

Table of Contents


```
@article{Cianetti2017,  
title = "Dental fear/anxiety among children and adolescents. A systematic  
review",  
journal = "European Journal of Paediatric Dentistry",  
volume = "18",  
pages = "121-130",  
year = "2017",  
issn = "",  
doi = {https://doi.org/10.23804/ejpd.2017.18.02.07},  
url = {https://pubmed.ncbi.nlm.nih.gov/28598183/},  
author = {S.Cianetti, G.Lombardo, E.Lupatelli, S.Pagano, I.Abraha,  
A.Montedori, S.Caruso, R.Gatto, S.De Giorgio, R.Salvato},  
keywords = "Dental fear, anxiety, children",  
abstract = "This paper reviews scientific literature published between 2000  
and 2014 to assess the prevalence and average levels of dental fear and  
anxiety (DFA) in children and adolescents, as well as variations according  
to demographic and contextual factors. Cross-sectional and cohort studies  
involving individuals aged 0–19 years were identified through searches in  
Medline, Embase, and Web of Science. Eligible studies included participants  
from the general population, dental care settings, schools, and  
kindergartens, and used validated questionnaires to measure DFA."  
}
```

```
@article{Zuhair2020,  
title = "Effectiveness of using virtual reality eyeglasses in the  
waiting room on preoperative anxiety: A Randomized Controlled Trial",  
journal = "Perioperative Care and Operating Room Management",  
publisher = "ScienceDirect",  
volume = "21",  
pages = "100129",  
year = "2020",  
issn = "2405-6030",  
doi = "https://doi.org/10.1016/j.pcorn.2020.100129",  
url =  
"https://www.sciencedirect.com/science/article/pii/S2405603020300443",  
author = "Zuhair Al-Nerabieah, M-Nour Alhalabi, Amer Owayda, Laith  
Alsabek, Nada Bshara, Chaza Kouchaji",  
keywords = "Virtual reality eyeglasses, waiting room, anxiety",  
abstract = "Dental fear and anxiety (DFA) are common in children and can  
negatively affect their oral health and willingness to seek dental care.  
These reactions are influenced by multiple factors, including previous  
negative experiences, fear of pain, the dental environment, and parental  
attitudes. The article emphasizes the importance of early identification and  
management of DFA to prevent long-term avoidance of dental treatment.
```

Among the strategies discussed, virtual reality (VR) glasses are highlighted as an innovative, non-pharmacological approach to reducing anxiety. By immersing children in engaging audiovisual environments, VR distracts their attention from dental procedures, minimizes exposure to stressful stimuli, and promotes emotional comfort. Studies suggest that VR can reduce anxiety levels, improve cooperation, and enhance the overall dental experience,

although its effectiveness may vary depending on the child and context.

Overall, behavioral and psychological interventions, including the use of VR, play a key role in managing dental anxiety and improving pediatric dental care outcomes."

```
}  
  
@inproceedings{Wang2025,  
  title = "The Impact of Color–Light Interaction Design in Hospital  
Waiting Areas on Emotional Relaxation",  
  booktitle = "Proceedings of CISAI '25",  
  publisher = "ACM Digital library",  
  pages = "1085 - 1092",  
  year = "2025",  
  issn = "2214-7853",  
  doi = "https://doi.org/10.1145/3773365.3773537",  
  url = "https://dl.acm.org/doi/10.1145/3773365.3773537",  
  author = "Yi Wang, Xinyu Deng, Jianghe Xu",  
  keywords = "Color, Light interaction, emotional relaxation",  
  abstract = "This study investigated a color–light interaction design  
intended to reduce negative emotional states, such as stress and anxiety,  
experienced by individuals during waiting periods. The proposed approach  
combined dynamic lighting effects with guided breathing exercises to promote  
relaxation. To evaluate its effectiveness, the researchers used a multimodal  
assessment method that included subjective feedback, electroencephalography  
(EEG), and photoplethysmography (PPG) measurements. The study analyzed how  
different light colors and breathing rhythms influenced emotional states by  
examining brain activity, heart rate variability (HRV), and participants'  
self-reported experiences. Based on these outcomes, the researchers  
developed design guidelines for color–light interaction systems aimed at  
improving emotional well-being in waiting environments. These concepts were  
implemented in interactive devices and further tested through virtual  
reality (VR) simulations. Overall, the study introduces an innovative  
approach to enhancing waiting spaces, providing both theoretical insights  
and practical applications for using color–light interactions to support  
emotional relaxation."  
}
```

```
@inproceedings{Hiwat2021,  
  title = "Social Robot for Health Check and Entertainment in Waiting  
Room: Child’s Engagement and Parent’s Involvement",  
  booktitle = "Adjunct Proceedings of the 29th ACM Conference on User  
Modeling, Adaptation and Personalization",  
  journal = "ACM Digital Library",  
  pages = "120 - 125",  
  year = "2021",  
  doi = "https://doi.org/10.1145/3450614.3463413",  
  url = "https://dl.acm.org/doi/10.1145/3450614.3463413",  
  author = "Anouk Neerinx, Thirza Hiwat, Maartje de Graaf",  
  keywords = "Entertainment, waiting room, children",  
  abstract = "This study explores how a social robot (iPal) can support
```

