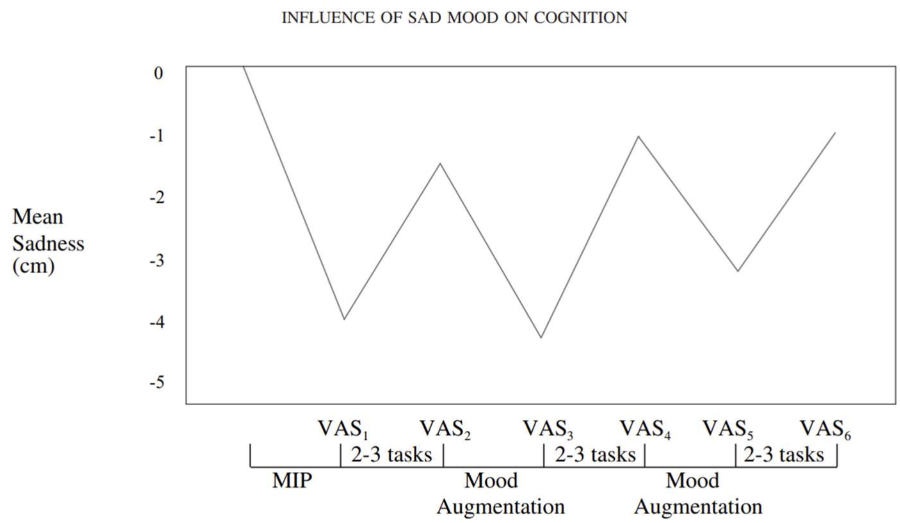
<table>
<tr><td></td><td>

Figure 1. Average sadness ratings throughout the course of the sad condition session, measured in centimeter deviations from incoming mood on a visual analog scale (VAS). MIP = mood induction procedure.</td></tr>
<tr><td>VOCAB: (w/definition)</td><td>Mood – an emotional state; cognition – mental process of gaining knowledge through the senses</td></tr>
<tr><td>Cited references to follow up on</td><td>Ashby, F. G., Isen, A. M., & Turken, A. U. (1999). A neuropsychological theory of positive affect and its influence on cognition. Psychological Review, 106, 529 –550.
Bush, G., Luu, P., & Posner, M. I. (2000). Cognitive and emotional influences in anterior cingulate cortex. Trends in Cognitive Sciences, 4, 215–222.
Gilboa, E., Roberts, J. E., & Gotlib, I. H. (1997). The effects of induced and naturally occurring dysphoric mood on biases in self-evaluation and memory. Cognition & Emotion, 11, 65– 82.
Liddle, P. F., Kiehl, K. A., & Smith, A. M. (2001). Event-related fMRI study of response inhibition. Human Brain Mapping, 12, 100 –109.
Phillips, L. H., Bull, R., Adams, E., & Fraser, L. (2002). Positive mood and executive function: Evidence from Stroop and fluency tasks. Emotion, 2, 12–22.</td></tr>
<tr><td>Follow-up Questions</td><td>What mood is most likely to affect a person’s driving abilities? Are mentally ill people more likely to get into a car crash then mentally healthy people? Is it possible for someone to forget how to drive due to their mental state?</td></tr>
</table>

Article #9 Notes: A neuropsychological theory of positive affect and its influence on cognition

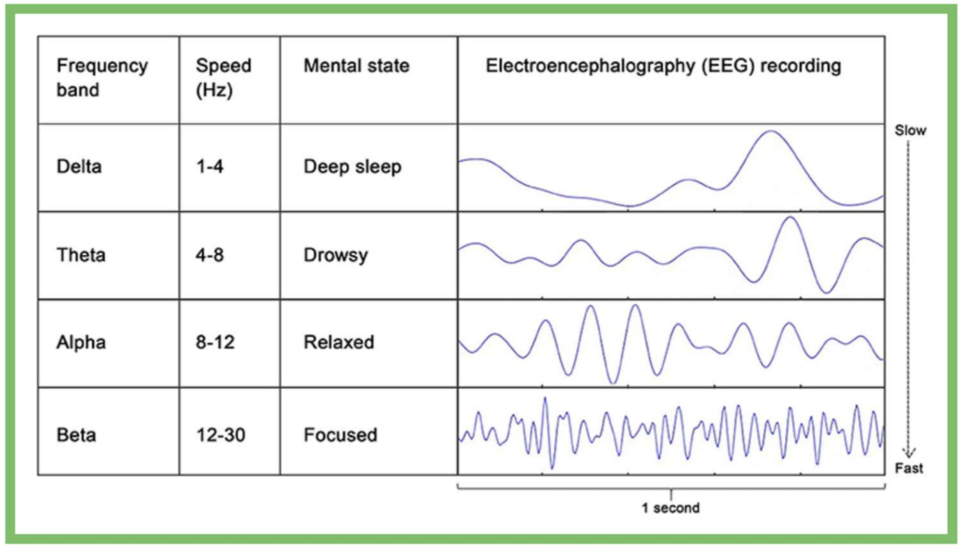
Article notes should be on separate sheets

Source Title	A neuropsychological theory of positive affect and its influence on cognition.
Source citation (APA Format)	Ashby, F. G., Isen, A. M., & Turken, A. U. (1999). A neuropsychological theory of positive affect and its influence on cognition. *Psychological Review, 106*(3), 529–550. https://doi.org/10.1037/0033-295X.106.3.529
Original URL	https://pubmed.ncbi.nlm.nih.gov/10467897/
Source type	Journal Article
Keywords	Dopamine, cognition, postive effects
#Tags	#background #positiveeffects #cognition
Summary of key points + notes (include methodology)	While more of a research paper than a study, this paper seeks to come up with a theory for the effects a positive attitude has on cognition. Overall, positive mood causes an individual to think outside of the box and see solutions to situations that they may have not previously seen. In lab settings, an increase in mood has also been shown to have positive results in patients with Parkinson's disease.
Research Question/Problem/ Need	What are the effects of positive mood on cognition?
Important Figures	
VOCAB: (w/definition)	Dopamine: a neurotransmitter in the brain, has an effect on mood, memory, motor function, etc; Parkinson's Disease: progressive death of dopamine cells in the brain; Amygdala: area of the brain involved in processing emotions
Cited references to follow up on	Cahill, L., Babinsky, R., Markowitsch, H. J., & McGaugh, J. L. (1995). The amgydala and emotional memory. Nature, 377, 295-296. Gaffan, D. (1992). Amygdala and the memory of reward. In J. P. Aggleton (Ed.), The amygdala (pp. 471-483). New York: Wiley Hale, W. D., & Strickland, B. (1976). Induction of mood states and their effect on cognitive and social behaviors. Journal of Consulting and Clinical Psychology, 44, 155
Follow up Questions	Does the brain register music like a drug? Does a good mood make you less likely to get distracted while driving? What causes different emotions in a person?

