Understanding Emerging Adults' Decision-Making Process When Selecting a Smoking Cessation Approach: A Grounded Theory Study

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Dedication

This dissertation is dedicated to Hayden, Harper and Hazel. On days I felt like quitting, I thought of the example I wanted to set for you. I hope one day you will each have the opportunity to pursue your own dreams with both gusto and determination.

Abstract

Rates of cigarette smoking have been markedly reduced in recent decades, but young adults (or emerging adults) continue to have the highest rate of tobacco use in Ontario, Canada. Though preventing smoking initiation is optimal, positive outcomes of cessation early in the lifespan make it clear that cessation support for smokers in this age group is critical. Despite research into the effectiveness of quitting approaches and smokers' preferred approaches to quitting, it remains largely unclear how smokers characterized as emerging adults (Arnett, 2000) make and act upon "real-world" decisions about which cessation approach to use. To learn more about this important aspect of the quitting process, this study investigated emerging adults' experiences of choosing their approach to quitting. Twenty-six recent quitters between the ages of 19-29 participated in semi-structured interviews. Grounded theory methods were used to develop a framework explaining the decision-making process successful quitters engaged in when choosing a smoking-cessation approach. The newly proposed "Choosing How To Quit" Framework shows a decision making process that includes three distinct phases: Awareness of Approaches; Personal Reflection; Making a Choice. Successful emerging-adult quitters chose a quitting approach by drawing on a variety of sources for information and exploring personal facets including their past experiences, real-life daily-living considerations and an understanding of their present and future-selves. The Framework offers emerging adults and cessation supporters new realistic avenues to consider or explore when making the decision about a cessation approach, potentially leading to a greater likelihood of success. As a preliminary theory, the CHQ Framework requires further investigation, including into which components may be most essential to the decision-making process.

Key Words: tobacco, smoking-cessation methods, emerging adulthood, grounded theory, decision-making

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CHAPTER I: Introduction & Background

Tobacco Use In Canada

Extensive efforts have been made to reduce tobacco use globally. Addressing prevention, cessation, protection and denormalization, tobacco control initiatives and interventions across North America and in countries world-wide have focused on both individual and population level strategies in an attempt to reduce the burden of smoking related disease, disability and death. In Canada specifically, the National Strategy to Reduce Tobacco Use (NSTRTU), which began in 1999, outlined five strategic directions that guided the national and provincial intervention priorities. These strategic directions included: policy and legislation; public education; industry accountability and product control; research; and building and supporting capacity for action (Health Canada, 1999). Undoubtedly these efforts, which involved federal and provincial government collaboration, were instrumental in the tremendous decline in tobacco use witnessed over the last 18 years. According to the most recent biennial Canadian Tobacco and Nicotine Survey (CTNS), current smoking prevalence in Canada among those 15 years of age or older is 12% (Statistic Canada, 2020), a significant change from the 25% prevalence found in 1999 (Reid, Hammond, Rynard & Burkhalter, 2017). However, given that smoking remains the leading cause of premature and preventable death in Canada (Public Health Agency of Canada [PHAC], 2016) it is imperative that tobacco control remains a top public health priority.

Tobacco Use Among Younger Adults

Over the past several decades, surveillance of tobacco use has traditionally distinguished between youth and adult smokers. More recently, and in lock-step with a trend pervading the

entire field of tobacco use research, surveillance reports have included an age-category labeled "young adults." This age group is generally defined as 19-to-25 year-olds or 19-to-29 year-olds. Tobacco use among "young adults" has received much attention in the past few decades based on the observation that this cohort is consistently found to have the highest smoking prevalence across all age groups. This period of the lifespan is associated with both an increase in smoking prevalence (i.e., the proportion of individuals who smoke) as well as an escalation in tobacco consumption (i.e., how often individuals smoke) compared to the teen years, as documented in Canadian survey data since 1999 (Reid et al., 2017). Most recent data corroborates this: in 2019, 13% of Canadians 20-to-24 years old were current cigarette smokers, and 6% were daily cigarette smokers. This compares to 5% of youth aged 15-to-19 who were current smokers (Statistics Canada, 2020). In Ontario specifically, survey results indicate that while significant decreases have been seen in smoking rates among individuals in their 20s, smoking remains "firmly established" during this age period (Ontario Tobacco Research Unit [OTRU], 2017). Most recently, a large Ontario data set shows that 20% of 25-to-29 year-olds, 13% of 20-to-24 year-olds, and 7% of 18-to-19 year-olds, were current cigarette smokers (Ontario Agency for Health Protection and Promotion (Public Health Ontario) [PHO], 2019).

