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Then and Now: Examining Memories of Pediatric Experiences and Their Influence on Opinions about Healthcare as an Adult

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Children use their memories of healthcare experiences to navigate subsequent visits. The purpose of this exploratory study was to examine young adults' (N = 343) memories of childhood medical experiences, how support from parents and the medical team influenced these memories, and how memories of pediatric experiences influence opinions about healthcare as an adult. The participants remembered having mild anxiety about childhood medical visits, feeling parents and the medical team were helpful with coping, and thinking the medical staff were supportive/friendly. Participants remembered having a relationship with their healthcare providers and the healthcare providers communicating with them as a child. The adults reported their current opinion and healthcare use was influenced by childhood healthcare experiences. These findings highlight the importance of parents and the medical team during pediatric healthcare visits. Also, visits during childhood were found to influence use of healthcare as an adult, highlighting the need for positive pediatric experiences, both at the doctor and dentist.

Key Words: memories, pediatric visits, parents, medical team

During medical and dental experiences, children are vulnerable to stress and fear (Berge, Veerkamp, & Hoogstraten, 2002; Salmela, Salantera, & Aronen, 2010). Vulnerability can lead to an increase in emotions which can influence the way a person perceives an experience and his or her memory of it (LeBlanc, McConnell, & Monteiro, 2015). For example, memories about medical experiences that involve pain tend to be negatively exaggerated by children (Chen, Zeltzer, Craske, & Katz, 2000; Noel, McMurtry, Chambers, & McGrath, 2010).

Understanding children's memories of medical experiences is important because there is evidence that children take these memories and utilize them when undergoing future experiences

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both at the doctor (Cohen et al., 2001; Noel, Chambers, McGrath, Klein, & Stewart, 2012) and dentist (Versloot, Veerkamp, & Hoogstraten, 2008). Chen et al. (2000) found that children who emphasized negative memories of a lumbar puncture were more likely to have heightened distress during subsequent lumbar punctures. Similarly, Versloot et al. (2008) found that children who reported feeling a high level of pain during a dental procedure were more likely to report subsequent dental visits as more painful. Furthermore, fears that develop during childhood may continue into adulthood. For example, fear experienced as a child during medical experiences has been found to increase avoidance of healthcare as an adult (Pate, Blount, Cohen, & Smith, 1996).

The presence of anxiety impacts what a person attends to, what he or she remembers, and his or her decision making about an experience (LeBlanc, McConnell, & Monteiro, 2015). In addition, children who display anxiety may store and access information selectively (Noel et al., 2012). Children are vulnerable to anxiety during medical visits, and such vulnerability may influence children's memories about medical visits. For example, children lacking parental engagement are less accurate in their recall of a medical procedure (Chae et al., 2014). Because anxiety has the potential to influence children's memories of medical experiences, such findings highlight the importance of minimizing anxiety and increasing coping in pediatric patients.

Adults, such as parents and the medical team, are helpful in minimizing anxiety and promoting coping in children undergoing medical experiences (Burns-Nader, Hernandez-Reif, & Porter, 2014; Pate et al., 1996). The presence of supportive parents has been found to decrease children's anxiety associated with medical experiences (Burns-Nader et al., 2014; Chae et al., 2014). In addition, support from the medical team positively influences children's memory of medical procedures (Noel et al., 2010). According to the information processing theory, children are active agents in their world, and in the face of problems, children either attempt new or use familiar, successful techniques (Thompson, 2009). However, in social settings, stress can be introduced which can make it difficult for children to process a situation and implement problem solving (Thompson, 2009). If this happens in the medical setting, parents and the medical staff may help to provide support and information to facilitate problem solving in children (Thompson, 2009). This, in turn, can enhance coping.