Article #10 Notes: Measuring Brain Waves in the Classroom

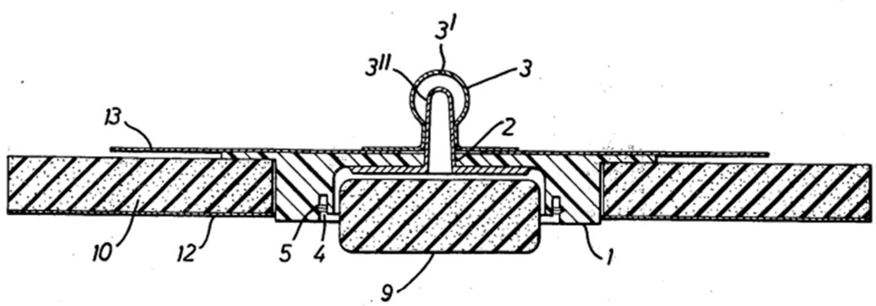
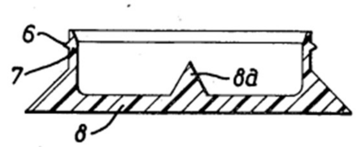
Article notes should be on separate sheets

Source Title	Measuring Brain Waves in the Classroom
Source citation (APA Format)	van Atteveldt, N., Janssen, T. W. P., & Davidesco, I. (2020, August 11). *Measuring Brain Waves in the Classroom*. Frontiers for Young Minds. https://kids.frontiersin.org/articles/10.3389/frym.2020.00096/full
Original URL	https://kids.frontiersin.org/articles/10.3389/frym.2020.00096/full
Source type	Website Article
Keywords	Brain waves, electroencephalography, electrodes,
#Tags	#devices #reader #brain #brainwaves
Summary of key points + notes (include methodology)	First, this article explained was electroencephalogram was - a device used to measure brain waves. This device uses electrodes to measure brain activity, which are detectors placed on a person's scalp. It is also mentioned that a test such as a go/no-go test can be used to decode how specific reactions appear in an electroencephalography test. Finally, it was mentioned that a test was conducted with teachers and students in an actual classroom, and it was found that the students who were more engaged tended to have synchronized brain waves
Research Question/Problem/ Need	What does the brain activity of students look like in a classroom?

Important Figures	 Figure 1 - EEG frequency bands from slow to fast and how they relate to mental state. Brain wave frequency is measured in Hertz (Hz), which is the number of waves per second.
VOCAB: (w/definition)	EEG – Electroencephalography, a test that measured electrical signals in the brain ERP – Event-related potential, a specific reaction to something that occurs in the environment Synchrony – when brain waves follow the same pattern, within the same brain or different brains
Cited references to follow up on	Immordino-Yang, M. H., Christodoulou, J. A., & Singh, V. (2012). Rest Is Not Idleness. *Perspectives on Psychological Science*, 4, 352–364. https://doi.org/10.1177/1745691612447308 Biasiucci, A., Franceschiello, B., & Murray, M. M. (2019). Electroencephalography. *Current Biology*, 3, R80–R85. https://doi.org/10.1016/j.cub.2018.11.052
Follow up Questions	What do brain waves look like when someone is feeling different emotions? Why are brain waves slower the more relaxed you are? What is the most common brain wave frequency in humans? Can this predict the emotion that most people feel on a daily basis?

Patent #1 Notes: Electrodes

Article notes should be on separate sheets

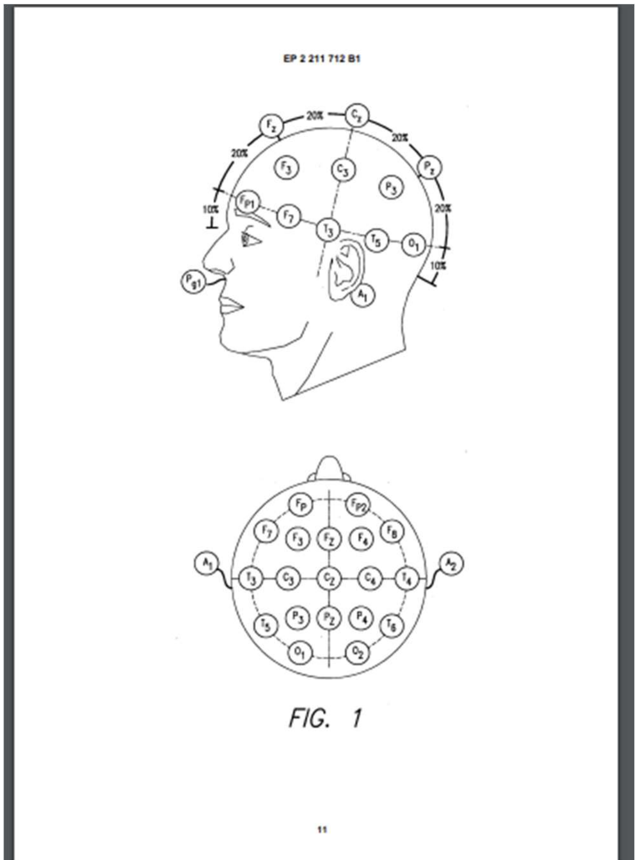
Source Title	Electrodes
Source citation (APA Format)	Bowles, L. R., Heath-Coleman, R. A. (1976). *Electrodes* (U.S. Patent No. 3,942,517). U.S. Patent and Trademark Office. https://patentimages.storage.googleapis.com/20/48/f7/87fb2d666c5f3b/US3942517.pdf
Original URL	https://patents.google.com/patent/US3942517A/en
Source type	Patent
Keywords	Gel container, plastic, gel, sterility, hermetic seal
#Tags	#devices #method #patents
Summary of key points + notes (include methodology)	This patent introduced a improved electrode design in which the gel containers of the electrode that attach to the skin are automatically sealed when the capsule is removed. This aides in the caps having a longer shelf-life by preventing the gel from dehydrating.
Research Question/Problem/ Need	How can the design of gel containers in electrodes be made to last longer?
Important Figures	  Top and side view of an electrode
VOCAB: (w/definition)	Hermetic seal- an airtight seal; shelf-life: amount of time an object can safely be

	deemed as usable or sellable; corrosion: chemical wear-down of a substance over time;
Cited references to follow up on	
Follow up Questions	How do electrodes collect information about electrical signals in the brain? What brain waves are the most easily detectable using electrodes? Are there any other devices used to collect information about brain waves?