Various explanations have been offered for this escalation in smoking. In Ontario, the legal age to purchase commercial tobacco cigarettes is 19. Reaching this legal age allows older teens easier access to cigarettes, which may partially explain the escalation observed during this time. As adolescents transition into their 20s they also encounter a variety of new and frequently-changing work, academic, living and social settings and situations, which may increase their exposure and access to tobacco, as well as their desire to use tobacco (Freedman, Nelson & Feldman, 2012; Hammond, 2005; O'Loughlin, Dugas, O'Loughlin, Karp & Sylvestre, 2014).

Targeted marketing by tobacco companies to this age demographic may also play a role in the initiation and escalation of tobacco use during this time (Freedman et al., 2012; Hammond, 2005).

Despite the concerning rise in use and consumption of tobacco from the late teens to early 20s, cessation support for this age group is markedly absent (Backinger, Fagan, Matthews, & Grana, 2003; Villanti, McKay, Abrams, Holtgrave, & Bowie, 2010). This is a critical gap in tobacco control efforts given the strong, empirically-supported understanding of the need to encourage cessation early in the lifespan in order to attain the most significant health gains. Encouragingly, research has found that smokers who quit between 25 to 34 years of age gain approximately 10 years of life, compared to those who didn't quit, making these younger quitters nearly identical to those who have never smoked (Jha et al., 2013). The expansive 'Million Women' research study similarly reveals that in women, 97% of excess overall mortality, where excess mortality is defined as a premature death (one that occurs before the average life expectancy) as a result of smoking, can be avoided by quitting smoking before age 30 (Pirie, Peto, Reeves, Green & Beral, 2013). Though preventing smoking initiation is optimal, the extremely positive outcomes of cessation early in the lifespan makes it clear that strong cessation support for younger tobacco users is critical as we work towards decreasing the health burden of tobacco.

Effective Cessation

Successful quitting can be the result of many different approaches: self-directed (e.g., self-help booklets, phone apps or videos, deals with friends, email subscriptions), behavioural (e.g., individual or group counseling, quit-lines, social support), pharmacological (e.g., nicotine replacement therapies and prescription medications) and cold turkey. Notice that some

approaches are "formal" (e.g., counselling and pharmacological aids), while others are "informal" (e.g., deals with friends, cold turkey). A vast body of literature examining the effectiveness of specific (formal and informal) cessation approaches for various populations, including teens, younger adults, and adults, has led to the identification of "evidence-based" interventions that are recognized as effective ways to increase the odds of cessation and abstinence (U.S. Department of Health and Human Services, 2008). A summary of these is shown in Table 1. Research studies further confirm that treatment options found to be effective for general populations of adult smokers are equally effective for younger adult smokers (Minian, Schwartz, Di Sante, & Philipneri, 2010; Suls, Luger, Curry, Murmelstein, Sporer, & An, 2012). There is also general consensus that "any (evidence-based) treatment" option results in higher odds of cessation than no intervention (Suls et al., 2012). Separate studies with Ontario and American smokers under the age of 30 have shown positive cessation outcomes for "self-help materials, behavioural therapies, pharmacotherapies, physician advice to quit smoking, and participation in a local program" (Diemert, Bondy, Brown, & Manske, 2013) and for "brief [interventions] with extended support via telephone quit-line, telephone counseling, web resources, and e-mail" (Villanti et al., 2010). More recently, support for text messaging, quit-and-win contests, and multiple behaviour interventions for young adults has also been found (Villanti et al., 2020).