A review of the literature highlights that avoidance of healthcare as an adult can be related to a range of variables, including emotions (McCambridge & Consedine, 2014), trust in healthcare providers (McDowell, 2013), and demographics (Do et al., 2010). Furthermore, a recent study found healthcare avoidance as an adult to be related to previous healthcare interactions (McDowell, 2013). The affect heuristic theory suggests that affect drives one's use of healthcare (McCambridge & Consedine, 2014; Slovic, Peters, Finucane, & MacGregor, 2005). For example, the affective impression of fear is thought to increase avoidance of healthcare in some adults (Consedine, Magai, Krivoshekova, Ryzewicz, & Neugut, 2004). Children are vulnerable

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to emotions and pain during medical experiences (Salmela et al., 2010). This raises the question of whether pediatric experiences influence use of healthcare as an adult. Only one study to date has examined the relationship of pediatric memories and adult healthcare use (Pate et al., 1996). It found adults who remembered pediatric experiences as painful were more likely to avoid healthcare as an adult (Pate et al., 1996). Additional research is needed to further understand the relationship between pediatric experiences and adult use of healthcare.

Previous research on children's memories of medical and dental experiences has been limited to cross-sectional designs, longitudinal designs with short time intervals, and potentially biased designs (i.e., parent reports) (Berge et al., 2002; Chae et al., 2014; Noel et al., 2010; Versloot et al., 2008). A gap in the literature exists for examining how adults recall their medical experiences as a child and how parents and the medical team relate to such memories. The purpose of this study was to examine adults' memories of childhood medical experiences, including memories of parent and medical team influence during these experiences. A second objective was to explore the relationship between adults' childhood medical memories and adult healthcare opinions. It was hypothesized that some anxiety would be remembered regarding medical visits as a child and that parents and the medical team would be remembered as being helpful during medical visits. In addition, it was hypothesized that adults' memories of childhood medical and dental experiences would influence their opinion of healthcare as an adult.

Method

Participants

Participants were 294 female and 49 male undergraduate students enrolled in a human development course. The participants ranged in age from 19 to 44 (M = 20.35, SD = 2.72). Seventy-seven percent (n = 264) were White, 16% (n = 54) were Black, 4% (n = 13) were Asian, 2% (n = 7) were Hispanic, and 1% (n = 3) were other. For family annual income, 70% (n = 240) were from middle to upper middle income households, 17% (n = 59) were from high income households, and 12% (n = 41) were from low to lower middle income households (1% (n = 3) was missing data). Of the adults surveyed, 185 (54%) were hospitalized at least once as a child, and 46 (13%) were diagnosed with a chronic illness as a child.

Procedure

Following Institutional Review Board approval, the study was conducted at a large public university in the Southeast region of the United States at the beginning of a fall semester. Seven instructors in the Department of Human Development and Family Studies were selected and contacted via email to ask for permission to use their class for data collection purposes. These

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classes were chosen because of their large enrollment, increasing the potential for representation of a variety of students. Five instructors agreed to allow class time for data collection.

During recruitment, the researchers attended the class at a time convenient for the instructor and briefly explained the purpose of the study. To be eligible to participate in the study, a person had to be enrolled in the course and be 19 years or older in age. Participants completed a consent form and a survey. After completing the survey, consent forms and surveys were separated so that no identifiable information was connected to the survey. Surveys were distributed to 475 adults. The data were entered into Statistical Package for the Social Science (SPSS) software and were cleaned, excluding respondents who were not 19 or older or who failed to answer a majority of the questions. Of the 475 distributed surveys, 343 (72%) surveys were completed and included.

Measures

Demographics. Background demographics were collected through five questions that gathered information on the participant's age, gender, race, family income, and location of living as a child. Two additional questions gathered information on the number of hospitalizations experienced as a child and diagnosis of a chronic condition as a child.

Memories of Pediatric Healthcare Survey. For the purpose of this study, a questionnaire was designed to examine what adults remembered about their childhood medical visits. In particular, anxiety about medical visits, support from parents and the medical team, and influence of pediatric experiences on opinions of healthcare as an adult were topics of interest. Questions were created based on the concepts that children are vulnerable to anxiety during healthcare visits (Berge et al., 2002; Salmela et al., 2010), children respond similarly to parents during medical visits (Burns-Nader et al., 2014; Chae et al., 2014), supportive medical teams decrease anxiety (Noel et al., 2010), and memories of healthcare visits influence subsequent visits (Cohen et al., 2001; Noel, et al., 2012; Versloot et al., 2008). Because they can be very different experiences, doctor visits and dental visits received separate questions. A copy of the survey can be obtained by contacting the first author.