Patent #2 Notes: Device and method for performing electroencephalography

Article notes should be on separate sheets

Source Title	Device and method for performing electroencephalography
Source citation (APA Format)	Mcpeck, J. P., Principe, K. M. (2008). *Device and method for performing electroencephalography* (European Patent No. 08847101.6). European Patent Office. https://patentimages.storage.googleapis.com/13/58/2c/93019c9c9f63d3/EP2211712B1.pdf
Original URL	https://patentimages.storage.googleapis.com/13/58/2c/93019c9c9f63d3/EP2211712B1.pdf
Source type	Patent
Keywords	Electroencephalography, electrodes, brain, electrical activity
#Tags	#devices #eeg #method #procedure
Summary of key points + notes (include methodology)	An electroencephalogram is a device used to measure electrical signals in the brain. In this patent, a new design for one of these such devices has been created. The new design holds the electrodes in a cloth sleeve that can be adhered to the head.
Research Question/Problem/ Need	Improvements to an EEG
Important Figures	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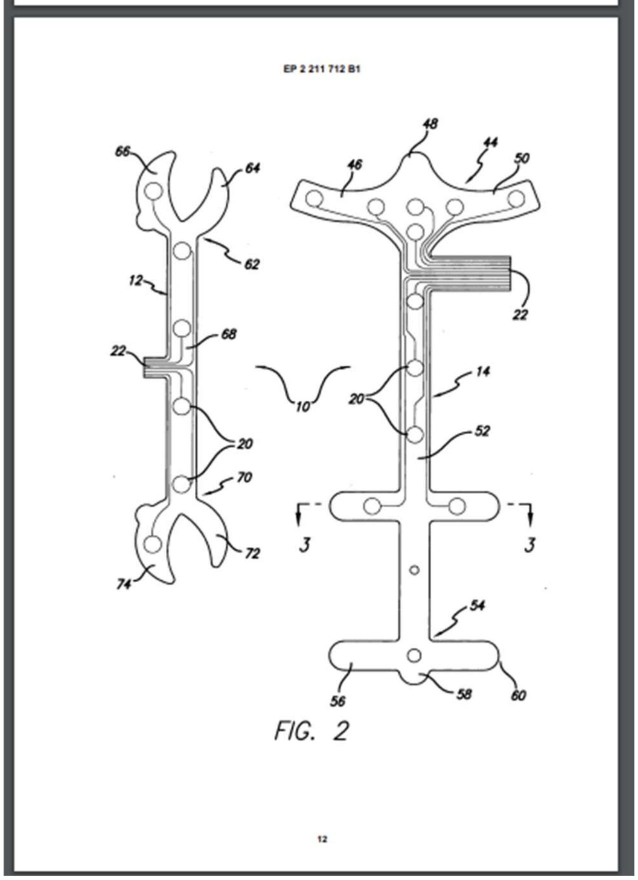
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FIG. 2
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	Figure 1: Diagram of the EEG with the electrodes placed Figure 2: Diagram of the EEG before being adhered to the head.
VOCAB: (w/definition)	Electrode – small disks connected to wires that measure electrical signals in the brain; sagittal portion – divides the body into right and left hemispheres; eeg – test that measures electrical signals in the brain
Cited references to follow up on	
Follow up Questions	What tests do eegs work best for? How can eegs be used to detect different emotions? What are the most common brain waves to detect using an eeg?

Article #11 Notes: A developmental study of the affective value of tempo and mode in music

Source Title	A developmental study of the affective value of tempo and mode in music
Source citation (APA Format)	Dalla Bella, S., Peretz, I., Rousseau, L., & Gosselin, N. (2001). A developmental study of the affective value of tempo and mode in music. *Cognition*, *80*(3), B1–B10. https://doi.org/10.1016/s0010-0277(00)00136-0
Original URL	https://www-sciencedirect-com.ezpv7-web-p-u01.wpi.edu/science/article/pii/S0010027700001360
Source type	Journal Article
Keywords	Developmental study; Tempo; Mode
#Tags	#effect #music #emotion
Summary of key points + notes (include methodology)	In this study, researchers were trying to determine if participants could accurately discern happy vs sad music based on mode and tempo. If so, how young could they obtain results of this experiment for? To conduct this, they first had adults listen to 32 different pieces of music (16 happy, 16 sad) under one of 4 conditions -music was left alone -tempo of music was changed to median tempo of ALL songs -mode of music was flipped (minor songs were converted to major, major to minor) -both of these conditions were implemented Researchers were able to get significant results for the adults, so they then again tried this experiment with children between the ages of 3 and 8. They were unable to obtain results for children 3-4 years, but the rest they were able to obtain significant results for.
Research Question/Problem/ Need	Can music be labeled as happy/sad based on the tempo and mode of the music? If so, when in life does this skill develop?

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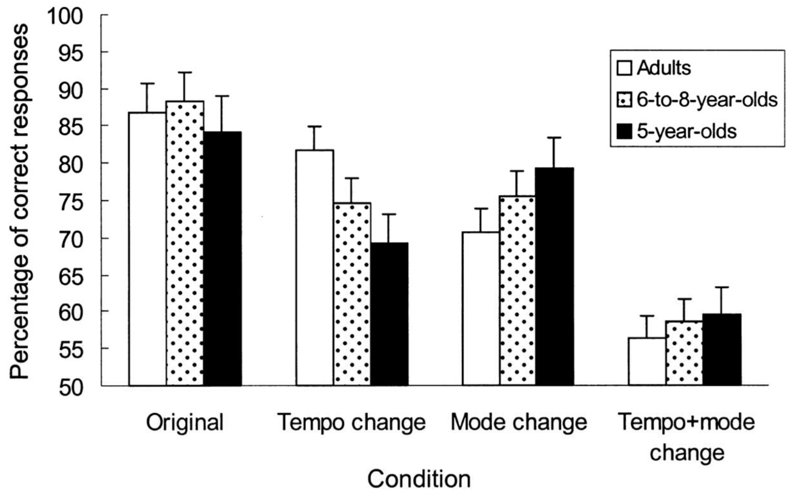
<tr><td>Important Figures</td><td>


Fig. 2. Mean percentage of correct responses for adults and 6–8-year-old and 5-year-old children in the different conditions defined by the type of modification applied to the musical excerpts in Experiments 1 and 2. Error bars represent standard errors of the mean.
</td></tr>
<tr><td>VOCAB: (w/definition)</td><td>Mode: specific notes used to write a song</td></tr>
<tr><td>Cited references to follow up on</td><td>Balkwill, L.-L., & Thompson, W. F. (1999). A cross-cultural investigation of the perception of emotion in music: psychophysical and cultural cues. Music Perception, 17 (1), 43±64.
Rigg, M. G. (1940). Speed as a determiner of musical mood. Journal of Experimental Psychology, 27, 566±571.
Terwogt, M. M., & Van Grinsven, F. (1991). Musical expression of moodstates. Psychology of Music, 19, 99±109.</td></tr>
<tr><td>Follow up Questions</td><td>Can humans distinguish music by simply hearing it, or do they really have to listen to get the tone of the music? Overall, what factor most greatly influences how a song is perceived? Is this technique effective in non-western music?</td></tr>
</table>

Article #12 Notes: Evaluation of Driver Reaction to Disengagement of Advanced Driver Assistance System with Different Warning Systems While Driving Under Various Distractions