children in a vaccination waiting room. After a health check, children played a game either with the robot or on a tablet, while their behavior and feedback were recorded. Results showed that interaction with the robot increased engagement, motivation, and positive behaviors, while reducing distractions.

However, factors such as age and parental presence influenced outcomes. Although the robot helped distract children from stress, it also reduced parent-child interaction compared to the tablet condition. Future research aims to improve the robot's ability to support both engagement and family interaction."

```
}
```

```
@article{Lehrner2005,  
  title = "Ambient odors of orange and lavender reduce anxiety and improve mood in a dental office",  
  journal = "ScienceDirect",  
  volume = "86",  
  pages = "92-95",  
  issn = "",  
  year = "2005",  
  issn = "",  
  doi = "https://doi.org/10.1016/j.physbeh.2005.06.031",  
  url =  
  "https://www.sciencedirect.com/science/article/pii/S0031938405002660",  
  author = "J. Lehrner, G. Marwinski, S. Lehr, P. Johren, L. Deecke,",  
  keywords = "Essential oil of orange, essential oil of lavender, anxiety, aromatherapy",  
  abstract = "The goal of this study was to investigate the impact of the essential oils of orange and lavender on anxiety, mood, alertness and calmness in dental patients. Two hundred patients between the ages of 18 and 77 years (half women, half men) were assigned to one of four independent groups. While waiting for dental procedures patients were either stimulated with ambient odor of orange or ambient odor of lavender. These conditions were compared to a music condition and a control condition (no odor, no music). Anxiety, mood, alertness and calmness were assessed while patients waited for dental treatment. Statistical analyses revealed that compared to control condition both ambient odors of orange and lavender reduced anxiety and improved mood in patients waiting for dental treatment. These findings support the previous opinion that odors are capable of altering emotional states and may indicate that the use of odors is helpful in reducing anxiety in dental patients."  
}
```

```
@misc{Brass2022,  
  title = "Brass sheet Product Information",  
  year = "2022",  
  url = "https://www.fms.pt/pt/latao/chapas/chapa_de_latao.html",  
  author = "F. Marques da Silva S.A.",  
  keywords = "Chapa de Latão, Brass Sheet",  
  abstract = "This page shows the brass sheets available with their dimensions: 1.000 mm wide; 2.000 mm long, thickness varying from 0.50 mm to
```

```
10.00 mm"
}

@misc{Alu2022,
  title = "Rectangular Aluminium tube",
  year = "2022",
  url =
  "https://www.fms.pt/pt/aluminio/tubos/tubo_retangular_de_aluminio.html",
  author = "F. Marques da Silva S.A.",
  keywords = "Aluminium",
  abstract = "This page shows all the aluminum shapes available from this
supplier"
}

@misc{ArtnovionFoam,
  title = "SoundPET absorption products",
  year = "2026",
  url =
  "https://www.artnovion.com/product-categories/50-absorption/products/1116-so
undpet-range",
  author = "Artnovion",
  keywords = "SoundPET, Non-Woven Acoustic Absorber ",
  abstract = "The PET core is a material made entirely from recycled PET
plastic, that undergoes an environmentally-friendly transformation process
into the non-woven acoustic core we use in this panel. To keep this process
as efficient as possible, the thickness of the product may vary slightly
(±3mm)"
}

@article{Hamed2017,
  title = "Evidence-Based Design and Transformative Service Research
application for achieving sustainable healthcare services: A developing
country perspective",
  journal = "ScienceDirect",
  volume = "140",
  pages = "1885-1892",
  year = "2017",
  issn = "",
  doi = "https://doi.org/10.1016/j.jclepro.2016.09.161",
  url =
  "https://www.sciencedirect.com/science/article/pii/S0959652616315025?casa_to
ken=XYT18M5DupQAAAAA:1KuFZK9C0s1DiUNQNAZh0TYJndPQlV1lBDy8tGIFunZX6ympnVdltwU
66pDGh0IS7yoW0T_-Gwc",
  author = "Sara Hamed, Noha El-Bassiouny, Anabel Ternès",
  keywords = "Design, healthcare, sustainable, hospital, servicescape",
  abstract = "The research shows that: patients consider detailed
information before choosing healthcare providers, expecting both effective
treatment and a supportive environment. This study links healing design and
wellbeing research to propose sustainable hospital guidelines, focusing on
Egypt.
Key findings show that greenery, safety, and private rooms most improve
```