Descriptive questions were included to gather information on what pediatric healthcare experiences looked like for the participants. These included gathering information on the use of primary physician, location of pediatric services, typical reason for attending doctor's visits, frequency of physicals, use of a primary dentist, location of dental services, typical reason for attending dental visits, and frequency of teeth cleanings as a child.

Anxiety as a child about doctor visits was assessed with the following questions: "Which best describes how you felt about the doctor's visit? Select one of the following" and "On a scale of

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1 to 5, typically, how anxious were you to go to the doctor? Not anxious at all (1) to extremely anxious (5)." Using Cronbach's alpha, the internal consistency of the composite of these two questions was 0.72. Anxiety about dentist visits as a child was assessed with "On a scale from 1 (not anxious at all) to 5 (extremely anxious), typically, how anxious were you to go to the dentist as a child?"

The survey included questions about parents and their influence on pediatric memories. Questions asked about parents' attitude concerning doctors as a child and whether their attitude influenced opinions of healthcare as a child. The same questions were posed for dental visits. In addition, children were asked to rate what made experiences better at the doctor and dentist on a scale of 1 to 5, with parents and medical staff personality included to evaluate how helpful adults remembered these support systems during medical experiences. Questions about medical team members included assessing if adults remembered having a relationship and communicating with their doctors and dentists as children. Questions about opinions on healthcare as an adult assessed whether current opinions of doctors and dentists were influenced by childhood experiences and if childhood experiences influence use of doctors and dentists as an adult.

This survey was part of the exploratory research design. There is currently little previous research on the topic of this study. Exploratory research is designed to gain more information about the nature of something or explore research questions of interest when little is known (Singh, 2007). Therefore, this survey was designed to assess pediatric experiences for the purpose of gaining more information on this subject. Internal consistency was found on questions regarding anxiety about doctor's visits. However, the validity and reliability of the survey needs further exploration.

Data Analyses

Using SPSS, descriptive statistics, including frequencies and means, were calculated on demographic information and participants' responses to the survey questions.

Results

Description of Visits

The majority of the adults remembered using a primary physician (n = 325, 95%), receiving services at a pediatric office (n = 245, 71%), and going to the doctor for ill or well check-ups at least once a year (n = 250, 73%). During dental visits, the majority of the adults remembered having a primary dentist (n = 293, 85%) and receiving services at a family dentist for a routine cleaning twice a year (n = 210, 61%) (see Table 1).

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Table 1. Participants' Description of Pediatric Experiences (N = 343)

	n	*%*
As a child, did you have a primary physician?		
Yes	325	95
No	17	5
Missing	1	0
Where did you typically receive pediatric services?		
Pediatrician	245	71
Family Physician	80	23
Urgent Care	9	3
Health Department	4	1
Emergency Room	2	1
Missing	3	1
What was the typical reason you remember for going to the doctor as a child?		
Ill Check-ups	113	33
Well Check-ups/Physicals	196	57
Immunizations	24	7
Prescription Refill	4	1
Missing	6	2
As a child, how often did you have a check-up/physical?		
Never	13	4
Every Few Years	76	22
Every Year	250	73
Missing	4	1
As a child, where did you typically receive dental services?		
Pediatric Dentist	94	27
Family Dentist	246	72
Emergency Room	2	1
Missing	1	0
Over your childhood years, did you have a primary dentist?		
Yes	293	85
No	50	15
What was the typical reason you remember for going to the dentist as a child?		
Bi-annual Cleaning	310	90
Dental Treatment	22	6
Orthodontic Referral	9	3
Missing	2	1
As a child, how often did you have a teeth cleaning?		
Never	8	2
Every Few Years	30	9
Every Year	95	28
Twice A Year	210	61

