

How does virtual reality shopping experiences influence consumer perceptions of product and how do demographic factors (e.g., age, gender, income) moderate the impact of virtual reality on consumer decision making and behaviour in supermarkets?

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Patagonia Bears Ears : <http://bearssears.patagonia.com>

RawMarketing : <https://rawmarketing.ie/portfolio-item/coca-cola-santa-sleigh/>

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Appendices

i. Figures

Figure 2. Global virtual reality market share by component

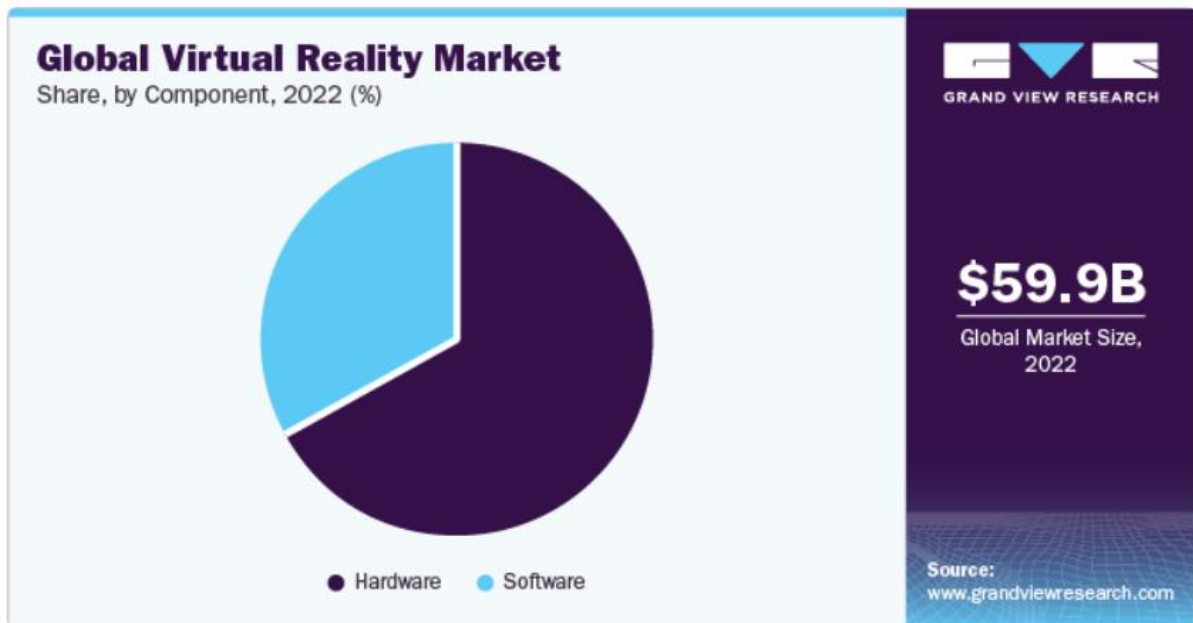


Figure 3. Virtual reality market trends by region



Figure 6. The StarCAVE from above, looking down on a RNA* protein rendering, Adapted from (DeFanti et al., 2008)