Source Title	Evaluation of Driver Reaction to Disengagement of Advanced Driver Assistance System with Different Warning Systems While Driving Under Various Distractions
Source citation (APA Format)	Shirani, N., Song, Y., Wang, K., & Jackson, E. (2024). Evaluation of Driver Reaction to Disengagement of Advanced Driver Assistance System with Different Warning Systems While Driving Under Various Distractions. *Transportation Research Record, 0*(0). https://doi.org/10.1177/03611981241252789
Original URL	https://journals.sagepub.com/doi/pdf/10.1177/03611981241252789
Source type	Journal Article
Keywords	human factors, advanced driver assistance systems, distraction, driver attitudes, driver behavior, driver performance
#Tags	#mentorpaper #ideas
Summary of key points + notes (include methodology)	In this paper, participants were asked to drive in a driving simulator using different types of distractions and an assistance system. At some point in the trip, the assistance system was disengaged and researchers recorded how long it took participants to correct the car in the simulator.
Research Question/Problem/ Need	What type of driver monitoring system is most effective at alerting drivers to a disengaged ADAS system?
Important Figures	 **Figure 2.** University of Connecticut driving simulator setup and dashboard interface. © 2024 Connecticut Transportation Safety Research Center. Driving simulator used

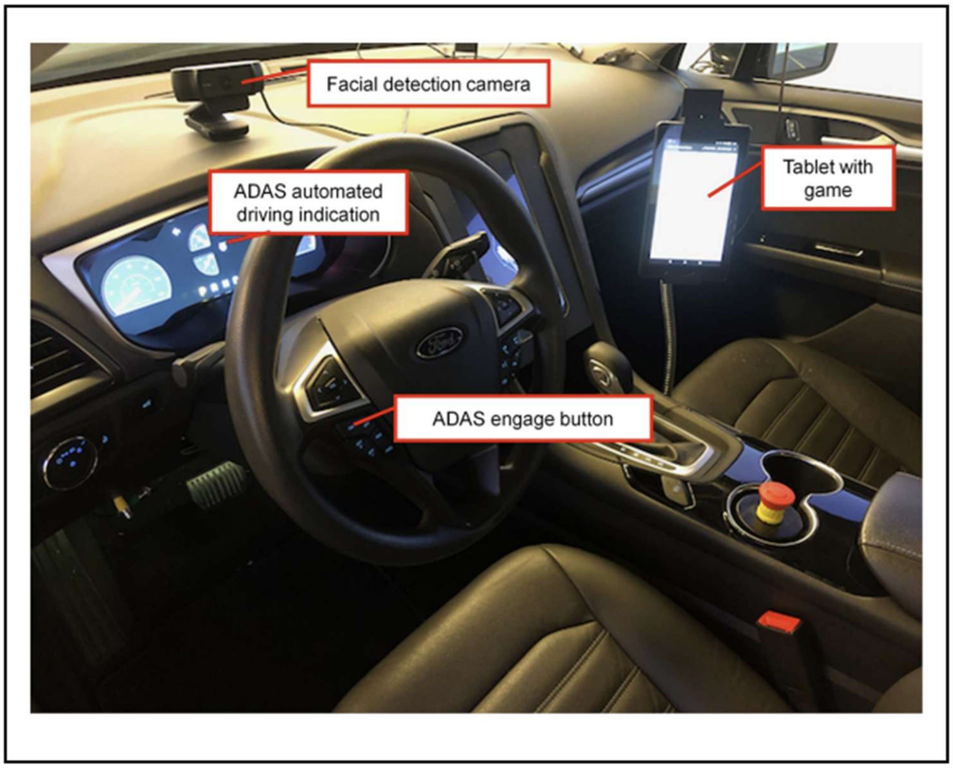


Figure 3. Driving simulator cab setup.
Note: ADAS = advanced driver assistance systems.

Inside the driving simulator

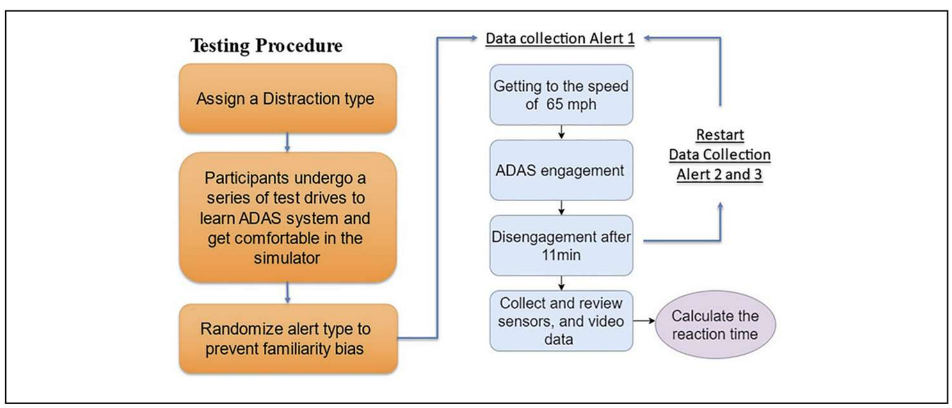


Figure 4. Driving simulation testing procedure.
Note: ADAS = advanced driver assistance systems.

Overview of the experiment

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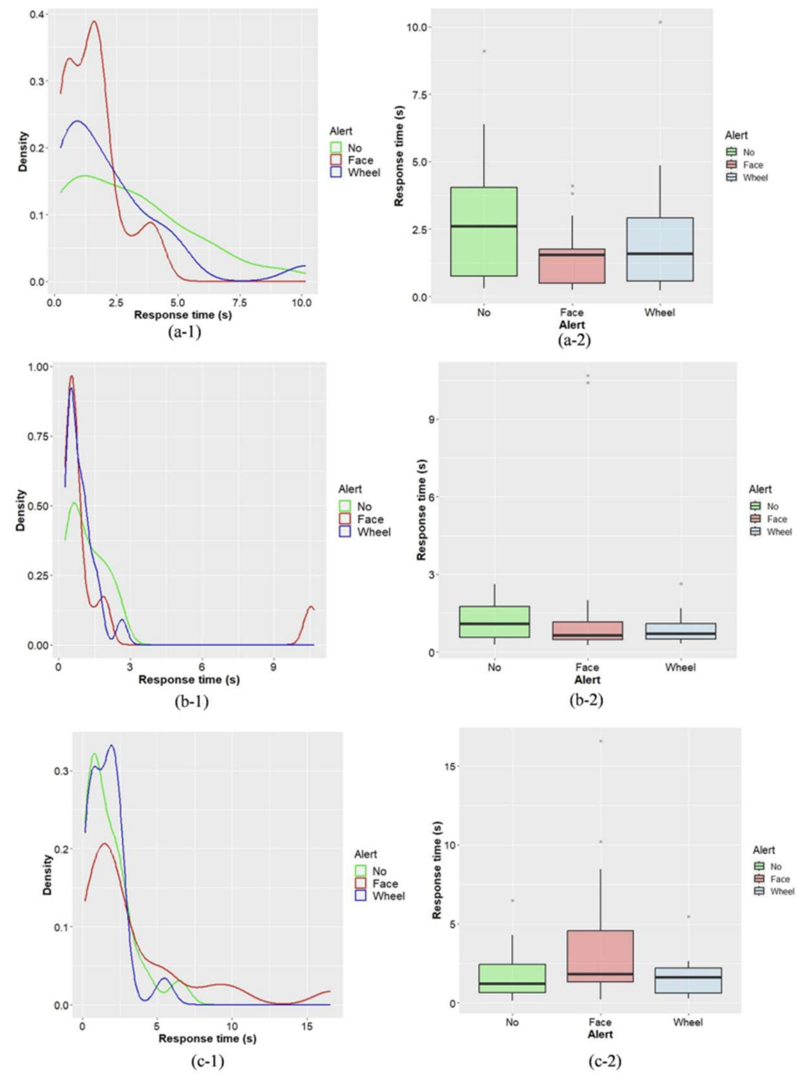

Figure 5. Distribution of response time by distraction group: (*a*, 1 and 2) no distraction, (*b*, 1 and 2) audio distraction, and (*c*, 1 and 2) visual distraction.