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Anxiety about Visits

Participants were asked to select one word from a list that best described their feelings about doctors' visits as a child. A majority of the participants (*n* = 190, 55%) selected neutral. See Table 2 for a complete list of responses. On a scale from not anxious at all (1) to extremely anxious (5), the adults remembered being a little anxious about doctors' visits as a child (*M* = 2.30, *SD* = 1.09). A majority of the adults (*n* = 258, 75%) remembered that needles and shots were the scariest thing about going to the doctor as a child, with others reporting the atmosphere (*n* = 32, 9%), other children crying (*n* = 22, 6%), medical tools (*n* = 15, 4%), separation from parents (*n* = 9, 3%), and medical staff (*n* = 6, 2%) as being scary.

Examining memories of dental visits, on a scale from not anxious at all (1) to extremely anxious (5), the adults remembered being a little anxious about dental visits as a child (*M* = 2.31, *SD* = 1.23). A majority of the adults (*n* = 224, 65%) remembered that the tools and shots were the scariest thing about going to the dentist as a child, with others reporting the noises (*n* = 34, 10%), fluoride (*n* = 30, 8%), atmosphere (*n* = 12, 4%), X-rays (*n* = 12, 4%), separation from parents (*n* = 11, 3%), medical staff (*n* = 10, 3%), and other children crying (*n* = 7, 2%) as being scary (see Table 2).

Parents and the Medical Team

Ninety-five percent (*n* = 325) of the adults remembered their parents taking them to medical appointments as a child, with the remaining reporting that grandparents or other adults took them to appointments. Participants reported the accompanying adults to be extremely helpful (*n* = 140, 41%), very helpful (*n* = 125, 37%), helpful (*n* = 59, 17%), a little helpful (*n* = 15, 4%), or not helpful (*n* = 4, 1%) in minimizing anxiety. On a scale from very negative (1) to very positive (5), the adults remembered their parents having a positive opinion of the doctor as a child (*M* = 4.17, *SD* = 0.76), and 177 (52%) said their parents' opinion of the doctor influenced their opinion about the doctor as a child. On a scale from very negative (1) to very positive (5), the adults remembered their parents having a positive opinion of the dentist as a child (*M* = 4.05, *SD* = 0.88), and 175 (51%) said their parents' opinion of the dentist influenced their opinion about the dentist as a child.

When asked to select one word from a list that best described their feelings about the medical staff, a majority of the adults selected supportive/friendly for both the medical (*n* = 218, 64%) and dental staff (*n* = 127, 37%) (see Table 2). Eighty-six percent of the participants (*n* = 294) reported feeling like they had a relationship with the doctor(s) they saw as a child, with 87% (*n* = 298) reporting they remembered the doctor(s) explaining what was happening during the doctor's visits. Seventy-four percent of the participants (*n* = 254) reported feeling like they had a relationship with their dentist they saw as a child, with 78% (*n* = 266) reporting they remembered their dentist explaining what was happening during the dental visits.

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Table 2. Participants' Responses about Doctor and Dental Visits (N = 343)

	n	*%*
Feelings about Doctors' Visits as a Child		
Neutral	190	55
Anxious	78	23
Dreadful/Fearful	42	12
Happy	23	7
Excited	8	2
Missing	2	1
Feelings about Medical Staff as a Child		
Supportive/Friendly	218	64
Neutral	58	17
Love	31	9
Intimidation/Fear	26	8
Hate	7	2
Missing	3	1
Scariest Thing about a Doctor's Visit		
Needles and Shots	258	75
Atmosphere	32	9
Other Children Crying	22	6
Medical Tools	15	4
Separation from Parents	9	3
Medical Staff	6	2
Missing	1	1
Feelings about Dental Staff as a Child		
Supportive/friendly	127	37
Neutral	97	28
Intimidation/fear	53	15
Love	30	9
Hate	30	9
Missing	6	2
Scariest Thing about a Dentist Visit		
Tools and Shots	224	65
Noises	34	10
Fluoride	30	8
Atmosphere	12	4
X-rays	12	4
Separation from Parents	11	3
Medical Staff	10	3
Crying	7	2
Missing	3	1