* RiboNucleic Acid

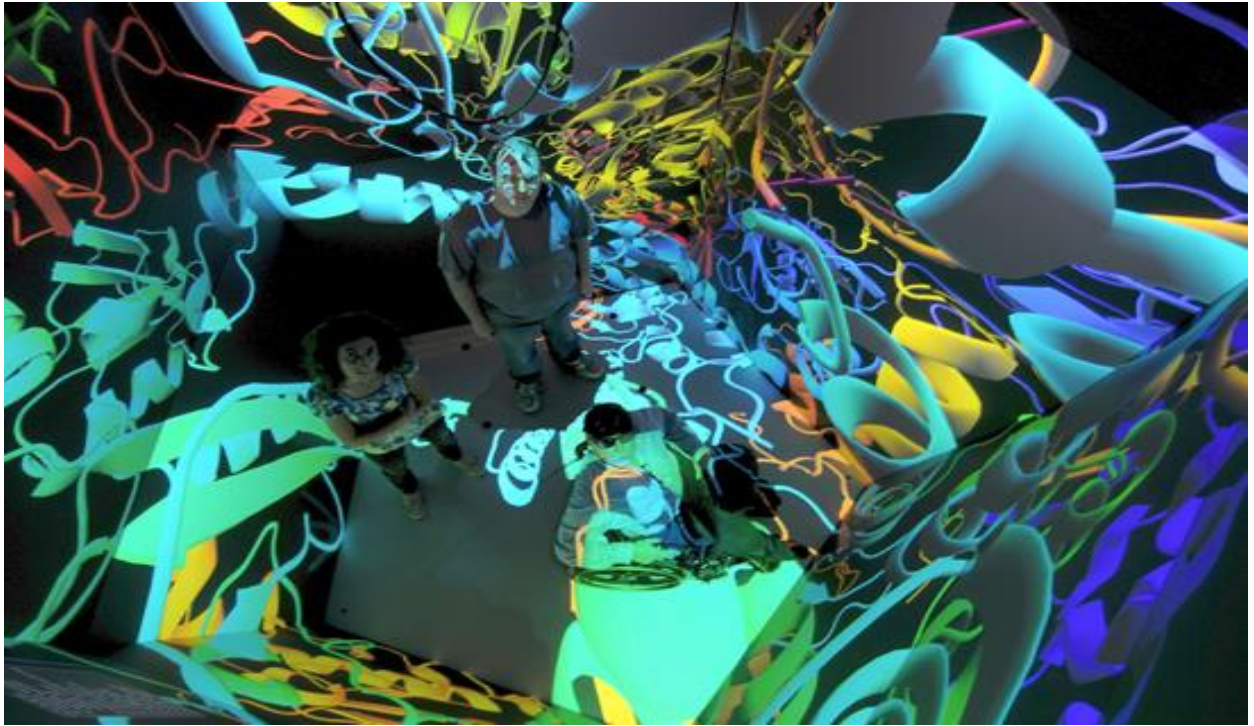
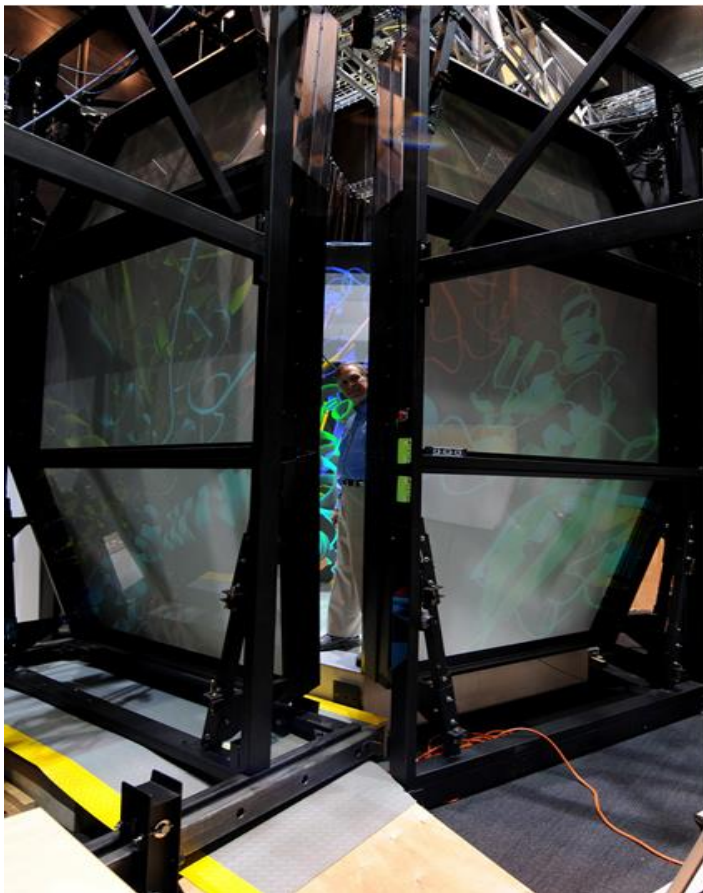