patient wellbeing. These results offer practical guidance for enhancing hospital environments in developing countries and suggest studying the combined impact of these factors in future research."

}

```
@article{Arenas2020,  
  title = "Sustainable Acoustic Materials",  
  journal = "MDPI",  
  volume = "12",  
  pages = "",  
  year = "2020",  
  issn = "",  
  doi = "https://doi.org/10.3390/su12166540",  
  url = "https://www.mdpi.com/2071-1050/12/16/6540",  
  author = "Jorge P.Arenas, Kimihiro Sakagami",  
  keywords = "Sustainable Materials, sound-absorption, acoustic materials,  
  recycled and recyclable materials",  
  abstract = "This page shows that: over the past few decades, progress in  
  materials science, manufacturing, chemistry, and nanotechnology has driven  
  major innovations in advanced engineered materials. One important area is  
  sustainable acoustic materials, which are increasingly used to enhance sound  
  comfort in buildings and are becoming more popular in fields like  
  architecture, automotive, aerospace, and construction. These materials are  
  designed with environmental responsibility in mind, aiming to reduce  
  resource depletion and limit ecological damage while supporting long-term  
  sustainability. This Special Issue highlights research on solutions such as  
  membrane absorbers and natural fibrous materials, which offer eco-friendly  
  alternatives to conventional acoustic materials."  
}
```

```
@article{Francesco2015,  
  title = "A review of unconventional sustainable building insulation  
  materials",  
  journal = "ScienceDirect",  
  volume = "4",  
  pages = "1-17",  
  year = "2015",  
  issn = "",  
  doi = "https://doi.org/10.1016/j.susmat.2015.05.002",  
  url =  
  "https://www.sciencedirect.com/science/article/pii/S2214993715000068",  
  author = "Francesco Asdrubali, Francesco D'Alessandro, Samuele  
  Schiavoni",  
  keywords = "Sustainability, building acoustics, Life Cycle Assessment",  
  abstract = "Most building insulation is made from petrochemicals like  
  polystyrene or energy-intensive materials like glass and rock wool, which  
  harm the environment during production and disposal. This paper explores  
  sustainable alternatives made from natural or recycled materials, such as  
  kenaf or wood fiber, which match synthetic performance but are less common.  
  It reviews their thermal and acoustic properties, environmental benefits,
```

```
and highlights the use of local resources or industrial byproducts to reduce impact."
}
```

```
@article{Fang2016,
  title = "Product Transportation Distance Based Supplier Selection in Sustainable Supply Chain Network",
  journal = "Journal of Cleaner Production",
  volume = "137",
  pages = "29-39",
  year = "2016",
  issn = "",
  doi = "https://doi.org/10.1016/j.jclepro.2016.07.046",
  url =
  "https://www.sciencedirect.com/science/article/abs/pii/S0959652616309349",
  author = "Fang Yu, Lei Xue, Changyin Sun, Chun Zhang",
  keywords = "Supplier selection, Sustainable supply chain, transportation distance",
  abstract = "Choosing suppliers is key for companies aiming for sustainable production, but most research focuses on evaluation methods rather than motivating greener choices. This study considers both traditional factors like price and lead time, and environmental factors like carbon emissions and use of harmful materials. It tracks product transportation from raw materials to consumers to estimate emissions and introduces an incentive system to encourage suppliers to make greener decisions. Numerical tests show the model is effective and practical."