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The ranked order from most helpful to least helpful coping sources at the doctor's office as a child was parents (*M* = 2.02, *SD* = 1.28), medical staff (*M* = 2.66, *SD* = 1.22), child friendly environment (*M* = 3.0, *SD* = 1.5), explanations of happenings (*M* = 3.11, *SD* = 1.36), and bribery (*M* = 3.84, *SD* = 1.50). The ranked order from most helpful to least helpful coping sources at the dental office as a child was parents (*M* = 2.84, *SD* = 1.79), medical staff (*M* = 2.97, *SD* = 1.43), distractions from noise (*M* = 3.29, *SD* = 1.74), child friendly environment (*M* = 3.44, *SD* = 1.47), explanations of happenings (*M* = 3.57, *SD* = 1.59), and bribery (*M* = 4.40, *SD* = 1.47).

Adulthood Healthcare Experiences

Sixty-nine percent (*n* = 235) of the adults said that their current opinion of the doctor is influenced by childhood experiences, and 57% (*n* = 195) said their memories of childhood medical experiences influence their decision to seek medical treatment as an adult. Of these 195, 157 (*n* = 81%) said it makes them more likely to seek medical treatment. For dental visits, 65% (*n* = 222) said that their current opinion of the dentist is influenced by childhood experiences, and 64% (*n* = 218) said their memories of childhood dental experiences influence their decision to seek dental treatment as an adult. Of these 218, 179 (*n* = 82%) reported that such memories make them more likely to seek dental treatment.

Discussion

This exploratory study examined adults' memories of doctor and dental visits during childhood and how support from parents and the medical team impacted such memories. Summarizing their responses, the adults remembered having just a little anxiety about doctor and dental visits as a child. They described their feelings as a child about the medical teams as positive. Also, adults remembered parents and the medical team being influential in their coping during medical visits.

According to memory, needles/shots were the scariest things about childhood medical visits. This is not surprising because one of the most feared and painful experiences reported by children is having a needle procedure (Taddio et al., 2010). In addition, the adults remembered tools and shots to be the scariest things about dental visits. Similarly, a previous study found the presence of needles and getting shots to be the top sources of anxiety for children at the dentist (Erten, Akarslan, & Bodrumlu, 2006). These findings suggest that shots and aspects of the environment, such as the presence of needles, are remembered as scary over time. Considering ways to minimize negative impressions, such as fear of objects, is important because such impressions may impact what a child attends to and remembers. Future studies could examine how the use of interventions, such as preparation for procedures, influence children's memories of medical visits, both short-term and long-term.

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Next, the current study examined how adults remembered support from parents and the medical team during childhood doctor and dental visits. The findings suggest that parents are typically the adult accompanying children to medical appointments and that they are helpful in minimizing anxiety during the appointments. Overall, the participants' responses continuously suggested that support from parents and the medical team was important.

In the current study, the majority of the adults remembered their parents' attitudes influencing their opinion of the doctor and dentist. This suggests that parents help shape children's medical experiences and memories of them. This could be due to the concept that children seek guidance from adults on how to respond to threatening or unfamiliar experiences. For example, children display a similar level of anxiety as parents at medical visits (Townsend, Dimigen, & Fung, 2000). In addition, some children, particularly younger children, have limited coping skills to handle stressful situations, such as medical visits (Hodgins & Lander, 1997). Therefore, parents can offer support and opportunities for coping by stepping in and addressing any concerns or anxieties that children display. For example, providing information (Beyer, 2008; Hatava, Olsson, & Lagerkranswer, 2000), offering reassurance (Zhou, Cameron, Forbes, & Humphris, 2011), and utilizing distraction techniques (Sparks, 2001) have been found to strengthen coping during medical visits. Such techniques by parents or the medical team help children successfully process cognitive and sensory information in the presence of the potential stress, enhancing their ability to navigate the situation (Thompson, 2009).

