


REVIEW ARTICLE

Cutting the cord? Parenting emerging adults with chronic pain

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Abstract

The role of parent factors, such as distress and protective behaviors, on pain and functional outcomes of emerging adults living with chronic pain has been largely unexplored. The effects of helicopter parenting and developmental changes occurring during this transition period between adolescence and adulthood (commonly defined as the ages between 18 and 30 years) may exacerbate the pain experience and have the potential to influence chronic pain management. Clinical practice, with an additional focus on supporting the parent(s), may aid in meeting the needs of this population. In this paper, we review the available literature on (a) the socio-cultural shift in parenting over the past decade with a focus on helicopter parenting; (b) the impact of this parenting style on the pain experience and outcomes of emerging adults living with chronic pain; (c) provide recommendations for chronic pain management with a focus on the parent-emerging adult dyad; and (d) conclude with future research recommendations. This narrative review is the first to consider the impacts and outcomes of helicopter parenting on emerging adults with chronic pain.

KEYWORDS

chronic pain, emerging adulthood, helicopter parenting

1 | AIM OF THE REVIEW

Chronic pain is a significant socio-economic and humanitarian burden affecting both children and adults.^{1,2} With chronic pain occurring across the lifespan, many studies have focused on pain in children,

adolescents, and adults while less is known specifically about pain during emerging adulthood. Research is gaining momentum,³⁻⁵ but the experience of the emerging adult-parent dyad has not been considered in the context of chronic pain, particularly with the emergence of a parenting style described as helicopter parenting. Often defined

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as an over-involvement of parent(s) in the lives of their children,⁶ helicopter parents have more recently been described by popular media as “snowplough” parents and “drone parents”⁷⁻¹² due to the intensity of the phenomenon growing overtime. This parenting style maps onto findings of parenting a child with chronic pain,^{13,14} which has found that overprotective parenting can result in increased pain and disability¹⁵; however, less is known about parenting a young adult with chronic pain. In pain research, emerging adults are often grouped with cohorts of adolescents and adults. This is a disservice as emerging adulthood is a distinct developmental stage and thus the needs of emerging adults living with chronic pain are unique.¹⁶ For example, emerging adults with chronic pain are often transitioning from pediatric to adult care for their pain treatment, which may also coincide with the transition to living independently to join the workforce, enlist in the military, and/or attend university.^{17,18}

The aim of this narrative review is to propose a framework for understanding the role of parents (eg, parental distress and helicopter parenting) in the chronic pain experience of an emerging adult. This is important because over the past two decades the distinction between adolescence, emerging adults, and adulthood as individual developmental stages has become increasingly understood.^{19,20} Additionally, parental factors have been well-studied and documented for their role in chronic pain and associated disability in children and adolescents,²¹ but their impact on emerging adults living with chronic pain is unclear. Along with an improved understanding of emerging adulthood as a distinct developmental stage over the past two decades, a parallel socio-cultural process in parenting has also been occurring with the emergence of helicopter parenting. Should the “cord be cut” so to speak? The answer to this question is complicated and warrants further investigation. Therefore, we first outline the important literature on (a) the transition from adolescence to emerging adulthood; (b) parenting during this transition; and (c) consideration of the influence of chronic pain in emerging adults. Next, we present the positive and negative impact of parenting emerging adults with chronic pain, and lastly, we present clinical suggestions, including challenges and potential solutions.

To address the aim of this narrative review, three databases were searched in June 2021 with no date restrictions: PubMed, Cochrane, and PsycINFO. All types of study methodologies published in English (or with an English translation available) were included in this review. The following terms were searched in each database: (a) parenting; (b) helicopter parenting; (c) over-protective parenting; (d) emerging adulthood; (e) young adults; (f) college/university students; (g) chronic pain. Popular media (eg, New York Times) was searched to describe the evolution of phrases used to describe the concept of helicopter parenting.