Figure 7. The StarCAVE from the outside showing the entry door quasi-closed, Adapted from (DeFanti et al., 2008)



A word cloud visualization of terms related to virtual reality. The words are arranged in a circular pattern, with colors ranging from blue to green. The most prominent words include "immersion", "system", "reality", "experience", "objective", "surrounding", "provides", "psychological", "environment", "delivering", "state", "capable", "level", "inclusive", "real", "illusion", "generates", "technical", "property", "lower", "sensorimotor", "disconnection", "either", "support", "included", "interacting", "result", "world", "fidelity", "extensive", "computer", "time", "task", "ve", "displays", "high", "includes", "gaming", "oneself", "description", "technology", "good", "vivid", "enveloped", "involvement", "natural".

[illegible]



Figure 21. Interactive table, Digital Lab HEC elaboration

Ambiance	Armoires	Décoration
Scandinave	Fermées	Avec
Classique	Ouvertes	Sans
	Vides	

Figure 22. Position mark, Digital Lab HEC elaboration



Figure 23. Products, Digital Lab HEC elaboration



Figure 24. Products, Digital Lab HEC elaboration

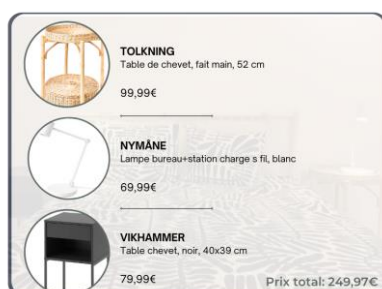


Figure 25. Products, Digital Lab HEC elaboration



Figure 26. Products, Digital Lab HEC elaboration






























Figure 27. Products, Digital Lab HEC elaboration



ii. Tables

Table 1. Virtual reality application fields and some technology examples. Own elaboration

Sector	Application fields	Technology examples
Gaming / Entertainment	<ul style="list-style-type: none"> Virtual Reality in gaming Movies and 360° Cinematics Theme Parks & Simulations 	 PlayStation VR  AVTAE INDEX  oculus  VIVE  HTC  STEAM VR
Healthcare / Medicine	<ul style="list-style-type: none"> Surgical Training & Simulations Therapy & Rehabilitation 	 Microsoft HoloLens  RelieVRx Formerly EaseVRx™

	<ul style="list-style-type: none"> Medical Imaging & Diagnosis Mental Health Treatment 	
Education / Training / Learning	<ul style="list-style-type: none"> Technical Training Medical Education Soft Skills Training STEM[†] model 	 
Military	<ul style="list-style-type: none"> Combat Training & Tactical Simulations Flight & Vehicle Simulations Remote Surveillance 	 
Industry / Manufacturing	<ul style="list-style-type: none"> Engineering & Product Design Assembly Line Training Remote Maintenance & Repair 	 
Retail	<ul style="list-style-type: none"> Virtual Showrooms Augmented Reality Shopping Personalized Retail Experiences 	 
Architecture / Design	<ul style="list-style-type: none"> Virtual Property Tours Architectural Visualization Interior Design Previews 	 
Automobile	<ul style="list-style-type: none"> Vehicle Prototyping & Design Driver Training & Safety Simulations Customer Test Drives 	  
Tourism	<ul style="list-style-type: none"> Virtual Travel Experiences Museum & Cultural Heritage Tours Event Planning & Conferences 	 
Sports / Well-being	<ul style="list-style-type: none"> VR Sports Training Immersive Workouts Live Sports Streaming 	   

[†] Educational approach: integrates four disciplines “Science, Technology, Engineering, Mathematics” into a coherent learning model

Table 4. words and frequencies used in the definition of immersion. Own elaboration

Word	Immersion	system	vivid	reality	extent	inclusive	experience
Frequency	6	5	4	4	4	3	3
Word	Extensive	surrounding	objective	vr	technology	displays	
Frequency	3	3	3	3	3	3	

Table 7. words and frequencies used in the definition of presence. Own elaboration

Word	environment	presence	virtual	psychological	mediated	subjective	state
Frequency	11	9	6	5	5	4	4
Word	perceptual	illusion	real	physical	system	experience	
Frequency	4	4	3	3	3	3	

iii. Surveys

Web-Based Experience Survey

Ikea Web

Welcome, and thank you for participating in this study!