Distribution of results
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<tr>
<td>VOCAB: (w/definition)</td>
<td>ADAS: Advanced Driver assistance system; DMS: Driver monitoring system;</td>
</tr>
<tr>
<td>Cited references to follow up on</td>
<td>. Sigari, M. H., M. Fathy, and M. Soryani. A Driver Face Monitoring System for Fatigue and Distraction Detection. International Journal of Vehicular Technology, Vol. 2013, 2013, pp. 1–11. https://doi.org/10.1155/2013/263983
Welz, W., S. Voelter-Mahlknecht, C. Große-Siestrup, and G. Preuß. The Influence of Different Auditory Stimuli on Attentiveness and Responsiveness in Road Traffic in Simulated Traffic Situations. International Journal of Environmental Research and Public Health, Vol. 17, No. 24, 2020, p. 9226. https://doi.org/10.3390/ijerph17249226</td>
</tr>
<tr>
<td>Follow up Questions</td>
<td>Are drivers that are not adapted to normally using the system more likely to</td>
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</table>

	respond it its disengagement faster? Are certain sounds more distracting than others while driving? Can these alert systems be effective in alerting distracted drivers in general?

Article #13 Notes: The Influence of Different Auditory Stimuli on Attentiveness and Responsiveness in Road Traffic in Simulated Traffic Situations

Source Title	The Influence of Different Auditory Stimuli on Attentiveness and Responsiveness in Road Traffic in Simulated Traffic Situations
Source citation (APA Format)	Welz, W., S. Voelter-Mahlknecht, C. Große-Siestrup, and G. Preuß. (2020). The Influence of Different Auditory Stimuli on Attentiveness and Responsiveness in Road Traffic in Simulated Traffic Situations. *International Journal of Environmental Research and Public Health*, *17*(24) https://doi.org/10.3390/ijerph17249226
Original URL	https://www.mdpi.com/1660-4601/17/24/9226
Source type	Journal Article
Keywords	auditory stimuli; deflection; responsiveness; road safety
#Tags	#previousdata #background #data
Summary of key points + notes (include methodology)	In this study, participants were split into three groups and completed tests on a computer while listening to different audio distractions. At the end, participants were asked to fill out a questionnaire about the experiment overall. No significant results were found by the experiment.
Research Question/Problem/ Need	How do different auditory stimuli affect one's performance while driving?
Important Figures	Due to the fact that the data found was NOT significant, figures will not be included.
VOCAB: (w/definition)	OSPAN – Operation span – sum of sets a participant remembers perfectly
Cited references to follow up on	Atchley, P.; Chan, M. Potential Benefits and Costs of Concurrent Task Engagement to Maintain Vigilance: A Driving Simulator Investigation *Human Factors*. J. Hum. Factors Ergon. Soc. 2011, 53, 3–12. Alimohammadi, I.; Zokaei, M.; Sandrock, S. The Effect of Road Traffic Noise on Reaction Time. *Health Promot*. Perspect. 2015, *5, 207*–214. . Nowosielski, R.J.; Trick, L.M.; Toxopeus, R. 2018.Good distractions: Testing the effects of listening to an audiobook on driving performance in simple and complex road environments. *Acid. Anal*. Prev. 2018, *111,* 202–209.
Follow up Questions	What causes insignificant results, even if the results seem blatantly obvious? How can simulated results differ from actual results? How does obtaining results in a driving simulator differ from results obtained in a real car?

Article #14 Notes: Potential Benefits and Costs of Concurrent Task Engagement to Maintain Vigilance: A Driving Simulator Investigation

<table>
<tr><td>Source Title</td><td>Potential Benefits and Costs of Concurrent Task Engagement to Maintain Vigilance: A Driving Simulator Investigation</td></tr>
<tr><td>Source citation (APA Format)</td><td>Atchley, P., Chan, M.(2011). Potential Benefits and Costs of Concurrent Task Engagement to Maintain Vigilance: A Driving Simulator Investigation. Human Factors, 53(1), 3–12.</td></tr>
<tr><td>Original URL</td><td>https://journals-sagepub-com.ezpv7-web-p-u01.wpi.edu/doi/epub/10.1177/0018720810391215</td></tr>
<tr><td>Source type</td><td>Journal Article</td></tr>
<tr><td>Keywords</td><td>countermeasures, vigilance, monotony, concurrent task, lane-keeping performance, driver safety</td></tr>
<tr><td>#Tags</td><td>#previousdata #distractions #variables</td></tr>
<tr><td>Summary of key points + notes (include methodology)</td><td>In this study, researchers were trying to determine if having a conversation at a specific point while driving was effective in keeping the driver focused. They did this by simulating a relatively boring drive, and testing three conditions: no conversation while driving, conversation being had throughout the whole drive, and having a conversation solely later in the drive. Overall, it was found that conversing throughout the whole drive is not effective in keeping the driver focused, but conversing later in the drive is effective in helping the driver keep focus on the road.</td></tr>
<tr><td>Research Question/Problem/ Need</td><td>How does having a conversation while driving help the driver keep focused during a boring drive?</td></tr>
<tr><td>Important Figures</td><td>TABLE 3: Total Number of Steering Deflections >10°, as a Function of Time
<table>
<tr><th>Condition</th><th>Block 2</th><th>Block 3</th><th>Block 5</th></tr>
<tr><td>Steering angles >10°</td><td></td><td></td><td></td></tr>
<tr><td>No verbal task</td><td>2.07 (1.83)</td><td>3.47 (2.59)</td><td>5.80 (5.05)</td></tr>
<tr><td>Continuous verbal task</td><td>1.27 (1.33)</td><td>2.27 (1.44)</td><td>3.60 (1.44)</td></tr>
<tr><td>Late verbal task</td><td>1.67 (2.55)</td><td>3.80 (3.19)</td><td>2.27 (1.22)</td></tr>
</table>
Note. Each time block is approximately 5 min in duration. Standard deviations are shown in parentheses.</td></tr>
</table>

TABLE 2: Total Lane Infractions and Duration of Infractions (in milliseconds) as a Function of Time

Condition	Block 2	Block 3	Block 5
Lane infractions			
No verbal task	2.27 (2.91)	2.33 (2.61)	4.27 (3.49)
Continuous verbal task	1.86 (2.13)	2.13 (2.03)	5.00 (5.55)
Late verbal task	3.07 (3.81)	4 (3.81)	2.53 (1.41)
Duration of lane infractions			
No verbal task	1,039.69 (818.66)	1,466.82 (1324.49)	2,241.36 (1406.76)
Continuous verbal task	1,134.78 (1128.66)	1,697.17 (1703.89)	3,210.81 (1801.78)
Late verbal task	1,323.56 (1506.33)	1,894.95 (1446.86)	3,025.57 (2335.15)

Note. Each time block is approximately 5 min in duration. Standard deviations are shown in parentheses.