1.1 | The adolescent to emerging and young adulthood transition

Commonly used age definitions for developmental periods of childhood, adolescence, and adulthood vary widely and are inconsistently grouped in pain research. Emerging adulthood is a

developmentally distinct stage historically focusing on the ages between 18 and 24 years and is considered neither adolescence nor adulthood. The recognition that emerging adults are not only still adolescents but also not entirely adults is largely based on research discovering neurobiological differences (eg, synaptic pruning,^{22,23} myelination,²⁴ and neurochemical changes²⁵), as well as different societal expectations during this age range when compared to adolescents and adults (eg, gaining more autonomy but still having a reliance on parents). However, the definitions for adolescence and emerging adults have been debated²⁶⁻²⁸ with some pain studies including young adults up to age 31^{29,30} and others including up to 40.³¹ Further, there has been a recent call to expand the age range of adolescence. A 2018 Lancet viewpoint²⁸ recommended a more inclusive definition of adolescence, which suggested defining adolescence as the ages of 10-24 years because this age group aligns with a contemporary understanding of adolescent physical, cognitive, and emotional growth, as well as the acknowledgment that a transition to living completely independently does not necessarily occur at age 18. However, the Lancet viewpoint²⁸ also acknowledged the use of various terminology for the age range between 18 and 30 including adolescence, emerging adulthood, and young adulthood.

For the present narrative review, we have selected to use the term emerging adulthood to reflect the period of the gradual process to adulthood and include the ages 18-30 years. This transitional developmental stage is a dynamic and fluid process as different emerging adults reach adulthood at different points.²⁰ See [Table 1](#) for relevant terms and definitions defined in published research.

1.1.1 | A societal shift

The developmental stage of emerging adult has been recognized over the last two to three decades in industrialized countries, mainly attributed to social and economic changes.³⁷ Due to this shift, the transition from adolescent to independent adult blurred as people in this age range are, on average, leave home at an older age and a higher percentage of the population attend university,³⁸ which has created longer transition times. Additionally, historical patterns of social roles and activities during this stage of life have changed for emerging adults today compared to previous generations who often left home at the age of 18, with common reasons being to work and/or to marry.^{37,39} Lastly, the sequence of the roles has shifted as it is increasingly shaped by individual choices and actions rather than social structures (eg, stigmas changing toward the sequence of marriage and childbearing³⁷). Economic factors have also contributed to the shift in historical patterns, as economic restructuring over time, advances in information and communication technologies, and changes in the labor market have dramatically altered risks and opportunities in emerging adulthood.³⁹ Many emerging adults live with a parent(s) at some point during this stage of life, which is not a new phenomenon in industrialized societies and doing so does not necessarily negatively impact one's ability to transition to a fully independent adult.^{37,40} For example, 32% of emerging adults in the United

<i>Overprotective parenting</i>	Parents who control behaviors and provide excessive comforting that inhibit their child's experiences and independence in coping with stress ³²
<i>Helicopter parenting</i>	Overinvolved parents who hover around their children and solve their problems by actively intervening in their child's overall life even into adulthood ^{6,33-36}
<i>Drone or snowplow parenting</i>	New terms used in popular media to describe the intensity of helicopter parenting that has grown over time, as they are described to "steamroll" or heavily manage from a distance to ensure their child's success ⁷⁻¹²
<i>Young adult</i>	Individuals aged approximately 18-26 y ³⁷
<i>Emerging adult</i>	The period of the gradual process to adulthood and include the ages 18-30 y ²⁰

TABLE 1 Relevant terms and definitions defined in published research

Note: The current definitions are listed in Table 1; however, these concepts may evolve.