In this session, you will explore interactive content using a **web-based interface**. Afterward, you'll be asked to complete a short survey about your impressions and interactions with the material.

There are no right or wrong answers — we're interested in your honest opinions.

Your responses will remain anonymous and are used for research purposes only.

The survey will take about **5-7 minutes**.

When you're ready, click "Next" to begin.

There are 11 questions in this survey.

This survey is anonymous.

The record of your survey responses does not contain any identifying information about you, unless a specific survey question explicitly asked for it.

If you used an identifying access code to access this survey, please rest assured that this code will not be stored together with your responses. It is managed in a separate database and will only be updated to indicate whether you did (or did not) complete this survey. There is no way of matching identification access codes with survey responses.

Next

Let's start

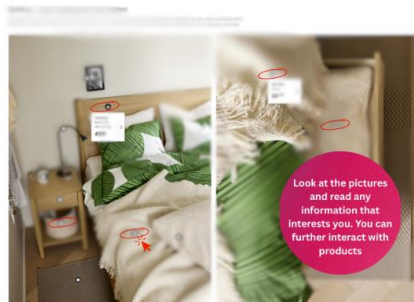
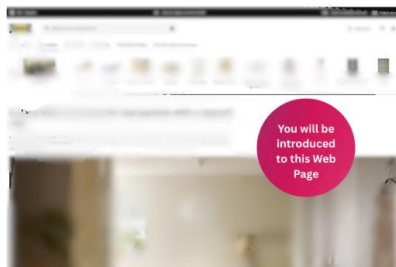
In this part of the study, you will explore a bedroom from Ikea.

Instructions:

Please take your time to explore the website freely, just as you would if you were visiting it on your own.

- Please DO NOT navigate to other websites; remain on the page provided in the link
- Look at the pictures and read any information that interests you.
- You can scroll through the pages, click on sections, and view different products or content.
- Spend as much time as you need to feel familiar with the website before continuing to the questions.

When you are ready, move on to the next page to answer a few questions about your experience.



Click next to continue

IKEA'S website

Take a moment to explore the following webpage:

[Click here to visit Ikea](#)

Take your time to browse the page as if you were naturally exploring it — observe the layout, images, and content.
Once you've spent a **few minutes** exploring the website, **please return to this window and click "Next" to proceed with the survey.**

Your impressions and feedback are important, so feel free to take in the experience at your own pace.

How was it ?

*Did you visit and explore the IKEA webpage before continuing with this survey?

👉 Choose one of the following answers

- ☐ Yes, I visited and explored the webpage.
- ☐ No, I did not visit the webpage.

Were you really there ?

*Ranging from Strongly Disagree (1) to Strongly Agree (5)

	1 - Strongly Disagree	2	3	4	5 - Strongly Agree
I felt like I was actually there in the place shown in the pictures.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It seemed as though I was actively involved in what was happening in the pictures.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It was as though my true location had shifted into the scene shown in the pictures.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt as though I was mentally present in the place shown in the pictures.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*Ranging from Strongly Disagree (1) to Strongly Agree (5)

	1 - Strongly Disagree	2	3	4	5 - Strongly Agree
The pictures and other content on the website gave me the feeling that I could interact with them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had the impression that I could be active while exploring the pictures and content on the website.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt like I could move around and navigate freely through the pictures and sections of the website.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It seemed to me that I could explore the pictures and website content however I wanted.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Imagine you had to buy a bedroom from IKEA. How likely are you willing to choose IKEA ?