}
```

```
@article{Auvinen2014,
  title = "Calculating Emissions Along Supply Chains: Towards the Global Methodological Harmonisation",
  journal = "Research in Transportation Business & Management",
  volume = "12",
  pages = "41-46",
  year = "2014",
  issn = "",
  doi = "https://doi.org/10.1016/j.rtbm.2014.06.008",
  url =
  "https://www.sciencedirect.com/science/article/abs/pii/S2210539514000339",
  author = "Heidi Auvinen, Uwe Clausen, Igor Davydenko, Daniel Diekmann, Verena Ehrler, Alan Lewis",
  keywords = "carbon footprint, emissions, freight transport, supply chains, methodological harmonisation",
  abstract = "To tackle climate change, countries need to reduce greenhouse gas emissions, and freight transport is a major contributor. Many tools and methods exist to calculate the carbon footprint of transport, but results are often inconsistent or unclear due to differing approaches. This research reviews current methods, highlights gaps and ambiguities, and suggests ways to improve them. The goal is to move toward a more harmonized,
```

```
global standard for calculating emissions across complex supply chains."
}
```

```
@article{Robin2019,
  title = "Systematic Review and Meta-analysis of Virtual Reality in
Pediatrics: Effects on Pain and Anxiety",
  journal = "Anesthesia \& Analgesia",
  volume = "129",
  pages = "1344-1353",
  year = "2019",
  issn = "",
  doi = "https://doi.org/10.1213/ane.0000000000004165",
  url = "https://pubmed.ncbi.nlm.nih.gov/31136330/",
  author = "Robin Eijlers, Elisabeth M W J Utens, Lonneke M Staals, Pieter
F A de Nijs, Johan M Berghmans, René M H Wijnen, Manon H J Hillegers, Bram
Dierckx, Jeroen S Legerstee",
  keywords = "virtual reality, pediatrics, pain, anxiety",
  abstract = "Medical procedures can be pretty stressful and painful for
kids, often causing both physical discomfort and a lot of anxiety. Virtual
reality (VR) is a newer tool that's starting to be used either to distract
young patients during procedures or to help them get ready for what's
coming. This meta-analysis is the first to bring together different studies
to see how effective VR actually is in reducing pain and anxiety in children
going through medical procedures."
}
```

```
@article{Hua2015,
  title = "The Effect of Virtual Reality Distraction on Pain Relief During
Dressing Changes in Children with Chronic Wounds on Lower Limbs",
  journal = "Pain Management Nursing",
  volume = "16",
  pages = "685-691",
  year = "2015",
  issn = "",
  doi = "https://doi.org/10.1016/j.pmn.2015.03.001",
  url =
"https://www.sciencedirect.com/science/article/pii/S1524904215000314",
  author = "Yun Hua MM, Rong Qiu MM, Wen-yan Yao MM, Qin Zhang BN, Xiao-li
Chen PhD",
  keywords = "virtual reality distraction, pain relief, children, chronic
wounds",
  abstract = "Patients with chronic wounds usually feel the most pain
during dressing changes, and most studies focus on medication or better
dressings to manage it. However, less is known about non-drug methods like
virtual reality (VR), especially in children. This randomized study,
conducted with 65 children aged 4 to 16, examined whether VR could reduce
pain during dressing changes. Pain, anxiety, and physiological responses
were measured, along with the duration of the procedure. The results showed
```