Table 1

Effectiveness of and Estimated Abstinence Rates of Cessation Interventions

Cessation Approach	Estimated odds ratio (95% C.I.)	Estimated abstinence rate (95% C.I.)
Clinical Intervention		
No clinician	1.0	10.2
Self-help	1.1 (0.9-1.3)	10.9 (9.1-12.7)
Non-physician clinician	1.7 (1.3-2.1)	15.8 (12.8- 18.8)
Physician Clinician	2.2 (1.5-3.2)	19.9 (13.7-26.2)
Psychosocial Treatments		
No format	1.0	10.8
Self-help	1.2 (1.02-1.3)	12.3 (10.9-13.6)
Proactive telephone counseling	1.2 (1.1-1.4)	13.1 (11.4-14.8)
Group counselling	1.3 (1.1-1.6)	13.9 (11.6- 16.1)
Individual counselling	1.7 (1.4-2.0)	16.8 (14.7-19.1)
Medications		
Placebo	1.0	13.8
Nicotine Gum (6-14 weeks)	1.5 (1.2-1.7)	19.0 (16.5-21.9)
Nortriptyline	1.8 (1.3-2.6)	22.5 (16.8-29.4)
Nicotine Patch (6-14 weeks)	1.9 (1.7-2.3)	23.7 (21.0-26.6)
Bupropion SR	2.0 (1.8-2.2)	24.2 (22.2-26.4)
Varenicline (1mg/day)	2.1 (1.5-3.0)	25.4 (19.6-32.2)
Nicotine Inhaler	2.1 (1.5-2.9)	24.8 (19.1-31.6)
Clondine	2.1 (1.2-3.7)	25.0 (15.7-37.3)
Long-Term Nicotine Gum (> 14 weeks)	2.2 (1.5- 3.2)	26.1 (19.7-33.6)
Nicotine Nasal Spray	2.3 (1.7-3.0)	26.7 (21.5032.7)
High-Dose Nicotine Patch (> 25mg)	2.3 (1.7-3.0)	26.5 (21.3-32.5)
Varenicline (2mg/day)	3.1 (2.5-3.8)	33.2 (28.9-37.8)

Note: Adapted from Clinical Practice Guideline Treating Tobacco Use and Dependence: 2008 Update, U.S. Department of Health and Human Services (2008).

Preferred Quitting Approaches of 18-to-29 Year Olds

While not quite as formidable, there is also a large body of literature examining smokers' preferred approaches to smoking cessation. Reviewing studies that have examined post-secondary students or individuals within the 18-to-29 age range, it is noted that smokers in this age cohort generally hold negative attitudes and beliefs about conventional, evidence-based cessation approaches including behavioural and pharmacological interventions (Bader, Travis, & Skinner, 2007; Kishchuk, Tremblay, Lapierre, Heneman, & O'Loughlin, 2004). They often indicate a preference to quit on their own (i.e., cold turkey) (Bader et al., 2007; Hines, 1996; Wiium, Overland, & Aaro, 2011). Researchers in one study found that innovative, rather than conventional, quitting strategies were preferred (Bader et al., 2007). Interestingly however, in a study that forced participants to choose a preferred approach from a list of options that did not include "quitting on their own", pharmacotherapy was the preferred cessation choice made by both daily and non-daily smokers (Berg, Sutfin, Mendel, & Ahluwalia, 2012). In a related finding, when offered the chance to choose more than one preferred cessation method, the majority of younger male and female smokers did not exclusively select "quitting on their own", and instead indicated multiple preferred cessation approaches, seemingly indicating a willingness to consider several methods (Wiium et al., 2011).

Exploration of factors that influence these preferences and intentions to use a particular cessation approach have led to the conclusion that perceived efficacy, cost, convenience, accessibility and awareness are influential to smokers' intention to use an approach (Bader, et al., 2007; Curry, Sporer, Pugach, Campbell, & Emery, 2006; Hines, 1996; Silla, Beard, & Shahab, 2014; Staten & Ridner, 2007). However, in one study that explored these commonly-cited

influences, it was found that younger adult smokers were less likely than adult smokers to use medication and psychosocial treatments, even when costs and awareness were not barriers (Hughes, Cohen, & Callas, 2009). Interestingly though, these younger smokers were not less likely to plan to use medications or talking therapy (Hughes et al., 2009). The researchers in this particular study conclude that factors other than cost or awareness must play a role in cessation method choice for younger adults. They suggest "some treatment entry aspects (e.g., location, personnel, or screening) [-as opposed to cost or awareness- must] especially discourage younger smokers from following through with treatment intentions" (p. 213).