*Ranging from Strongly Disagree (1) to Strongly Agree (5), please answer to these questions

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
If I needed a new bedroom in the future, I would purchase that new bedroom from IKEA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
If you were in the market for an additional bedroom, how likely would you be to purchase it from IKEA.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
If I were to purchase a new bedroom in the near future, I would NOT use IKEA as my provider	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Next

Demographics

*What is your gender ?

📌 Choose one of the following answers

Please choose... ▼

*What is the highest level of education you have completed?

📌 Choose one of the following answers

- ☐ Less than high school
- ☐ High school diploma or equivalent
- ☐ Some college
- ☐ Bachelor's degree
- ☐ Master's degree
- ☐ Doctoral degree

*Please enter your age. In numbers only

📌 Only numbers may be entered in this field.

*What is your current employment status ?

📌 Choose one of the following answers

- ☐ Employed full-time
- ☐ Employed part-time
- ☐ Self-employed
- ☐ Unemployed
- ☐ Student
- ☐ Retired

The End

Do you have any additional comments or thoughts you'd like to share about your experience? (Optional – you may leave this blank if you prefer)

Submit

The VR Experience Survey

VR Experience Survey

Thank you for participating in the VR experience!

Virtual Reality (VR) is a technology that lets users experience and interact with a simulated environment through a headset.

It creates the feeling of being inside a different space, often in 3D.

Virtual Reality is commonly used in video games, but it is also found in museums, tourist attractions where people can explore places without being there physically.

In this study, Virtual Reality was used to let you explore a bedroom space as if you were really inside it.

This short survey is designed to collect your thoughts, impressions, and experiences immediately after using the virtual reality.

Your responses will help us understand how users perceive and engage with VR.

There are no right or wrong answers — please answer honestly based on your personal experience.

The survey will take about **5-7 minutes** and your responses are **totally anonymous**.

Click **"Next"** to begin.

There are 16 questions in this survey.

This survey is anonymous.

The record of your survey responses does not contain any identifying information about you, unless a specific survey question explicitly asked for it.

If you used an identifying access code to access this survey, please rest assured that this code will not be stored together with your responses. It is managed in a separate database and will only be updated to indicate whether you did (or did not) complete this survey. There is no way of matching identification access codes with survey responses.

Next

*First of all, did you feel that you spent enough time in the virtual reality environment to be able to make a purchase decision?

👉 Choose one of the following answers

- ☐ Not at all
- ☐ Slightly
- ☐ Moderately
- ☐ Mostly
- ☐ Completely

*In your opinion, how long did you spend in the virtual reality environment?

👉 Choose one of the following answers

- ☐ 2/3 min
- ☐ 5/6 min

*Once here, you can call me over to assist you !

👉 Only numbers may be entered in this field.

Next

Let's talk about your familiarity with Virtual Reality

*

	Very unfamiliar 1	2	3	4	Very familiar 5
In general, would you consider yourself familiar or unfamiliar with Virtual Reality ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*

	Not at all informed 1	2	3	4	Highly informed 5
Would you consider yourself informed or uninformed about Virtual Reality ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*

	Know nothing at all 1	2	3	4	Know a great deal 5
Would you consider yourself knowledgeable about Virtual Reality ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Next

Were you really there in the Virtual Environment ?

*Ranging from Strongly Disagree (1) to Strongly Agree (5), please answer to these questions

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I felt like I was actually there in the Virtual Reality Environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It seemed as though I actually took part in the action of the Virtual Reality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It was as though my true location had shifted into the Virtual Reality Environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt as though I was physically present in the Virtual Reality Environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*Ranging from Strongly Disagree (1) to Strongly Agree (5), please answer to these questions

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The objects in Virtual Reality gave me the feeling that I could do things with them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had the impression that I could be active in the Virtual Reality Environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt like I could move around among the objects in Virtual Reality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It seemed to me that I could do whatever I wanted in the Virtual Reality Environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Next

Imagine you had to buy a bedroom from IKEA. How likely are you willing to choose IKEA ?