There are many ways that parents can help promote a positive experience. For one, it is important that parents display as minimal anxiety as possible because children are receptive to their anxiety (Townsend et al., 2000). Parents can also talk to their children about upcoming medical visits. For example, Beyer (2008) found that parents' talking to their child about an upcoming dental visit helped the child understand and remember the events of the dental visit. Parents can offer support through information, comfort measures, or distraction. In distraction, adults help focus children's attention on the context of the environment, helping them to recall the event in more detail with less focus on the anxiety and pain associated with a visit (i.e., a more optimal memory) (Noel et al., 2010). If parents are unsure of how to support children during healthcare visits, members of the medical team, such as a nurse or child life specialist, can provide parents with information and resources on such support.

Finally, in regard to support, the adults in the current study highlighted the importance of the medical team for children experiencing a doctor or dentist visit. The adults remembered the medical staff as being the second most helpful source of coping during both doctor and dentist visits. It seems the adults remember valuing a relationship with their childhood doctor, and this relationship positively affected anxiety about doctor visits. A majority of the adults remembered their doctors and dentists communicating by explaining aspects of the visit, such as procedures, to them. In other studies, the presence of information from the medical team has been found to

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be related to anxiety and emotions displayed during visits (Kain et al., 1998; Li, Lopez, & Lee, 2007). Such findings imply the need for the medical team to recognize the importance of relationships and communication skills in promoting optimal experiences for pediatric patients.

The current study examined the influence of pediatric memories on opinions of healthcare as an adult. Healthcare avoidance as an adult is related to the quality of previous experiences (McDowell, 2013). However, little is known about the relationship of pediatric experiences and adult use of healthcare. To date, one study has surveyed adults about their childhood experiences and how such experiences relate to their use of healthcare as adults. Pate et al. (1996) surveyed young adults and found that fear, pain, and coping experienced in medical visits as a child predicted fear, pain, and coping as an adult. In addition, it was found that fear about medical visits as a child predicted avoidance of healthcare as an adult (Pate et al., 1996). The adults in the current study noted that their childhood healthcare experiences influenced their opinion of doctors and dentists as an adult. Also, pediatric experiences influenced their decision to seek both doctor and dental treatment as an adult. These findings indicate that childhood healthcare experiences may influence opinions about healthcare even into adulthood.

This study has limitations. For one, memories reported may be influenced by emotions and may not be an accurate memory of the actual events. Adults' memories of childhood experiences may be influenced by medical experiences during adulthood. In addition, participants' memories may have deteriorated over time making it difficult to recall the actual events that took place during childhood, influencing the accuracy of the results. The participants were asked to consider their entire childhood, and healthcare experiences may have a large variance across different ages, further influencing the accuracy of the results. The findings are also limited in their generalizability. A majority of the participants were female, Caucasian, and from middle to upper middle class backgrounds, and all had access to higher education. The study should be replicated and include a more representative sample to increase generalizability of the findings. Next, information about the frequency of childhood medical visits or general health status as a child were not gathered. Results regarding anxiety and feelings about doctor's visits could be impacted by such variables, and future studies should gather information to control for their influence. Additionally, corroborating information regarding the participants' use of healthcare as an adult was not gathered. Therefore, findings regarding the relationship between childhood memories and adult use of healthcare should be interpreted with caution, and a future study should further investigate this relationship. Finally, the reliability and validity of the survey is a limitation worth noting and should be further explored in a future study.