that VR significantly reduced pain and anxiety compared to standard distraction methods, and also made dressing changes quicker, suggesting it could improve both patient comfort and clinical efficiency."

```
}
```

```
@article{Huisman2012,  
  title = "Healing Environment: A Review of the Impact of Physical  
Environmental Factors on Users",  
  journal = "Building and Environment",  
  volume = "58",  
  pages = "70-80",  
  year = "2012",  
  issn = "",  
  doi = "https://doi.org/10.1016/j.buildenv.2012.06.016",  
  url =  
"https://www.sciencedirect.com/science/article/pii/S0360132312001758",  
  author = "E.R.C.M. Huisman, E. Morales, J. van Hoof, H.S.M. Kort",  
  keywords = "Healing environment",  
  abstract = "In recent years, the impact of the physical environment on  
healing and well-being has become more important for patients, their  
families, and healthcare staff. A lot of discussion now questions whether  
traditional hospital designs actually support patient recovery. This review  
looks at research on evidence-based healthcare design, often linked to the  
idea of "healing environments." Out of 798 studies identified, 65 were  
analyzed, but less than half had strong evidence, and most focused on  
patient and family outcomes rather than staff."  
}
```

```
@article{Li2023,  
  title = "Effects of immersion in a simulated natural environment on  
stress reduction and emotional arousal: A systematic review and meta-  
analysis",  
  journal = "Frontiers in Psychology",  
  volume = "13",  
  pages = "1058177",  
  year = "2023",  
  issn = "",  
  doi = "https://doi.org/10.3389/fpsyg.2022.1058177",  
  url = "https://pmc.ncbi.nlm.nih.gov/articles/PMC9869155/",  
  author = "Hongyi Li, Yujun Ding, Bing Zhao, Yuhang Xu, Wei Wei",  
  keywords = "immersion, natural environment, stress, emotion, restorative  
effect, virtual reality",  
  abstract = "The study shows that watching and listening to simulated  
nature can help reduce stress and boost emotional responses. The level of  
immersion plays a key role in how strong these positive effects are. By  
improving the technical aspects of these experiences, it could be possible  
to better combine the mental health benefits of both real and virtual  
nature."  
}
```

```
@article{Wu2022,  
  title = "The Effectiveness of Distraction as Preoperative Anxiety  
Management Technique in Pediatric Patients: A Systematic Review and Meta-  
analysis of Randomized Controlled Trials",  
  journal = "International Journal of Nursing Studies",  
  volume = "130",  
  pages = "104232",  
  year = "2022",  
  issn = "",  
  doi = "https://doi.org/10.1016/j.ijnurstu.2022.104232",  
  url =  
"https://www.sciencedirect.com/science/article/pii/S002074892200061X",  
  author = "JiaXin Wu, JingXin Yan, LanXin Zhang, Jiao Chen, Yi Cheng,  
YaXuan Wang, MeiLin Zhu, Li Cheng, LuShun Zhang ",  
  keywords = "anxiety, preoperative technique, pediatric patients,  
distraction",  
  abstract = "Out of 793 studies found, 44 were analyzed and 19 randomized  
trials (with 1341 patients) were included in the meta-analysis. Results  
showed that distraction significantly reduced anxiety levels compared to  
control groups, both in the waiting area and during anesthesia induction.  
All subgroup analyses confirmed this positive effect, although there was a  
lot of variation between studies. Overall, distraction seems to be an  
effective way to reduce preoperative anxiety in children undergoing planned  
surgery, and it can be easily used by healthcare staff before procedures."  
}  
  
@misc{Philips2026,  
  title = "Philips Ambient Experience",  
  year = "2026",  
  url =  
"https://www.philips.nl/healthcare/consulting/experience-solutions/ambient-e  
xperience",  
  author = "Philips",  
  keywords = "ambient experience, patient experience, healthcare  
environment, clinical design",  
  abstract = "Philips Ambient Experience is a design concept for  
healthcare spaces aimed at improving both patient and staff experience. It's  
based on years of research and has already been implemented in many  
locations worldwide. The idea is to create a more comfortable environment  
using things like lighting, projections, and sound for patient distraction,  
while also improving workflow and organization for staff. These spaces can  
be adapted to fit anything from a single room to a full department,  