TABLE 1: Deviation of Lane Position (in meters) and Deviation of Steering Wheel Angle (in degrees) as a Function of Time

Condition	Block 2	Block 3	Block 5
Deviation of lane position			
No verbal task	0.39 (0.19)	0.42 (0.19)	0.45 (0.18)
Continuous verbal task	0.36 (0.22)	0.38 (0.23)	0.43 (0.23)
Late verbal task	0.40 (0.27)	0.42 (0.26)	0.35 (0.20)
Deviation of steering wheel angle			
No verbal task	2.11 (0.52)	2.51 (0.59)	2.96 (1.33)
Continuous verbal task	1.84 (0.37)	2.33 (0.33)	2.51 (0.74)
Late verbal task	1.98 (0.49)	2.49 (0.62)	2.09 (0.46)

Note. Each time block is approximately 5 min in duration. Standard deviations are shown in parentheses.

VOCAB: (w/definition)

Concurrent task – a task that occurs at the same time as another, but both aren't performed simultaneously
Interstimulus interval – The amount of time between which stimulus words were delivered to the participant
SDLP – standard deviation of lane position
SSD – steering wheel angle
RT – driver response to intruder car

Cited references to follow up on

Cooper J. M., Medeiros-Ward N., Seegmiller J., Strayer D. L. (2009). Shifting eyes and thinking hard keep us in our lanes. *Human Factors and Ergonomics Society Annual Meeting Proceedings*, 53, 1753–1756.
Gershon P., Ronen A., Oron-Gilad T., Shinar D. (2009). The effects of an interactive cognitive task (ICT) in suppressing fatigue symptoms in driving. *Transportation Research Part F*, 12, 21–28.
Howell D. C. (2002). *Statistical methods for psychology* (5th ed.). Pacific Grove, CA: Wadsworth.

Follow up Questions

Could other concurrent tasks have a different effect on the driver while driving? What if the driver was driving on a less monotonous road, could this produce different results? If the interstimulus interval were larger, could this have produced different results as well?

Article #15 Notes: The Effect of Road Traffic Noise on Reaction Time

<table>
<tr><td>Source Title</td><td>The Effect of Road Traffic Noise on Reaction Time</td></tr>
<tr><td>Source citation (APA Format)</td><td>Alimohammadi, I., Zokaei, M., & Sandrock, S. (2015). The Effect of Road Traffic Noise on Reaction Time. Health Promotion Perspectives, 5(3), 207–214. https://doi.org/10.15171/hpp.2015.025</td></tr>
<tr><td>Original URL</td><td>https://pmc.ncbi.nlm.nih.gov/articles/PMC4667263/pdf/HPP-5-207.pdf</td></tr>
<tr><td>Source type</td><td>Journal Article</td></tr>
<tr><td>Keywords</td><td>Traffic Noise, Reaction Time, Extroversion, Student</td></tr>
<tr><td>#Tags</td><td>#increasedreaction #previousresearch</td></tr>
<tr><td>Summary of key points + notes (include methodology)</td><td>In this study, researchers were trying to determine if traffic noise caused a difference in the reaction time of people with different personality types, specifically introverts and extroverts. To test this, they had participants complete a test to measure reaction time. Participants either listened to traffic noise in the background or no noise at all. It was found that the increase in reaction time was greater for all parties, but the increase was greater in introverts than extroverts.</td></tr>
<tr><td>Research Question/Problem/ Need</td><td>How does road traffic noise affect an individual's reaction time?</td></tr>
<tr><td>Important Figures</td><td>Table 5: The average reaction time and the average movement time differences before and after exposure to traffic noise
<table>
<tr><th>Groups</th><th>Items</th><th colspan="2">Different Mean RT(ms)</th><th>P value</th><th colspan="2">Different Mean MT (ms)</th><th>P value</th></tr>
<tr><th></th><th></th><th>Mean</th><th>SD</th><th></th><th>Mean</th><th>SD</th><th></th></tr>
<tr><td>Case</td><td>Introvert</td><td>69.3</td><td>49</td><td>0.006</td><td>15.4</td><td>7</td><td>0.431</td></tr>
<tr><td></td><td>Extrovert</td><td>25.1</td><td>33</td><td></td><td>16.6</td><td>4</td><td></td></tr>
<tr><td></td><td>Male</td><td>44</td><td>54</td><td>0.717</td><td>16.4</td><td>5</td><td>0.263</td></tr>
<tr><td></td><td>Female</td><td>42.3</td><td>49</td><td></td><td>14</td><td>1</td><td></td></tr>
<tr><td>Control</td><td>Introvert</td><td>3.8</td><td>8</td><td>0.479</td><td>8</td><td>7</td><td>0.164</td></tr>
<tr><td></td><td>Extrovert</td><td>2.1</td><td>11</td><td></td><td>5</td><td>5</td><td></td></tr>
<tr><td></td><td>Male</td><td>2.85</td><td>10</td><td>0.925</td><td>8</td><td>6</td><td>0.116</td></tr>
<tr><td></td><td>Female</td><td>2.5</td><td>8</td><td></td><td>10</td><td>12</td><td></td></tr>
</table></td></tr>
<tr><td>VOCAB: (w/definition)</td><td>CNS – Central Nervous System
CRTN Method – math model to estimate noise level</td></tr>
<tr><td>Cited references to follow up on</td><td>Hughes, G. M., Rudin-Brown, C. M., & Young, K. L. (2013). A simulator study of the effects of singing on driving performance. Accident Analysis & Prevention, 787–792. https://doi.org/10.1016/j.aap.2012.07.001</td></tr>
</table>

Follow up Questions	Does music from different cultures affect driving habits differently? How would noise in an urban area affect driving performance vs in a rural area? How does driving in a developing country differ from driving in a developed country?