States lived at home with their parent(s) in 1968, 31% in 1981, and 52% in 2020.⁴¹ The high estimates in 2020 may be related to the COVID-19 global pandemic's impact on the health of the individual, family, and economy. This developmental transition may appear to be less obvious or more gradual than other stages; however, its importance should not be overlooked as it is crucial to transforming children and adolescents into adults. For example, when adults later consider the most important events in their lives, they most often describe events that occurred during this period.⁴⁰

The impact of parents on emerging adults with health conditions (eg, eating disorders,⁴² cancer,⁴³ drug use,⁴⁴ and diabetes⁴⁵) has been well-described, especially in the context of nursing research.²¹ Most recent research on emerging adulthood has highlighted the impact of parents on health behaviors in Korean university students during the COVID-19 global pandemic (eg, following lockdown regulations, social distancing, etc).⁴⁶ However, the experience of the emerging adult-parent dyad, particularly the influence of helicopter parenting, has not been considered in the context of chronic pain.

The current narrative review will largely focus on Westernized countries, as it is where existing research on other types of parenting styles as well as emerging adults with chronic pain has been conducted. The current literature has been criticized for its lack of inclusivity, as the existing research has been described as "classist, ethnocentric, and heteronormative."³⁷ The few studies including more diverse samples have suggested that cultural and socio-economic factors may impact young people from nonminority groups differently than emerging adults from ethnic minority groups as they may have to employ adult responsibilities earlier, contribute to the family income, and care for siblings, sometimes at the detriment of their education.⁴⁷

1.2 | Parenting and emerging adults

Determining how to parent an emerging adult can be challenging. Research consistently shows parents' behavior predicts their child's well-being,⁴⁸⁻⁵² even during emerging adulthood.⁵³ This developmental stage does benefit from a parent(s) who understands when to intervene in problems during this unique developmental

age.⁵⁴ Many factors change the significance of the impact, such as culture,⁵⁵ gender,⁵⁴ and the health of both the parent and child.⁵⁶ Consistent with studies on children and adolescents, one study of emerging adults conducted in Spain and Portugal recommended permissive parenting styles as ideal, with the authoritarian style leading to greater psychological distress.⁵⁷

Five general themes have been identified regarding the successful parenting of emerging adults, which include strong communication between the parent and emerging adult, a healthy social support network, finances independent from parents, an acceptance of the increase of personal responsibility, and strong connections to other adults and resources.³⁷ Parents who understand what is typical during this phase (eg, developmental instability, the need for flexibility, a healthy balance of connection between an emerging adult and parent, independence from parents⁵⁸) as well as developmentally appropriate, maintain closer and healthier relationships during this life transition.⁵⁷

1.2.1 | A new way of parenting

Most parental involvement is consistently associated with positive child outcomes throughout development⁵⁹⁻⁶³; however, parental involvement that is developmentally inappropriate and intrusive can be problematic for a child's adjustment and well-being.^{54,64,65} The term helicopter parent was coined in 1969 by Ginott,⁶⁶ has been extensively studied,^{6,33-36,46,54,61,64,65,67-71} and is defined as overinvolved parents who hover around their children and solve their problems by actively intervening in their child's overall life even into adulthood.⁶⁶ Helicopter parenting has been distinguished, described, and measured as its own construct and type of parenting, which is comprised of specific parenting behaviors, such as uniquely prioritizing warmth/support and control but not autonomy.⁵⁴ Helicopter parenting can be particularly harmful toward achieving developmental goals during emerging adulthood as it hinders their independence and autonomy^{69,70} and is associated with dependent personality traits.^{65,72} Helicopter parenting (maternal and paternal) is associated with both negative outcomes (eg, dysfunctional family processes, poor child health, poor social behaviors, and poor empathic outcomes⁷¹) and

positive outcomes (eg, selecting friends who used less alcohol, less binge drinking, and fewer sexual risks^{33,73}) depending on the mediating factors (eg, parent-child affection; gender). Children of helicopter parents tend to have low self-efficacy and depend on their parents even after they become adults, which also negatively impacts their education^{35,74} and the ability to adjust to living away in a university setting.⁷⁵