Looking beyond conventional influences such as costs, convenience and perceived efficacy, Kishuk, Tremblay, Lapierre, Heneman, and O'Loughlin (2004) found that post-secondary students indicated that they may evaluate how cessation methods fit with their developing personal and social identities when selecting an approach to quitting. How cessation aids or strategies function within the busy and demanding lives of younger adults has also been identified as a potential influence on their decisions related to cessation approach (Kishuk et al., 2004; Staten & Ridner, 2007).

Summary

Despite research into the effectiveness of quitting approaches and smokers' preferred approaches to quitting, it remains largely unclear how smokers in their early-to-late 20s actually make and act upon "real-world" decisions about which cessation approach to use. It will be difficult to encourage and support cessation among a younger cohort of smokers without a better understanding of the decision-making process these young tobacco users engage in, and the internal and external factors that become salient to them as they move through the process of making this decision.

Accordingly, this research investigated emerging adults' experiences of choosing their approach to quitting. I examined how they experienced that decision-making process; what steps occurred in the process; and what internal/external factors influenced their decision-making experience. In the next chapter, three areas that provided the context for this study are examined: decision-making in the early-to-late 20s, the developmental period of "emerging adulthood", and the prevalence and patterns of tobacco use among those 18-to-29 years of age. Following that, the research questions for the study are presented and the use of grounded theory methodology is discussed and detailed for the study.

CHAPTER II: Literature Review

Decision Making in Young Adulthood

While there is value in assessing effectiveness of quitting approaches in general, and effectiveness of these methods for 18-to-29 year-olds specifically, there is arguably greater need for determining how individuals belonging to this younger adult cohort come to, and act upon, the decision to use any specific approach. After all, the effectiveness of a cessation approach is irrelevant if smokers decide against using a particular approach.

Research examining decision-making is both immensely complex and vast. Studies on the subject span numerous disciplines including neuroscience, psychology, economics, behavioural sciences, business and law among others. Jointly these disciplines provide an expansive amount of information aimed at helping us to better understand, predict and even influence both the trivial and the life-changing decisions people make each day. The fields of study demonstrate that decision-making is a multifaceted process that may be affected by brain structure development and processing capabilities, as well as other internal and external factors including age, cultural background, priorities, values, preferences, biases, knowledge, peers and situation or context specific factors, among other influences. During the period from 18-to-29 years of age, specifically, there may be distinct developmental factors that play a role in how individuals make decisions.

The following sections will provide an overview of some of the developmental factors that *may* play a role in decision-making, especially with respect to the choice of a cessation approach. The science of brain and cognitive development in young adulthood is reviewed very briefly. Internal and external factors that may impact decision-making are summarized with specific attention to developmental tasks associated with young adulthood.

Brain and Cognitive Development in Young Adulthood

Though we might consider the phenomenal brain growth and change during early childhood to be some of the most important development that occurs, there is ample research that demonstrates that vast changes in the brain structure and processing capabilities occur throughout the lifespan, and lead to alterations in both behaviours and decision-making capabilities (King & Kitchener, 2015; Taber-Thomas & Pérez-Edgar, 2014). Though explaining the complex physiological and neuropsychological details of this development are beyond the scope of this document, some of the most relevant changes are noted here.