Implications for Practice

The findings of this study have several important implications. For one, the adults remembered their parents and the medical team as being influential in their coping during childhood

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experiences and their opinion of healthcare visits. Such findings imply the importance of providing children with support during healthcare visits. Children look to parents for how to respond during medical appointments. Therefore, parents need to understand their role in these visits and be provided with tools to help their children cope with such visits. The medical team, such as a nurse or a child life specialist, can provide information to parents on how to distract children during procedures and the importance of effective communication. By empowering parents, children's medical experiences can be improved. In addition, adults recognized that having a relationship and gaining information from the doctor and dentist made the experience more positive. They also remembered the medical team communicating with them. These findings suggest the importance of the medical team developing a relationship with patients and providing information to and open communication with patients. Finally, the findings showed that pediatric experiences influenced adults' opinions of healthcare and decisions to seek healthcare as adults. These findings suggests the importance of promoting positive pediatric experiences because memories of these experiences can influence healthcare opinions even into adulthood.

References

Berge, T., Veerkamp, J., & Hoogstraten, J. (2002). The etiology of childhood dental fear: The role of dental and conditioning experiences. *Journal of Anxiety Disorders, 16*(3), 321–329. doi:10.1016/S0887-6185(02)00103-2

Beyer, A. (2008). *Parent-child conversations, before, during and after a dental exam: Links to remember* (Unpublished doctoral dissertation or master's thesis). University of Kansas, Lawrence, KS. Retrieved from https://kuscholarworks.ku.edu/bitstream/handle/1808/3950/umi-ku-2322_1.pdf?sequence=1

Burns-Nader, S., Hernandez-Reif, M., & Porter, M. (2014). The relationship between mothers' coping patterns and children's anxiety about their hospitalization as reflected in drawings. *Journal of Child Health Care, 18*(1), 6–18. doi:10.1177/1367493512468361

Chae, Y., Goodman, G., Larson, R., Augusti, E. M., Alley, D., VanMeenen, K., Culver, M., & Coulter, K. (2014). Children's memory and suggestibility about a distressing event: The role of children's and parents' attachment. *Journal of Experimental Child Psychology, 123*, 90–111. doi:10.1016/j.jecp.2014.01.005

Chen, E., Zeltzer, L., Craske, M., & Katz, E. (2000). Children's memories for painful cancer treatment procedures: Implications for distress. *Child Development, 71*(4), 933–947. doi:10.1111/1467-8624.00200

Cohen, L., Blount, R., Cohen, R., Ball, C., McClellan, C., & Bernard, R. (2001). Children's expectations and memories of acute distress: Short- and long-term efficacy of pain management interventions. *Journal of Pediatric Psychology, 26*(6), 367–374. doi:10.1093/jpepsy/26.6.367

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Consedine, N., Magai, C., Krivoshekova, Y., Ryzewicz, L., & Neugut, A. (2004). Fear, anxiety, worry, and breast cancer screening behavior: A critical review. *Cancer Epidemiology, Biomarkers and Prevention, 13*(4), 501–510.

Do, Y., Carpenter, W., Spain, P., Clarke, J., Hamilton, R., Galanko, J., . . . Godley, P. (2010). Race, healthcare access and physician trust among prostate cancer patients. *Cancer Causes & Control, 21*(1), 31–40. doi:10.1007/s10552-009-9431-y

Erten, H., Akarslan, Z., & Bodrumlu, E. (2006). Dental fear and anxiety levels of patients attending a dental clinic. *Quintessence International, 37*(4), 304–310.

Hatava, P., Olsson, G., & Lagerkranser, M. (2000). Preoperative psychological preparation for children undergoing ENT operations: A comparison of two methods. *Pediatric Anesthesia, 10*(5), 477–486. doi:10.1046/j.1460-9592.2000.00537.x

Hodgins, M. J., & Lander, J. (1997). Children's coping with venipuncture. *Journal of Pain and Symptom Management, 13*(5), 274–285. doi:10.1016/S0885-3924(96)00328-4

Kain, Z., Caramico, L., Mayes, L., Genevro, J., Bornstein, M., & Hofstadter, M. (1998). Preoperative preparation programs in children: A comparative examination. *Anesthesia & Analgesia, 87*(6), 1249–1255. doi:10.1213/00000539-199812000-00007

LeBlanc, V., McConnell, M., & Monteiro, S. (2015). Predictable chaos: A review of the effects of emotions on attention, memory, and decision making. *Advances in Heath Science and Education, 20*(1), 265–282. doi:10.1007/s10459-014-9516-6

Li, H., Lopez, V., & Lee, T. (2007). Effects of preoperative therapeutic play on outcomes of school-aged children undergoing day surgery. *Research in Nursing and Health, 30*(3), 320–332.