Helicopter parenting is a global phenomenon regardless of education, income, culture, or race^{46,76,77}; however, it has been mostly studied in Western educational/collegiate settings,^{6,54,61,71,78-81} possibly due to sample convenience. Interestingly, these students have reported engaging in less risk-taking behavior but have also endorsed greater impulsivity and an inflated sense of self.⁷¹ Additionally, helicopter parenting among university students has been negatively associated with psychological well-being⁷⁵ and positively associated with prescription medication use for anxiety/depression and the recreational consumption of pain medications.⁶⁴ Research has also produced mixed results, with one study finding that emerging adults who received intense support from their parents reported better psychological adjustment and life satisfaction, but parents who endorsed poor life satisfaction when they perceived their young adult as requiring too much support.³⁶ Parent-child affection was found to mediate this relationship with greater affection resulting in greater life satisfaction and fewer depressive symptoms.⁴⁶ There are also significant differences between gender and parenting; young women are more negatively affected by helicopter parenting (eg, lower psychological well-being; less optimism; low levels of self-satisfaction with personal accomplishments) while young men showed the reverse⁵⁴; which may be attributed to societal expectations of gender. The results of these studies indicate that the parent-child relationship during emerging adulthood is dynamic and complicated, and this relationship is likely intensified when the emerging adult is struggling with chronic pain. Understanding the role of parenting behaviors in the emotional development of self-regulatory abilities is critical to the transition to becoming a functional adult.⁷⁵ All these effects of helicopter parenting and changes during the emerging adulthood period have been understudied in emerging adults with chronic pain but likely exacerbate the pain experience and have the potential to influence chronic pain management.

1.3 | Chronic pain and emerging adulthood

Chronic pain in children and adolescents is a well-documented problem, with prevalence rates varying across studies with estimates from 42 countries finding that 44% of youth (11-15 years) reported chronic weekly pain.^{82,83} Pediatric pain has been found to have a deleterious impact on physical and emotional functioning, as well as quality of life.⁸⁴ There is strong evidence to support the following risk factors for the onset, maintenance, and exacerbation of pain in young people: (a) biological⁸⁵ including genetics, psychophysical pain sensitivity, and poor diffuse noxious inhibitory control efficiency; (b) psychological⁸⁶ such as anxious temperament and high

pain catastrophizing, and (c) social⁸⁸⁻⁸⁹ such as parental distress and parental responses to a child's pain. However, there is little understanding of how these factors may specifically impede the adolescent to emerging adulthood transition and the path to becoming an independent and autonomous adult. Although not conclusive and thought to be underestimated, a 2021 scoping review estimated prevalence rates of chronic pain in older adolescents and emerging adults (ages 18-29 years) to be between 5% and 30%, depending on the sample and chronic pain definition used.⁵ Females reported higher rates of pain compared to males.⁹⁰ Emerging adults require specific areas of focus in pain management interventions and may have unique vulnerabilities due to both physical challenges⁹¹ and the stigma of living with chronic pain, an often invisible illness.⁵ For example, unique biopsychosocial factors may contribute to the maintenance and/or exacerbation of chronic pain in emerging adults,³ which have largely been ignored and treatments addressing the parent-emerging adult-child dyad do not exist. Emerging adults are not "big kids" nor are they, in most cases, fully independent adults completely separated from their parents.