Advances in neuroimaging have allowed researchers to examine, in-depth, the structural and functional transformations that occur in the brain as people age, and offer biological explanations for decision-making variations that are observed at various life stages. In the realm of decision-making, one developmental period that has received a vast amount of attention is adolescence: a time when a dramatic increase in *risky* decision-making is noted. Substance use, including the initiation of tobacco use, is often cited as one such risky-decision or behaviour. For example, Casey, Getz and Galvan (2008) compiled research from human imaging and animal studies to support their theory that changes in behaviour observed during adolescence, relative to the childhood and adulthood, are a result of an imbalance in brain development during this time. They suggest that development of the pre-frontal cortex (associated with increased cognitive control) is outpaced by the faster developing nucleus accumbens (reward system) and note, "…the combination of heightened responsiveness to rewards and immaturity in behavioral control areas may bias adolescents to seek immediate, rather than long-term gains, perhaps explaining their increase in risky decision-making and impulsive behaviors" (p. 68). Though there might be a general increase in risk taking and impulsivity during adolescence at least

partially explained by these biological changes, individual variability in risk taking and reward processing is always present, and has been shown previously in numerous studies. This is important to keep in mind when exploring cognitive processing and decision-making in the early-to-late 20s, too.

Though many marked changes in the brain begin in adolescence, during late adolescence and into the early 20s, the brain continues to develop in ways that moderate risky decision-making and support decision-making that is more future-oriented and reasoned. Taber-Thomas and Pérez-Edgar(2014) explain it like this:

> The general trend of gray matter decrease and white matter increase is a continuation of processes that begin around the onset of adolescence. However, this process does not unfold simultaneously across the brain; as adolescence progresses and [young] adulthood begins, the brain regions undergoing gray matter loss and white matter increase shift to higher order association, frontal executive, and frontolimbic cortices. These structural changes may support the reduction in risk taking and facilitate the increasingly well regulated, future-oriented, and planful behavior seen in [young] adulthood. (p. 8)

These neuropsychological changes, paired with an abundance of environmental learning experiences that occur during this period, seem to move young adults towards complex adult cognition which includes the ability to integrate competing and disparate pieces of information into decision-making processes based on reasoning and planning (Taber-Thomas & Pérez-Edgar, 2014).

Changes in brain and cognitive development occurring in late teens and early 20s may factor into how 18-to-29 year-olds come to decisions about which cessation approach to use to quit smoking. Some presumably have the ability to plan and make future-oriented decisions that

lead them to make thoughtful, well-reasoned decisions about their choice of quitting approach. They may also have the ability to take into account multiple sources of information when making the decision. However given the variability in brain development, other young adults might not be quite as able to make reasoned decisions and may still be engaging in more impulsive choices regarding a cessation method. To date, research provides virtually no explanation of whether younger adult smokers simply gravitate to quitting approaches that are most immediate or easiest, or whether they consider factors commonly believed to be related to decisions about how to quit: cost, accessibility/availability, effectiveness or convenience. Further exploration of the decision-making process- how young smokers (18-to-29) experience the process of choosing their approach to cessation- would elucidate this important step in the process of quitting smoking.

Emerging Adulthood

Overview

Exploring development-specific factors implicated in decisions of 18-to-29 year olds requires an understanding of the role smoking has in this life period, the developmental factors that influence smokers' quitting choices and behaviours, and the ways in which smokers in this life stage may perceive, evaluate and arrive at choices regarding their approach for quitting smoking. While the term "young adulthood" is frequently used to refer to the time in the lifespan that encompasses the ages of approximately 18-to-29, there is a robust and growing body of literature from theorists and developmental psychologists, most notably Jeffrey Arnett, which suggests that this period is more accurately labeled and described as "emerging adulthood". Below, the conceptualization and application of "emerging adulthood" is explored.

Conceptualization Of Emerging Adulthood

The Technology Revolution, Sexual Revolution, Women's Movement and Youth Movement each contributed in their own way to creating an extended period of time in the life-span in which individuals are perceived neither as adolescents nor adults. This period is marked with frequent change, uncertainty, and personal transformation combined with incredible freedom and exploration (Arnett, 2015). In developed countries around the world, including Canada, significant life events that traditionally signaled the transition to adulthood such as marriage and parenthood now occur much later in the lifespan, often in the late twenties or early thirties (Clark, 2014; Arnett, 2015). This is in stark contrast to what was observed for individuals in this demographic range prior to the 1960's, when marriage and parenthood was characteristically observed early in the 20s, thus creating the stability of adulthood at a much earlier age.