depending on clinical needs, patient profiles, and budget. The goal is to  
create a more pleasant and engaging experience for everyone in the hospital.  
Overall, this approach can lead to better patient satisfaction, more  
positive recommendations, and improved efficiency in how healthcare teams  
work."  
}
```

```
@misc{Qwiek2026,  
  title = "Qwiek.up for Healthcare Professionals",  
  year = "2026",  
  url = "https://webshop.qwiek.eu/products/qwiek-up",  
  author = "Qwiek",  
  keywords = "Qwiek.up, healthcare professionals, sensory projection,  
anxiety, stress, care environment",  
  abstract = "The Qwiek.up is a tool for healthcare professionals who want  
to respond quickly and effectively to problem behavior in care recipients.  
Think, for example, of fear, stress, aggression, compulsive behavior or even  
sexually disinhibited behavior.  
Thanks to its impressive projections on the ceiling or wall, this tool  
instantly creates a calming atmosphere, making the care experience more  
pleasant and smooth. Ideal for both residents and care staff."  
}
```

```
@misc{SyncVR26,  
  title = "Improving care with Virtual Reality",  
  year = "2026",  
  url = "https://www.syncvrmedical.com/nl/",  
  author = "SyncVr Medical",  
  keywords = "virtual reality, healthcare, patient care, pain, anxiety,  
medical VR",  
  abstract = "Largest virtual reality platform in healthcare in Europe and  
offer tailor-made VR solutions for your entire healthcare organization. The  
goal is to simplify and support the implementation process from start to  
finish."  
}
```

```
@misc{Nicole2025,  
  title = "How Design in Clinical Spaces May Influence Health Outcomes",  
  year = "2025",  
  url =  
"https://www.definitivehc.com/blog/design-considerations-in-patient-and-clinical-areas",  
  author = "Nicole Witowski",  
  keywords = "design, clinical spaces, healthcare environments",  
  abstract = "This article explains the way that from the presence of  
natural light to noise reduction, the very structure of a clinical  
environment has the potential to aid or impede a patient's recovery, with  
far-reaching implications for both patient outcomes and the efficiency of  
care delivery."  
}
```

```
@article{Judy2004,  
  title = "Evidence-based hospital design improves health care outcomes
```

```
for patients, families, and staff",
  journal = "Pediatric Nursing",
  volume = "30",
  pages = "338-339",
  year = "2004",
  issn = "",
  doi = "",
  url =
  "https://www.researchgate.net/publication/8206315_Evidence-based_hospital_de
  sign_improves_health_care_outcomes_for_patients_families_and_staff",
  author = "Judy Rollins",
  keywords = "evidence-based design, hospital design, health care
  outcomes",
  abstract = "This article explains how hospital design improves
  HealthCare outcomes for patients, families, and staff"
}
```

```
@misc{Monteiro2026,
  title = "Monteiro Fabrics - MEDIFLEX Collection",
  year = "2026",
  url =
  "https://www.monteirofabrics.com/pages/mediflex?srsltid=AfmB0oo0BcZ3rdLJXsra
  j48AvWRVP3QxyrJwEdwdPu1K2ZGKFNmvKbt-",
  author = "Monteiro Fabrics",
  keywords = "MEDIFLEX, healthcare fabrics, upholstery, antimicrobial
  fabrics",
  abstract = "MEDIFLEX maintains its exceptional quality, even in the face
  of various healthcare challenges. It exhibits remarkable resistance to
  bodily fluids, lotions and creams. Textile products from the MEDIFLEX
  collection are, anti-microbial and anti-fungal, light resistant. MEDIFLEX
  seamlessly and safely interacts with living tissues, without triggering
  adverse reactions or toxic effects on cells, as demonstrated by its non-
  irritating and non-cytotoxic characteristics in accordance with ISO
  standards: ISO 10993-5 and ISO 10993-10. This ensures a dependable and
  comfortable experience in healthcare environments, where patient well-being
  is paramount."
}
```

```
@article{Devlin2003,
  title = "Health Care Environments and Patient Outcomes: A Review of the
  Literature",
  journal = "Environment and Behavior",
  volume = "35",
  number = "5",
  pages = "665-694",
  year = "2003",
  issn = "",
  doi = "10.1177/0013916503255102",
  url =
  "https://indigenoupsych.org/Discussion/forum/Health%20Care%20Environment%20"
```

```
and%20Patient%20Outcomes.pdf",
  author = "Devlin, Ann Sloan and Arneill, Allison B.",