Article #16 Notes: Effect of music on driving performance and physiological and psychological indicators: A systematic review and meta-analysis study

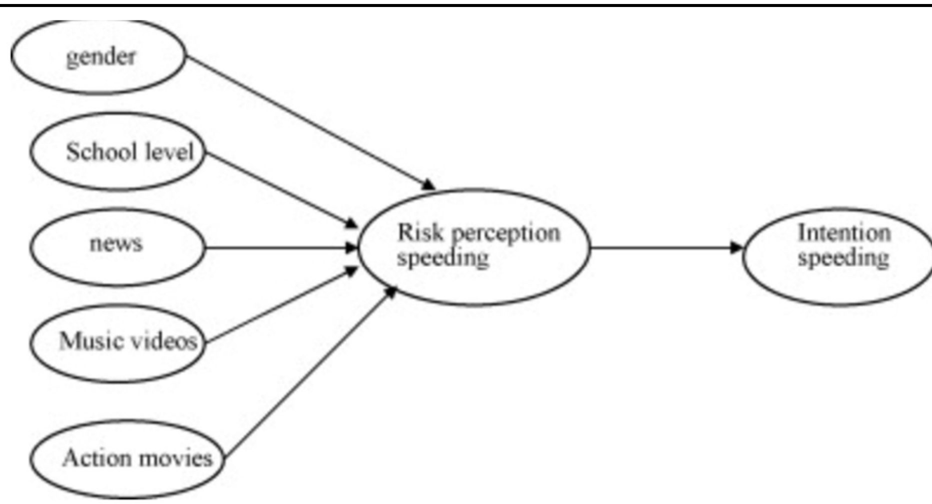
Source Title	Effect of music on driving performance and physiological and psychological indicators: A systematic review and meta-analysis study
Source citation (APA Format)	Ghojazadeh, M., Farhoudi, M., Rezaei, M., Rahnemayan, S., Narimani, M., & Sadeghi-Bazargani, H. (2023). Effect of music on driving performance and physiological and psychological indicators: A systematic review and meta-analysis study. *Health Promotion Perspectives*, *13*(4), 267–279. https://doi.org/10.34172/hpp.2023.32
Original URL	https://pmc.ncbi.nlm.nih.gov/articles/PMC10790125/#:~:text=In%20fact%2C%2075%25%20of%20the,wheel%2C%20they%20listen%20to%20music.&text=Driving%20quality%20is%20affected%20by,attention%2C%20performance%2C%20and%20response.
Source type	Journal Article
Keywords	Driving, Meta-analysis, Music, Physiologic, Psychologic, Digital epidemiology
#Tags	#data #compiled #databases
Summary of key points + notes (include methodology)	In this study, multiple different databases were searched for information about studying listening to music while driving. It was found that Americans listen to music about 75% of the time they are behind the steering wheel. It was also found that the most common music style listened to was rock, and that music with a medium and faster volume increases driving speed, and music with a lower volume decreases average speed of the car. It was also found that all music reduced reaction time, reduces response time, and increases coherence.
Research Question/Problem/ Need	Many studies pertaining to listening to music while driving produce confound results, this study aims to condense these results.
Important Figures	(Many tables w/ data from different studies)
VOCAB: (w/definition)	Digital epidemiology: using technology to try and mitigate a problem HIC: High-Income Country LMIC: Low/middle income countries
Cited references to follow up on	World Health Organization (WHO). Global Status Report on Road Safety. Geneva: WHO; 2018. Beullens K, Van den Bulck J. News, music videos and action movie exposure and adolescents' intentions to take risks in traffic. Accid Anal Prev. 2008;40(1):349-56.

	doi: 10.1016/j. aap.2007.07.002. Wen H, Sze NN, Zeng Q, Hu S. Effect of music listening on physiological condition, mental workload, and driving performance with consideration of driver temperament. Int J Environ Res Public Health. 2019;16(15):2766. doi: 10.3390/ ijerph16152766. Dibben N, Williamson VJ. An exploratory survey of in-vehicle music listening. Psychol Music. 2007;35(4):571-89. doi: 10.1177/0305735607079725 Schäfer T, Sedlmeier P, Städtler C, Huron D. The psychological functions of music listening. Front Psychol. 2013;4:511. doi: 10.3389/fpsyg.2013.00511. Pradheep N, Venkatachalam M, Saroja M, Sivasooriya V. Effect of music and noise on human driving and accident: a systematic review. Int Res J Eng Technol. 2020;7(7):3256-61. Navarro J, Osiurak F, Gaujoux V, Ouimet MC, Reynaud E. Driving under the influence: how music listening affects driving behaviors. J Vis Exp. 2019(145):e58342. doi: 10.3791/58342. Jimison ZN. The Effect of Music Familiarity on Driving: A Simulated Study of the Impact of Music Familiarity Under Different Driving Conditions [dissertation]. Florida, USA: University of North Florida; 2014. Navarro J, Osiurak F, Reynaud E. Does the tempo of music impact human behavior behind the wheel? Hum Factors. 2018;60(4):556-74. doi: 10.1177/0018720818760901. Hargreaves DJ, North AC. Experimental aesthetics and liking for music. In: Juslin PN and J. A. Sloboda JA, eds. The Handbook of Music and Emotion: Theory, Research, Applications. Oxford: Oxford University Press; 2010. p. 515-46. Betts SL. Taylor Swift's 'Love Story' Encourages Safe Driving? The Boot; 2009. Available from: https://theboot.com/taylorswifts-love-story-encourages-safe-driving/. Accessed March 12, 2019. . Mesken J, Hagenzieker MP, Rothengatter T, de Waard D. Frequency, determinants, and consequences of different drivers' emotions: an on-the-road study using self-reports, (observed) behaviour, and physiology. Transp Res Part F Traffic Psychol Behav. 2007;10(6):458-75. doi: 10.1016/j. trf.2007.05.001
Follow up Questions	How could adding more datasets change these obtained results? How can an optimal sample be collected from a population? Is there an optimal sample size that should be collected from a population?

Article #17 Notes: Taylor Swift's 'Love Story' Encourages Safe Driving?

Source Title	Taylor Swift's 'Love Story' Encourages Safe Driving?
Source citation (APA Format)	Betts, S.L. (2009, March 12). *Taylor Swift's 'Love Story' Encourages Safe Driving?* The Boot. https://theboot.com/taylorswifts-love-story-encourages-safe-driving/. Accessed November 8, 2024
Original URL	https://theboot.com/taylorswifts-love-story-encourages-safe-driving/
Source type	Website article
Keywords	
#Tags	#songchoices #potentialsong
Summary of key points + notes (include methodology)	A British music company put together a list of music that ranks the top 10 songs on the radio in 2009. It was based on research that found that listening to faster-paced music while driving leads to more accidents. The least dangerous song on this list was *Love Story* by Taylor Swift, and the most dangerous song was *Just Dance* by Lady Gaga
Research Question/Problem/ Need	What popular song from 2009 is the most/least dangerous to drive to?
Important Figures	
VOCAB: (w/definition)	
Cited references to follow up on	
Follow up Questions	Would this list be different if it were based in the US? What songs from this year would be considered the most dangerous to drive to? Would the songs on this list still be considered dangerous?