Three key themes have been highlighted as important when considering the impact of chronic pain during emerging adulthood⁹²: (a) education and vocation; (b) independence from family; and (c) peer and romantic relationships. The adverse effects of chronic pain on school functioning in children and adolescents have been well-researched,⁹³⁻⁹⁵ with these children having frequently missed school days and reporting an increased difficulty with concentration and comprehension.^{91,96} Additionally, adolescents with chronic pain have been found to perceive their development to be behind their peers, which ultimately impacts success in obtaining educational goals during emerging adulthood.⁹⁷ For example, adolescents with juvenile-onset fibromyalgia were less likely to attend university or secure full-time employment as emerging adults when compared to pain-free peers.⁹⁸ Most children or adolescents who transition to emerging adulthood with a chronic illness do graduate high school and are employed; however, they are significantly less likely than their peers without pain to achieve meaningful educational and vocational successes.⁹⁹ Students in the United States often opt for insurance plans through their universities, which tend to be limited to overburdened, on-campus health centers with long wait times for appointments and generally lack psychiatric, pain, and other specialty services.¹⁰⁰ This lack of available and appropriate care may negatively impact pain outcomes in emerging adulthood, as well as the associated stigma with seeking help.^{101,102} As presented by Twiddy et al (2017), the most common themes identified for understanding the needs for coping and managing chronic pain in university students included: (a) thwarted opportunities; (b) peer separation; (c) perceived validation of illness during young adulthood; and (d) dependence/parental enmeshment. Collectively, these barriers to higher education emerging adults with chronic pain endure may significantly impact the transition to independence from parents due to a lack of financial stability, disability, or low levels of autonomy.^{3,54}

Emerging adults with chronic pain also face challenges in their peer and romantic relationships. Children and adolescents with

chronic pain tend to spend less time with same-age peers and romantic partners and tend to have more negative experiences with their romantic relationships.¹⁰³ Interestingly, research has found that emerging adults with chronic pain marry earlier and have children sooner compared to healthy, age-matched peers, with the healthy peers more likely to move to university/out of the home.⁹⁸ Other research has found that pain may hinder intimate sexual relations with a partner, impacting the potential for romantic relationships.¹⁰⁴

2 | PARENTING AND CHRONIC PAIN

An abundance of research has been conducted on the impact of parental factors, such as distress and protective responses, on children's chronic pain and associated disability.^{15,21,51,105-109} Of note, mothers have mostly been investigated but research on fathers and the paternal impact on child pain and disability has started to be recognized.^{110,111} Parental distress, particularly pain-related distress, anxiety, and pain catastrophizing have been shown to be predictive of increased pain and functional disability in children with chronic pain.^{87,112} Research has also shown pain-related solicitous behavior may be closely related to parental catastrophizing, therefore, should be considered in the patient's treatment plan.^{113,114} Increased parent-adolescent conflict, poor family functioning, perceived feelings of injustice by both the child and the parent,¹¹⁵ and lower levels of autonomy are also associated with greater pain-related functional impairment and depressive symptoms in adolescents.^{116,117} Interestingly, recent research has highlighted the potential role of intergenerational transmission of pain as a risk factor for the development of pediatric chronic pain and pain-related disability.^{118,119}

A recent study¹²⁰ found that adolescents of mothers with chronic pain had 1.67 times increased odds of developing chronic pain and that each year of exposure to maternal chronic pain was associated with a 5% increased likelihood for the development of chronic pain in the adolescent. High maternal pain-related disability was also associated with higher pain-related disability in the adolescent and depressive symptoms in both the mother and the adolescent assumed an important role in the development of pain-related disability in the adolescent. Lastly, parental protective responses have been found to negatively impact chronic pain outcomes in children and adolescents^{21,105,121-122} while on the other hand, parental pain dismissal during adolescence may damage the relationship and produce feelings of isolation in emerging adults.¹²³ Interestingly, the behavioral response of protectiveness to a child's pain maps onto the concept of helicopter parenting. Parental protective responses to an emerging adult's pain have not been explored but is warranted. It is unrealistic to expect that a parent of a child with chronic pain who has been engaging in protective parenting behavior will change their behavior when the child turns 18 or that an emerging adult with new onset chronic pain condition who has a parent who engages in helicopter parenting will necessarily be able to transition to independent adulthood successfully. The factors that may be influencing why some people become hovering parents is unknown. For example, it

is unclear how the age of chronic pain onset, severity of pain symptoms, number of siblings, and/or impact of psychiatric conditions in the family may influence helicopter parenting tendencies.