The delay in entry into traditional and more stable adult roles, prompted by and combined with revolutionary changes in society, has led developmental researchers and theorists to identify emerging adulthood as a new life stage. Arnett (2015) believes this unique period in the lifespan, occurring from roughly 18-to-29 years of age, is sufficiently distinct from adolescence and young adulthood/adulthood, and sufficiently enduring in the foreseeable future, to warrant attention.

Building on the previous contemplations of developmental theorists like Erik Erikson and Daniel Levinson, Arnett (2000a, 2015) persuasively argues for a new clearly-defined, accurately-labeled developmental period: "emerging adulthood". In his seminal paper in 2000a, and continuing in his most recent book on the subject in 2015, Arnett argues that using the term "young adulthood" to refer to 18-to-29 year-olds is inaccurate. He states that "young adulthood"

implies "an early stage of adulthood has been reached, whereas most young people in their twenties have not made the transitions historically associated with adult status- especially marriage and parenthood-and most of them feel they have not yet reached adulthood" (p. 2). Arnett advocates that "emerging" far more accurately describes both the feeling of being in-between adolescence and adulthood that many people in this age range report, and also the exploratory, unstable, fluid quality of the period (Arnett, 2000a; 2015).

Defining Features Of Emerging Adulthood

Arnett (2000a; 2015) supports his argument to clearly define an emerging adulthood life-stage by pronouncing five-defining features of emerging adulthood. These features, which he has identified through his extensive research on individuals in the 18-to-29 year age range, include: 1) Identity Exploration 2) Instability 3) Self-focused 4) Feeling In-Between and 5) Possibilities/Optimism.

While some critics have suggested the Arnett's theory applies only to middle or upper-middle class individuals, suggesting that financial freedom is a precursor to the five-defining features (Hendry & Kloep, 2010, Hendry & Kloep, 2007), Arnett has challenged this thinking. Data from a large national (United States) survey demonstrated that the proposed five features of emerging adulthood applied across social classes, and strongly supported "common experiences" among this age group in American society (Arnett, 2016). It is pertinent however to note that Arnett (2015, p. 8) indicates that the defining features are "proposed as *distinctive* to emerging adulthood but not *unique* to it" and that they should not be considered globally universal. Despite this proclamation, it seems reasonable to assume that 18-to-29 year-olds in many developed countries, including Canada, have experienced many of the same cultural and social changes that gave rise to this new conceptualization of developmental processes occurring between

adolescence and adulthood. Accordingly, descriptions of defining features of adulthood would be equally applicable to Canadians. Each of these defining features is explained below and an exploration of how each feature might provide insight into 18-to-29 year olds' smoking and quitting behaviours, including the choice of quitting approach, is presented.

Identity Exploration. Emerging adults are engaged in the process of exploring and choosing personal, professional, romantic and social paths in their lives. "In the course of these explorations, emerging adults develop an *identity,* that is, they clarify their sense of who they are and what they want in life" (Arnett, 2015, p. 9). Arnett suggests that this feature might be the most distinctive of emerging adulthood. He notes that forming one's identity begins in adolescence but intensifies in emerging adulthood and is a gradual process that involves freedom of exploration and experimentation prior to making more permanent decisions.

Arnett (2005) suggests that substance use (including tobacco use) may be a mechanism for coping with this confusion and resultant feelings. Identity exploration can cause feelings of stress or depression. Studies of young adults have shown strong positive correlations between tobacco use and stress (King, Reboussin, Spangler, Ross, & Sutfin, 2017), anxiety (King et al., 2017; Kirst, Mecredy, & Chaiton, 2013) and depression (King et al., 2017; Kirst et al., 2013; Magid, Colder, Stroud, Nichter, & Nichter, 2009). Stress is often found to be a major contributor to relapse in smoking cessation (Buczkowsli, Marcinowicz, Czachowski, & Pisszczek, 2014; Kassel, Stroud, & Paronis, 2003).