Article #18 Notes: News, music videos and action movie exposure and adolescents' intentions to take risks in traffic

Source Title	News, music videos and action movie exposure and adolescents' intentions to take risks in traffic
Source citation (APA Format)	Beullens, K., & Van den Bulck, J. (2007). News, music videos and action movie exposure and adolescents' intentions to take risks in traffic. *Accident Analysis & Prevention*, *40*(1), 349–356. https://doi.org/10.1016/j.aap.2007.07.002
Original URL	https://www.sciencedirect.com/science/article/pii/S0001457507001145?fr=RR-2&ref=pdf_download&rr=8e7aaa24d9b981fd
Source type	Journal Article
Keywords	Traffic; Risk taking; Television; Adolescents; Alcohol; Speeding;
#Tags	#previousresearch #teen drivers
Summary of key points + notes (include methodology)	Questionnaires were given out to a stratified random sample of teens from 20 different schools regarding intentions to drink and speed while driving. The different answers to the questions about different factors were run through an analyzation software, and independent t-tests were conducted on the results.
Research Question/Problem/ Need	How do television watching habits affect an individual's intentions to take risks in traffic?
Important Figures	 Figure 1: First analysis model

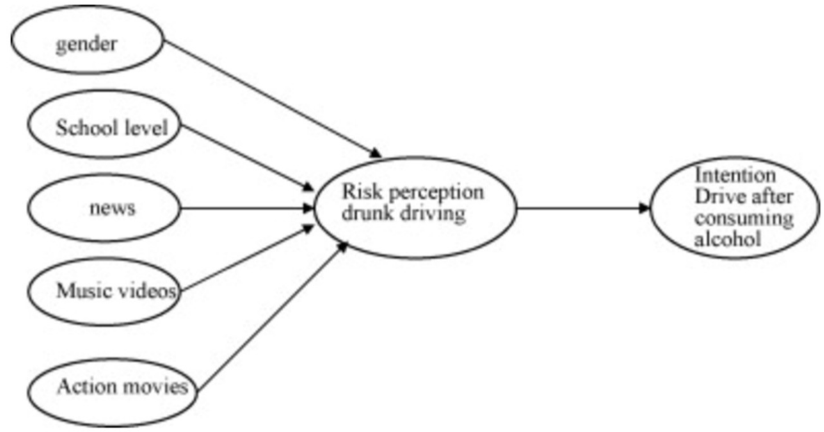


Figure 2: Second analysis model

Intention to speed					
Boy	2.63	1.02	10.99	1768.55	.000
Girl	2.17	.87			
Total sample	2.47	.99			

Figure 3: P-value received about how television affects speeding intentions

VOCAB: (w/definition)

Cultivation theory: Theory that suggests how media affects one's perception of reality

Cited references to follow up on

Arnett, J.J., (1992). Musical preferences and reckless behavior among adolescents. *J. Adolesc. Res. 7* (3), 313–331.
Arnett, J.J., Irwin, C.E., Halpern-Felsher, B.L., (2002). Developmental sources of crash risk in young drivers. *Inj. Prev. 8* (2), 17–21.

Follow up Questions

What type of media is most likely to influence a driver's behavior? Could prominence of music among teens cause them to drive more recklessly than adults? Could the prominence of driving in media cause adolescents to drive more with distractions?

Article #19 Notes: The 'most dangerous' Christmas song you should never listen to while driving — and why it could cause an accident

Source Title	The 'most dangerous' Christmas song you should never listen to while driving — and why it could cause an accident
Source citation (APA Format)	Landsel, D. (2024, December 7). *The "most dangerous" christmas song you should never listen to while driving - and why it could cause an accident.* New York Post. https://nypost.com/2024/12/07/lifestyle/the-most-dangerous-christmas-song-to-listen-to-while-driving/
Original URL	https://nypost.com/2024/12/07/lifestyle/the-most-dangerous-christmas-song-to-listen-to-while-driving/
Source type	News Article
Keywords	Christmas, driving, accident, speeding, music
#Tags	#recentlypublished #speeding #christmas #music
Summary of key points + notes (include methodology)	This news article focused on a study conducted by the South China University of Technology. In their study, researchers found that the most dangerous Christmas song to drive to is Frosty the snowman. This is because the pace of the song is very high, and this could cause the driver to drive faster.
Research Question/Problem/ Need	Songs with higher BPM rates may cause drivers to drive faster, what Christmas song is the most dangerous to drive to according to this?
Important Figures	1. Frosty The Snowman 2. All I Want For Christmas Is You 3. Feliz Navidad 4. Santa Claus Is Comin' To Town 5. Happy Xmas (War Is Over) 6. Let It Snow! Let It Snow! Let It Snow! 7. Rudolph The Red-Nosed Reindeer 8. I Wish It Could Be Christmas Every Day 9. Have Yourself A Merry Little Christmas 10. I Saw Mommy Kissing Santa Claus Figure 1: List of the top ten most dangerous Christmas songs to drive to, according to the South China University of Tech.

VOCAB: (w/definition)	BPM – Beats Per Minute, or tempo of a song;
Cited references to follow up on	
Follow up Questions	What regular songs are the most dangerous to drive to, according to this logic? What other aspects of a song can make them dangerous to drive to? What other Christmas songs may be dangerous to drive to that are not currently on this list?

Article #20 Notes: Developmental sources of crash risk in young drivers

Source Title	Developmental sources of crash risk in young drivers
Source citation (APA Format)	Arnett, J.J., Irwin, C.E., Halpern-Felsher, B.L., (2002). Developmental sources of crash risk in young drivers. *Inj. Prev. 8* (2), 17–21.
Original URL	https://pmc.ncbi.nlm.nih.gov/articles/PMC1765486/pdf/v008p0ii17.pdf
Source type	Journal Article
Keywords	Adolescence, emerging adulthood, distracted driving, car crash
#Tags	#research
Summary of key points + notes (include methodology)	This article explores what makes teens drivers more likely to get into a car crash than adult drivers, as well as differentiates what causes an emerging adult (18–25-year-old) vs an adolescent (16/17 year old) to take risks while driving. For 18-25 year olds, being away from home and not living at home means no imposed restrictions, which may lead an emerging adult to take more risks. For a 16/17-year-old, driving with friends is relatively common, and this can lead to a driver getting more distracted and getting into a crash. It was also mentioned that males are more likely to take risks in traffic than females.
Research Question/Problem/ Need	What causes adolescent and emerging adult drivers to take risks in traffic?

Important Figures

Table 1 Rates of risky vehicle use by Danish and American adolescents

	At least once in past year (%)	
Behavior	Danish	American
Driving car >80 MPH	20	79
Driving car >20 MPH over speed limit	22	85
Driving car while intoxicated	7	26
Riding moped while intoxicated	20	0
Riding bicycle while intoxicated	78	3

MPH, miles per hour.
For the first two items, MPH were converted to kilometers for the Danish adolescents.
Danish adolescents, n = 100 (45 boys, 55 girls); American adolescents, n = 133 (63 boys, 70 girls).

VOCAB: (w/definition)	ESM: experience sampling method; FARS: Fatality Analysis Reporting System; MPH: Miles per hour;
Cited references to follow up on	
Follow up Questions	What countries have the lowest driving fatalities? Are there similar or different reasons for this to the people of Denmark? Which age group tends to take the most risk, regardless of where or not they can drive?