*Ranging from Strongly Disagree (1) to Strongly Agree (5), please answer to these questions

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
If I needed a new bedroom in the future, I would purchase that new bedroom from IKEA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
If you were in the market for an additional bedroom, how likely would you be to purchase it from IKEA.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
If I were to purchase a new bedroom in the near future, I would NOT use IKEA as my provider	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Next

Demographics

*What is your gender ?

Choose one of the following answers

Please choose... ▾

*What is the highest level of education you have completed?

Choose one of the following answers

☐ Less than high school

☐ High school diploma or equivalent

☐ Some college

☐ Bachelor's degree

☐ Master's degree

☐ Doctoral degree

*Please enter your age. In numbers only

Only numbers may be entered in this field.

*What is your current employment status ?

Choose one of the following answers

☐ Employed full-time

☐ Employed part-time

☐ Self-employed

☐ Unemployed

☐ Student

☐ Retired

The End

Do you have any additional comments or thoughts you'd like to share about your experience? (Optional – you may leave this blank if you prefer)

Submit

iv. JASP Tables

Tab1

Descriptive Statistics

	Age
Valid	108
Missing	0
Mean	30.50
Std. Deviation	13.21
Minimum	17.00
Maximum	65.00

Tab2

Descriptive Statistics

	Age	
	0	1
Valid	47	61
Missing	0	0
Mean	34.43	27.48
Std. Deviation	14.47	11.38
Minimum	18.00	17.00
Maximum	65.00	63.00

Tab3

Descriptive Statistics

		Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
Age	Bachelor's degree	30	0	31.07	13.48	20.00	65.00
Age	Doctoral degree	3	0	35.33	13.58	27.00	51.00
Age	High school diploma or equivalent	10	0	25.30	12.43	17.00	60.00
Age	Less than high school	4	0	29.00	22.67	17.00	63.00
Age	Master's degree	42	0	31.71	12.11	23.00	65.00
Age	Some college	19	0	29.21	14.23	18.00	64.00

Tab4

Descriptive Statistics

		Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
Age	Employed full-time	28	0	36.50	12.515	23.00	61.00
Age	Employed part-time	6	0	34.00	16.174	23.00	65.00
Age	Retired	5	0	63.40	1.517	61.00	65.00
Age	Self-employed	8	0	39.88	9.357	27.00	54.00
Age	Student	56	0	22.30	2.649	17.00	28.00
Age	Unemployed	5	0	36.60	15.742	20.00	60.00

Tab5

Binomial Test

Variable	Level	Counts	Total	Proportion	p
Gender_1W_0M	0	47	108	0.435	.211
	1	61	108	0.565	.211
Education Level	Bachelor's degree	30	108	0.278	< .001
	Doctoral degree	3	108	0.028	< .001
	High school diploma or equivalent	10	108	0.093	< .001
	Less than high school	4	108	0.037	< .001
	Master's degree	42	108	0.389	.026
	Some college	19	108	0.176	< .001
Status	Employed full-time	28	108	0.259	< .001
	Employed part-time	6	108	0.056	< .001
	Retired	5	108	0.046	< .001
	Self-employed	8	108	0.074	< .001
	Student	56	108	0.519	.773
	Unemployed	5	108	0.046	< .001

Note. Proportions tested against value: 0.5.