Cessation Approach/Strategy Choice Implications. The search for an identity that is typical during emerging adulthood may play a role in decisions to smoke and subsequent decisions about cessation, including choice of quitting approach. Numerous studies have shown that, despite having used tobacco products in the past 30 days, emerging adults will often not

identify themselves as a "smoker" (Berg et al., 2009; Berg, Parelkar, Lessard, & Escoffery, 2010; Choi, Choi, & Rifon, 2010; Hoek, Maubach, Stevenson, Gendall, & Edwards, 2013; Levinson, Campo, Gascoigne, Jolly, Zakharyan, & Tran, 2007;Schane, Glantz, & Ling, 2009), choosing instead to identify themselves with alternate labels such as "social smoker" (Song & Ling, 2011) or "non smoker who smokes". While this may be a result of emerging adults simply self-identifying a consumption level or frequency that they associate with the term "smoker", these findings may also indicate that emerging adults hold negative perceptions of what it means to be identified as a "smoker". Based on either their own beliefs about the negative associations of smoking, or their perceptions of others (including those of family members, peers, mentors or employers), they may not feel comfortable with "smoker" being a labeled part of their identity. Indeed, in their meta-ethnography of qualitative research on the subject of smoker identity, Tombor, Shahabm, Herbec, Neale, Michie, & West (2015) found that young adults often "associated smoking with negative characteristics relating to physical appearance (e.g., having yellow teeth and smelling), psychological characteristics (e.g., being desperate and anxious), and future aspirations (e.g., not being successful)" (p. 998). In a qualitative research study by Berg et al. (2010) college students associated the term "smoker" with certain personality typologies, such as being highly stressed, anxious or depressed. "[S]mokers were viewed as unattractive, depressed, angry, stressed, involved with drugs and sex, and not having many positive activities in their lives" (p. 967). Participants in this study also associated "smoker" with negative physical characteristics (yellowing of teeth or fingers) and perceived the label to be inversely related to socioeconomic status.

Conversely, for many emerging adults who smoke exclusively in social settings (Hoek et al., 2013), where smoking might be strongly tied to their desire to fit in with a peer group or

attract a romantic interest, identifying as a smoker could be seen positively. In fact, studies have shown that young adults can experience many conflicting, co-occurring feelings about their identity as a smoker (Hoek et al., 2013; Tombor et al., 2015). As Tombor et al. (2015) note:

> Young adults [can] hold different smoker identities concurrently, and individual, social and behavioural factors could all shape how they [perceive] their smoker identities and the attitudes they [attach] to these. Smoker identities might not be established automatically and in tandem with smoking initiation but may be adopted over time and changed intentionally depending on the context. Additionally, different smoker identities could both facilitate and inhibit smoking cessation (p. 1000).

Given that smoking initiation and cigarette use might be entwined with their identity development and exploration, it seems quite feasible that two opposing concepts of themselves as smokers could play a role in how emerging adults come to the decision about a cessation approach. Emerging adults may view the need for cessation approaches that involve tangible quitting aids as a sign of weakness. They might be resistant to selecting approaches that involve using an "aid". Emerging adults who do not identity themselves as a "smoker", or perhaps just not as an addicted smoker, may believe that specific approaches to quitting are not useful to or needed by them. For example, Berg et al. (2010) noted that how college student's defined "smoker" played a significant role in perceived barriers and motivations for quitting. Participants who felt that they were not addicted to nicotine and therefore not "real" smokers mentioned "quitting smoking was personally irrelevant, and that it would be easy to quit if they wanted to."

The hypothesis that choices related to cessation might be related to identity exploration has been at least partially addressed in one of the few studies to explore how emerging adults approach the act of smoking cessation. In that study Kishuk et al. (2002) used focus groups to

examine Canadian emerging adults' opinions about various smoking cessation approaches that could be offered in the post-secondary campus setting. The authors noted that students seemed to closely consider whether the approach fit with the type of person that the students perceived themselves to be (or not to be). "[T]hese college students are deeply engaged in the process of developing an adult identity, and…their assessment of smoking cessation programs was driven primarily by the degree to which the programs could contribute meaningfully to the identity formation process" (p. 495). The authors ultimately identified the following three factors that the emerging adults in their study used to evaluate the appeal of cessation programs: "(a) Whether the programs were coherent with the sense of personal identity they were consolidating, or were internally consistent when examined from within that identity, (b) whether the programs furthered the development of authentic social relationships and social identity, and (c) whether the programs were consistent with a sense of social responsibility and membership in a healthy collectivity" (p. 495). It seems, then, that this unique feature of emerging adulthood-identity exploration-may be implicated in decisions about how to quit smoking.