  keywords = "health care architecture, managed care, ambient environment,
patient-centered care, postoccupancy evaluations (POEs)",
  abstract = "This review of the literature on health care environments
and patient outcomes considers three research themes: patient involvement
with health care (e.g., the role of patient control), the impact of the
ambient environment (e.g., sound, light, art), and the emergence of
specialized building types for defined populations (e.g., Alzheimer's
patients). The article also describes the challenges presented in doing
high-quality research focused on health care environments and contrasts the
contributions made by two different traditions: architecture and behavioral
science. The implications of managed care and opportunities for research are
considered."
}
```

```
@article{ZupokKapala2025,
  title = "Next Generation Marketing Channels: Typology, Strategic
Implications, and the 6V Framework",
  journal = "European Research Studies Journal",
  volume = "XXVIII",
  number = "3",
  pages = "576-590",
  year = "2025",
  issn = "",
  doi = "10.35808/ersj/4062",
  url =
"https://ersj.eu/journal/4062/download/Next+Generation+Marketing+Channels+Ty
pology+Strategic+Implications+and+the+6V+Framework.pdf",
  author = "Zupok, Sebastian and Kapala, Michal",
  keywords = "marketing channels, 6V framework, digital economy",
  abstract = "This article proposes and applies the 6V Framework to
conceptualize and evaluate next-generation marketing channels in the digital
economy. It aims to understand how emerging formats—such as voice commerce,
immersive AR/VR environments, retail media networks, and Web3-based
platforms—are reshaping customer engagement, brand experience, and value
creation. Building on an extensive literature review and theoretical
synthesis, the paper introduces the 6V Framework, consisting of six
analytical dimensions: Value, Velocity, Visibility, Verifiability,
Virtuality, and Vulnerability."
}
```

```
@book{Johnson2023,
  title = "Exploring Strategy: Text and Cases",
  publisher = "Pearson",
  edition = "13",
  year = "2023",
  isbn = "9781292145129",
  doi = "doi=specific link to insert here",
  url =
```

```
"https://www.pearson.com/en-gb/subject-catalog/p/exploring-strategy-text-and-cases/P200000007156/9781292428741",
  author = "Richard Whittington, Patrick Regnér, Duncan Angwin, Gerry Johnson, Kevan Scholes",
  keywords = "Strategy, Marketing, Models",
  abstract = "this book explains how companies can analyze their external environment in order to support strategic decision-making. The book presents the PESTEL framework as a useful method to identify macro-environmental factors such as political, economic, social, technological, environmental, and legal influences. It also emphasizes the importance of understanding market trends, risks, and opportunities before defining a business strategy. This approach helps organizations adapt to changes in their environment and improve their long-term competitiveness."
}
```

```
@article{Porter1980,
  title = "Industry Structure and Competitive Strategy: Keys to Profitability",
  journal = "Financial Analysts Journal",
  volume = "36",
  pages = "30-41",
  year = "1980",
  issn = "4",
  doi = "https://doi.org/10.2469/faj.v36.n4.30",
  url = "https://www.tandfonline.com/doi/pdf/10.2469/faj.v36.n4.30",
  author = "Michael E. Porter",
  keywords = "Competitive strategy, Profitability",
  abstract = "This article (based on a book) focuses on how companies can gain a competitive advantage within their industry. The book introduces important strategic tools, especially Porter's Five Forces model, which helps analyze competition, market attractiveness, and external pressures affecting businesses. Porter explains that understanding competitors, suppliers, customers, substitute products, and potential new entrants is essential for building an effective strategy. His work is widely used in strategic management to evaluate industry structure and support long-term business decisions."
}
```

```
@misc{Pack2025,
  title = "FEFCO Standards: From 0201 to 0427 with packQ",
  year = "2025",
  url =
  "https://www.packagingdesignsoftware.com/post/feeco-standards-explained-packq",
  author = "Nico Olejniczak, Patrick Jarzabek",
  keywords = "Corrugated cardboard, standard, FEFCO, packQ",