3 | CLINICAL SUGGESTIONS AND RECOMMENDATIONS

While the goal for the treatment of chronic pain in children and adults is centered around adopting and promoting a self-management approach to pain,¹²⁴ the family system and its impact on pain cannot be ignored, especially during the vulnerable developmental period of emerging adulthood. We argue that emerging adults with chronic pain and their parents require tailored interventions to address their needs. The following section highlights clinical recommendations and treatment considerations for emerging adults with chronic pain with a focus on parental needs as well as the parent-child dyad. Developing appropriate self-management skills during emerging adulthood is of particular importance as the responsibility for chronic pain management shifts from the parent to the emerging adult, which may offset the potential for lifelong pain-related disability.¹²⁵ Similarly, people with chronic pain often advocate for their needs and explore self-identity,¹²⁶ which is a potential positive benefit that an emerging adult may experience. However, this ability to self-advocate and explore identity may be hindered in those emerging adults with helicopter parents. In the context of emerging adults with chronic pain, overprotective parents may be sending a message, albeit unintended, that it is not safe for their child to care for themselves on their own. Whereas helicopter parenting may be sending the message that parents do not trust that the child is able to handle their care on their own.

For adolescents and young adults living with chronic health conditions, the transition from pediatric to adult health care is often associated with poor clinical outcomes, increased costs, and low patient and family satisfaction.^{18,127-129} While parents are often included as part of multi- or interdisciplinary pediatric pain treatment plans,^{130,131} parental involvement once an emerging adult transitions into adult care are more difficult where adult pain treatment models are not necessarily set up to support family-based treatment.¹³² Future research would greatly benefit from a systematic analysis of the literature investigating parenting styles for emerging adults with chronic pain.

While studies of family-based pediatric pain interventions are lacking,¹³² there is a body of research on parental treatment for pediatric pain including abdominal pain,¹³³⁻¹³⁵ fibromyalgia,¹³⁶ chronic musculoskeletal pain,¹³⁷ and in pediatric pain rehabilitation in the context of severe disability secondary to a variety of chronic pain.^{14,138} Psychological interventions involving the parents of children with chronic pain include a variety of evidence-based therapies including strategies largely based on Cognitive Behavioral Therapy (CBT) as well as Acceptance and Commitment Therapy (ACT).¹³⁹⁻¹⁴⁵ Often when the chronic pain in the child is treatment refractory and debilitating, an intensive rehabilitation

program, either via inpatient admission or a day hospital model is warranted, and these programs require parental involvement for admission. Studies show that parents whose children are enrolled in these intensive programs improve in their perception of their child's functional disability as well as have improved scores for their own anxiety, depression, and parental stress.^{111,139,146} Treatment goals for parents of children and adolescents with chronic pain typically include: providing psychoeducation about chronic pain; problem-solving; addressing parental responses to pain; targeting fear, somatic, and illness-related thinking; helping parents to foster self-management of pain within their child; assessing parental values; practicing acceptance and diffusion in order to facilitate behaviors that align with long-term goals and values despite ongoing worry and distress; and addressing family dynamics and interactions around pain.¹³⁹⁻¹⁴⁵

Unfortunately, despite the evidence supporting parental involvement in pediatric pain treatment, there is a dearth of research on parental treatment for emerging adults who have chronic pain. Only one study was found, a pilot study utilizing ACT for both adolescents and young adults, ages 12-21 years, with Neurofibromatosis Type 1 (NF1) and chronic pain and their parents.¹⁴⁴ Specifically, adolescents, emerging adults, and their parents participated separately in a 2-day small group ACT workshop and completed a 1-month post-treatment telephone booster session. Results supported feasibility of this intervention with parents endorsing marginally greater acceptance of their child's pain and both patients and parents reporting significant decreases in pain interference at 3-month post-treatment.