Tab6

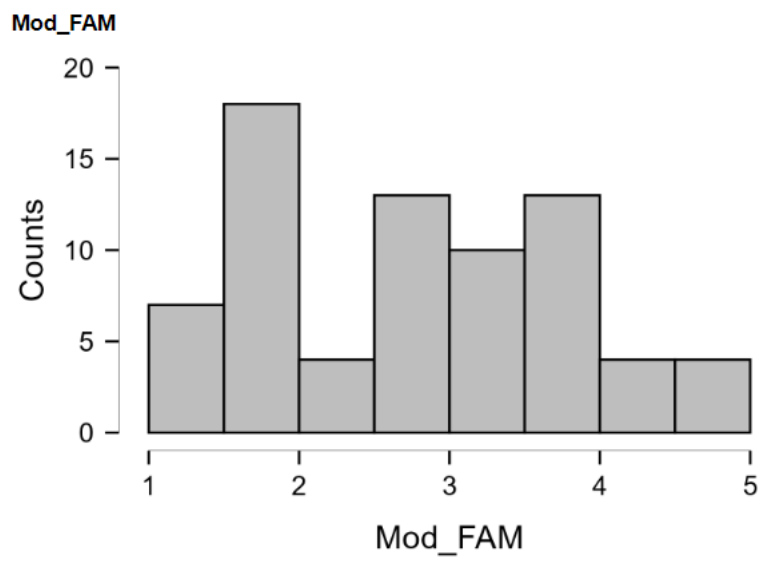
Descriptive Statistics

	Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
Age	108	0	30.500	13.213	17.000	65.000
Mod_FAM	73	35	2.845	1.054	1.000	5.000
DV_PI	108	0	3.611	0.724	1.667	5.000
Med_PR	108	0	3.666	0.694	2.125	5.000

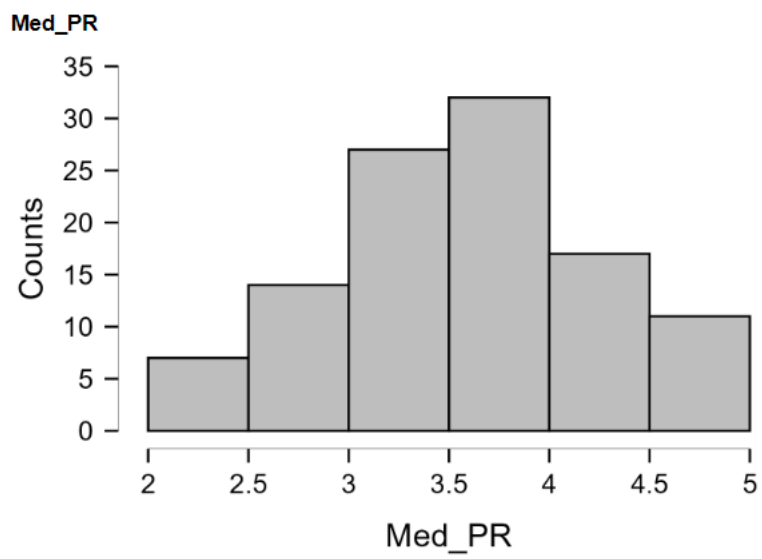
v. Plots

Plot1

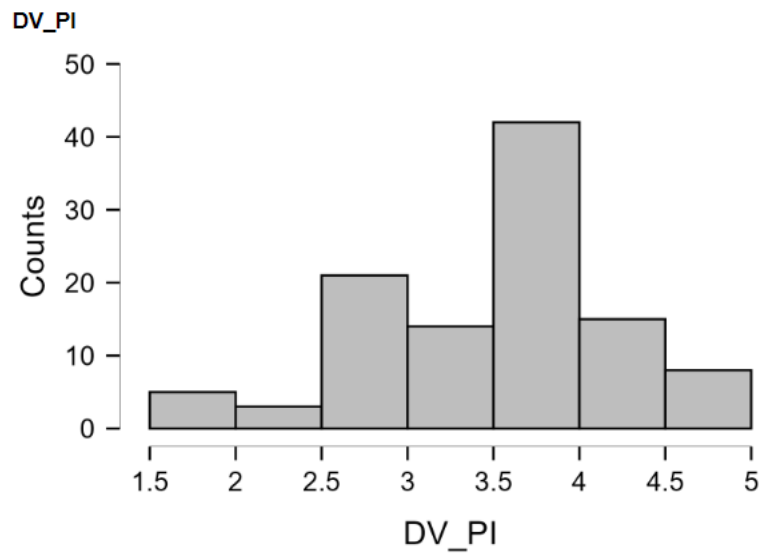
Distribution Plots



Plot2



Plot3



Plot4