  abstract = "The FEFCO catalog, created by the European Federation of Corrugated Board Manufacturers, provides this clarity. Each FEFCO code represents a box design, making it a universal language of corrugated
```

```
packaging."
}

@article{Klingberg2007,
  title = "Dental Fear/Anxiety and Dental Behaviour Management Problems in Children and Adolescents: A Review of Prevalence and Concomitant Psychological Factors",
  journal = "International Journal of Paediatric Dentistry",
  volume = "17",
  pages = "391-406",
  year = "2007",
  issn = "",
  doi = "10.1111/j.1365-263X.2007.00872.x",
  url = "https://pubmed.ncbi.nlm.nih.gov/17935593/",
  author = "Gunilla Klingberg, Anders G Broberg",
  keywords = "dental fear, dental anxiety, behaviour management problems, children, adolescents",
  abstract = ""
}

@article{Fux2019,
  title = "The Effect of the Waiting Room's Environment on Level of Anxiety Experienced by Children Prior to Dental Treatment: A Case Control Study",
  journal = "BMC Oral Health",
  volume = "19",
  pages = "294",
  year = "2019",
  issn = "",
  doi = "10.1186/s12903-019-0995-y",
  url = "https://pubmed.ncbi.nlm.nih.gov/31888588/",
  author = "Avia Fux-Noy, Maayan Zohar, Karin Herzog, Aviv Shmueli, Elinor Halperson, Moti Moskovitz, Diana Ram",
  keywords = "dental anxiety, multisensory environment, waiting room, children",
  abstract = ""
}

@book{Mulligan2019,
  title = "Sustainable Engineering: Principles and Implementation",
  publisher = "CRC Press, Taylor & Francis Group",
  volume = "",
  pages = "",
  year = "2019",
  isbn = "978-1-498-77458-1",
  doi = "10.1201/9780429027468",
  url = "",
  author = "Mulligan, Catherine N.",
```

```
    keywords = "Sustainability, Environmental engineering, Life cycle
assessment",
    abstract = ""
}

@book{Kotler2016,
    title = "Marketing Management",
    publisher = "Pearson Education Limited",
    edition = "15th Global",
    pages = "",
    year = "2016",
    isbn = "978-1-292-09261-4",
    doi = "",
    url = "",
    author = "Kotler, Philip and Keller, Kevin Lane",
    keywords = "Marketing management, marketing strategy, consumer behavior,
brand management",
    abstract = ""
}

@book{Ashby2009,
    title = "Materials and the Environment: Eco-Informed Material Choice",
    publisher = "Butterworth-Heinemann",
    edition = "1st",
    pages = "",
    year = "2009",
    isbn = "978-1-85617-608-8",
    doi = "",
    url =
"https://www.sciencedirect.com/book/9781856176088/materials-and-the-environm
ent",
    author = "Ashby, Michael F.",
    keywords = "materials science, engineering materials, eco-design, life-
cycle assessment, environmental impact, sustainability",
    abstract = ""
}

@book{Harris2019,
    title = "Engineering Ethics: Concepts and Cases",
    publisher = "Cengage Learning",
    edition = "6th",
    pages = "",
    year = "2019",
    isbn = "978-1-337-55447-3",
    doi = "",
    url =
"https://www.cengage.com/c/engineering-ethics-concepts-and-cases-6e-harris/9
781337554473/",
```

```
author = "Harris, Jr., Charles E. and Pritchard, Michael S. and Rabins, Michael J. and James, Ray and Englehardt, Elaine",  
keywords = "Engineering ethics, professional responsibility, moral dilemmas, code of ethics, risk and safety",  
abstract = ""  
}
```

```
@article{codename,  
title = "",  
journal = "",  
volume = "",  
pages = "",  
year = "",  
issn = "",  
doi = "doi=specific link to insert here",  
url = "",  
author = "",  
keywords = "",  
abstract = ""  
}
```

```
@article{codename,  
title = "",  
journal = "",  
volume = "",  
pages = "",  
year = "",  
issn = "",  
doi = "doi=specific link to insert here",  
url = "",  
author = "",  
keywords = "",  
abstract = ""  
}
```

```
@article{codename,  
title = "",  
journal = "",  
volume = "",  
pages = "",  
year = "",  
issn = "",  
doi = "doi=specific link to insert here",  
url = "",  
author = "",  
keywords = "",  
abstract = ""  
}
```

EXAMPLE TO KEEP: please copy/paste it and then modify it

```
@article{codename,  
  title = "",  
  journal = "",  
  volume = "",  
  pages = "",  
  year = "",  
  issn = "",  
  doi = "doi=specific link to insert here",  
  url = "",  
  author = "",  
  keywords = "",  
  abstract = ""  
}
```

From:

<https://www.eps2026-wiki6.dee.isep.ipp.pt/> - EPS@ISEP

Permanent link:

<https://www.eps2026-wiki6.dee.isep.ipp.pt/doku.php?id=refnotes:bib>

Last update: **2026/06/03 16:34**