Given that there are no existing models, some recommendations to support emerging adults with chronic pain and their parents include:

1. Hospital Wide. Given the complexity of pediatric to adult transition for healthcare, it would be useful for children's hospitals to extend care to include emerging adults. This is particularly pertinent as the age range for childhood and adolescence has been proposed to be extended in some hospitals with the implementation of transition teams and planning in place; however, this is not the norm and other hospitals have strict age cutoffs where children transition to adult hospital care.¹⁴⁷ This transition is often not well-managed, and families can struggle as they leave their pediatric multidisciplinary team that they have often come to know well over years of care to a new team.^{18,128} This is exacerbated if the care transitions between cities as the emerging adult relocates for further education or work. In fact, a transition of care was highlighted as a particular issue to address in the field of pediatric pain by a recent Lancet Commission on pediatric pain.¹⁴⁸ In the United States, for example, under the Affordable Care Act, dependent children can remain on their parents' health insurance until age 26.¹⁴⁹ Additionally, the International Association for the Study of Pain (IASP) Pediatric Pain Special Interest Group maintains a database of pediatric chronic pain programs around the world, a combination of outpatient, day rehabilitation, and intensive inpatient

models (<http://childpain.org/wp-content/uploads/2021/01/Pediatric-Chronic-Pain-Programs-2021-Update.pdf>). Of the 83 programs around the world, only 30 report treating patients over the age of 18, with only eight treating patients older than age 21. Of the 30 programs treating emerging adults, 19 are inpatient and/or a day rehabilitation model with only four inpatients and/or day rehabs treating patients over the age of 21 making it difficult for both the emerging adults and their parent(s) to access pain treatment. For example, programs should include promoting independence in emerging adults and provide guidance/support for the transition and provide advice to parents on how to support their emerging adult without hovering. Additionally, programs should establish a connection with university health services and work together on best possible support resources for pain, such as encouraging students with chronic pain to seek support, especially since there is a lack of a clear pathway for detecting students with chronic medical conditions.¹⁵⁰

2. Intensive Pain Treatment. For emerging adults still living at home and largely dependent on their parents for care, the pediatric intensive rehabilitation model/partial hospitalization model that is largely elusive in adult pain treatment should be made available to emerging adults. While some programs may accept patients up until 18 or 19 years, as aforementioned, to our knowledge, only four of these programs exist around the world for emerging adults 21 and older. As this is a unique time developmentally, where emerging adults are preparing to leave home and live independently, they are likely to want to increase their autonomy from their parents. As it may be difficult to mix younger children with older adolescents and emerging adults, programs should create a strategy on how to best accommodate emerging adults. While many intensive rehabilitation programs may have a rolling admission policy where length of stay likely varies by patient (eg, typical programs are 3-6 weeks long¹⁴⁶), perhaps running several emerging adult-only groups (with parental involvement) per year would be a good place to start.
3. Digital Health Interventions. Parents of emerging adults living with pain outside the home/attending university likely need alternative and flexible treatment options. Digital health interventions (eg, web-based, mobile, online support groups) may be promising. Web-based, mobile health interventions and online support groups are promising. While parents should be provided with outpatient psychotherapy referrals as necessary, many parents may be functioning well overall but may experience pain-specific distress as it relates to their child's pain^{14,151} and thus may warrant targeted therapies to address this distress and accompanying maladaptive behaviors. Numerous Internet-based CBT approaches are available and have been found to be effective for treating a range of mental health problems, including chronic pain,¹⁵²⁻¹⁵⁵ and could be easily adapted to target the unique needs of emerging adults with chronic pain and their parents. A recent pilot study assessing the feasibility and acceptability of a parent-focused mindfulness and psychosocial support mobile app

intervention reported favorable outcomes for parents of children with chronic pain,¹⁵⁶ specifically finding significant decreases in parental solicitous behavior and perceived stress and a significant increase in mindful parenting.