McCambridge, S., & Consedine, N. (2014). For whom the bell tolls: Experimentally-manipulated disgust and embarrassment may cause anticipated sexual healthcare avoidance among some people. *Emotion, 14*(2), 407–415. doi:10.1037/a0035209

McDowell, A. (2013). *Quality of past experiences with healthcare providers, level of self-efficacy, and degree of trust in providers as determinant of provider avoidance: Testing the moderating effects of race and gender* (Unpublished doctoral dissertation). University of Maryland, College Park, MD. Retrieved from http://drum.lib.umd.edu/bitstream/handle/1903/12735/McDowell_umd_0117E_13141.pdf?sequence=1

Noel, M., Chambers, C., McGrath, P., Klein, R., & Stewart, S. (2012). The role of state anxiety in children's memories for pain. *Journal of Pediatric Psychology, 37*(5), 567–579. doi:10.1093/jpepsy/jss006

Noel, M., McMurtry, M., Chambers, C., & McGrath, P. (2010). Children's memory for painful procedures: The relationship of pain intensity, anxiety, and adult behaviors to subsequent recall. *Journal of Pediatric Psychology, 35*(6), 626–636. doi:10.1093/jpepsy/jsp096

Pate, J., Blount, R., Cohen, L., & Smith, A. (1996). Childhood medical experience and temperament as predictors of adult functioning in medical situations. *Children's Health Care, 25*(4), 281–298. doi:10.1207/s15326888chc2504_4

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Salmela, M., Salantera, S., & Aronen, E. (2010). Coping with hospital-related fears: Experiences of preschool-aged children. *Journal of Advanced Nursing, 66*(6), 1222–1231. doi:10.1111/j.1365-2648.2010.05287.x

Singh, K. (2007). *Quantitative social research methods.* New Delhi, India: Sage.

Slovic, P., Peters, E., Finucane, M., & MacGregor, D. (2005). Affect, risk, and decision making. *Health Psychology, 24*(4, Suppl), S35–S40. doi:10.1037/0278-6133.24.4.S35

Sparks, L. (2001). Taking the "ouch" out of injections for children: Using distraction to decrease pain. *The American Journal of Maternal/Child Nursing, 26*(2), 72–78. doi:10.1097/00005721-200103000-00005

Taddio, A., Appleton, M., Bortolussi, R., Chambers, C., Dubey, V., Halperin, S., . . . Shah, V. (2010). Reducing the pain of childhood vaccination: An evidence-based clinical practice guideline. *Canadian Medical Association Journal, 182*(18), 1989–1995. Retrieved from http://f.i-md.com/medinfo/material/1ae/4ea7cff544ae1efe2b1cf1ae/4ea7cff544ae1efe2b1cf1b1.pdf

Thompson, R. (2009). *The handbook of child life: A guide for pediatric psychosocial care.* Springfield, IL: Charles C. Thomas.

Townsend, E., Dimigen, G., & Fung, D. (2000). A clinical study of child dental anxiety. *Behaviour Research and Therapy, 38*(1), 31–46. doi:10.1016/S0005-7967(98)00205-8

Versloot, J., Veerkamp, J., & Hoogstraten, J. (2008). Children's self-reported pain at the dentist. *Pain, 137*(2), 389–394. doi:10.1016/j.pain.2007.09.025

Zhou, Y., Cameron, E., Forbes, G., & Humphris, G. (2011). Systematic review of the effect of dental staff behaviour on child dental patient anxiety and behaviour. *Patient Education and Counseling, 85*(1), 4–13. doi:10.1016/j.pec.2010.08.002

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