Another mobile intervention informed by the Resilience in Illness Model and utilized mindfulness and social support for adolescents and young adults with cancer demonstrated preliminary feasibility and acceptability.¹⁵⁷ This model may be a useful approach both for emerging adults with chronic pain and adapted for use with parents. Additionally, the Web-based Management of Adolescent Pain (WebMAP) Mobile app and accompanying parent modules developed by Palermo and colleagues has also demonstrated efficacy.¹⁵⁸⁻¹⁶⁰ Specifically, the eight parent modules include: (a) education about chronic pain, (b) recognizing stress and negative emotions, (c) operant strategies I (using attention and praise to increase positive coping), (d) operant strategies II (using rewards to increase positive coping; strategies to support school goals), (e) modeling, (f) sleep hygiene and lifestyle, (g) communication, and (h) maintenance and relapse prevention. Parents and adolescents separately complete weekly behavioral assignments to facilitate skills practice, as well as vignettes, videos, illustrations, and reinforcing knowledge quizzes.¹⁵⁹ While most of the content in this parent intervention is also applicable to helping parents of emerging adults with chronic pain, it would be useful to adapt this intervention to address the unique needs of being a parent of an emerging adults with chronic pain, (eg, how to support an emerging adult living at university; understanding developmentally appropriate responses; vignettes and illustrations with emerging adults' appropriate content).

4 | CONCLUSIONS

Emerging adults with chronic pain have been neglected, despite the known trajectories of children with chronic pain who are often likely to transition to become adults with chronic pain.^{161,162}

Emerging adults endure significant challenges when transitioning to adult healthcare clinics, moving out of the family home, and starting work. However, for an emerging adult with chronic pain, these transitions are even more challenging, and the culture of helicopter parenting may only exacerbate the distress for an emerging adult living with chronic pain. But should the "cord be cut" so to speak? The answer to this question is complicated and warrants further investigation.

Emerging adults may benefit from a healthy balance of connection and independence from parents. Understanding the role of parenting behaviors in the emotional development of self-regulatory abilities may optimize the transition to becoming a functional adult. Helicopter parenting and how this style may hinder an emerging adult, especially one living with chronic pain, should be further explored. This parenting style likely exacerbates the pain experience and has the potential to influence chronic pain management. Research is needed to prevent acute pain from becoming chronic, to overcome the challenges faced during emerging adulthood, and to understand how to best help individuals in this vulnerable developmental stage reach their potential.

As mentioned above, future research should also focus on diversity and inclusion to increase generalizability, as cultural and socioeconomic factors may impact young people from ethnic minority groups differently than emerging adults from nonminority groups. For example, most research uses a convenient sample of college students. It is a tremendous privilege to attend university as well as rely on one's parents and to have the concern of a hovering parent. Lastly, research on the parenting style of helicopter parenting, particularly during emerging adulthood, is limited therefore conclusions are speculative.

The parent-child relationship during emerging adulthood is dynamic and complicated, and this relationship may be intensified when the emerging adult is struggling with chronic pain; thus, clinical practice may need to be altered to meet the needs of this population. See [Table 2](#) for a summary of the current clinical and research

TABLE 2 Summary of current clinical and research challenges and recommendations for parenting emerging adults with chronic pain, an understudied developmental stage in pain research mapping onto a societal and cultural shift in parenting styles

Challenge	Recommendation
Unknown parental involvement needed once an emerging adult transitions into adult care	Systematic analysis of the literature investigating parenting styles for emerging adults with chronic pain
Hard to reach population and most research is conducted on college/university students	Create hospital-wide programs in collaboration with university health services and work together on best possible support resources for pain. These programs should be expanded to help emerging adults who did not attend university
Strict age cutoffs during transition from child to adult hospital care	Implement hospital-wide, multidisciplinary, and patient-specific treatment plans
Emerging adults still living at home and largely dependent on their parents for care	Programs hospital-wide should promote independence of emerging adults and provide guidance/support for the transition and advice to parents on how to support their emerging adults without hovering
Reaching parents of emerging adults living with chronic pain outside the home/attending university need alternative and flexible treatment options	Development and validation of web-based, mobile health interventions and online support groups

challenges and recommendations for parenting emerging adults with chronic pain.

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