It is also possible that the choice of cessation approach may vary depending on the degree to which emerging adults experience identity exploration as stressful. Studies with emerging adult populations seem to indicate that some individuals feel stressed and identify emotional experiences as a barrier to cessation (Berg et al., 2010). These emerging adults in particular may evaluate and make choices about cessation strategies based on the need to cope with feelings of stress. If they are seeking ways to cope without resorting to smoking, then the perceived effectiveness of cessation strategies to help them quit may be important. Alternatively, the decision about an approach might be related to beliefs about side effects perceived to exacerbate

extant stress. Or, as noted by Kishuk et al. (2004), cessation method choice might be based on personal judgments of how stressful it would be to use that approach.

Instability. Significant instability is often a result of the identity exploration emerging adults are engaged in. As they make choices about and engage in new relationships, employment opportunities, or tertiary education, and as they reevaluate their decisions, course correct and try different possibilities for their life, emerging adults often experience change and disruption. Frequently emerging adults move in and out of their family-of-origin home or to different living situations as they follow employment, academic or relationship opportunities to different locations.

Changes in emerging adults' living and working situations have been shown to be correlated with changes in smoking behaviours (Bahler, Foster, Dey, Gmel, & Mohler-Kuo, 2016; McDermott, Dobson, & Owen, 2007; McDermott, Dobson, & Owen, 2006). Smoking initiation and escalation, for example, may be used by emerging adults as a way to cope with change, as a way to fit into new social settings, relate to peers, or find new friendships and social supports. Given the variations in smoking prevalence across occupations (Hammond, 2005; Lee, LeBlanc, Fleming, Gomez-Marin, & Pitman, 2004; OTRU, 2017; PHO, 2019), emerging adults might alter their use of tobacco as they find themselves coming into contact with more smokers or non-smokers as their work environment changes. Finally, availability or accessibility of family, friends, significant others, or trusted health professionals who might play a variety of roles in emerging adults' decisions and actions related to tobacco use might be affected by the significant instability and disruption that marks emerging adulthood.

Cessation Approach/Strategy Choice Implications. Emerging adults' awareness and access to certain cessation approaches might change as they move through the frequently changing landscape that is characteristic of this life stage. As an emerging adult transitions out of a parent's health plan coverage or into a new work place or school health plan, accessibility of certain cessation aids might change and play a role in their choice of a quitting approach. Consistent access to a trusted health professional might be interrupted as emerging adults change locations, thus limiting the role health professionals play in the emerging adults' choice of a cessation approach. Moving out of the family home might mean that advice from peers or significant others becomes a more salient factor in the decisions they make about a cessation strategy. At the same time, a shifting or changing peer network, and social influences in general, may rapidly sway emerging adults to different cessation approaches in a short time frame resulting in premature abandonment of longer-term interventions, or decisions to avoid them in the first place. Instability may also lead to decisions against approaches that require ongoing attendance at specific times or locations for a protracted period of time.

Self-focused. In adolescence, parents, teachers and other adult decision-makers act as significant gatekeepers in the lives of youth. In adulthood people are often accountable to spouses, colleagues and/or bosses. In contrast, emerging adulthood tends to present individuals with the freedom to be self-focused and self-directed. This self-focus gives emerging adults opportunities to both maintain a degree of freedom and unaccountability, and to gain a better understanding of who they are and what they want from life. As emerging adults develop skills for daily living and experience the responsibility and learning that comes with self-sufficiency, they begin to build a foundation for their adult lives. While emerging adults see this self-sufficiency as important, they do not see this complete autonomy as a permanent state. Instead they view this period of independence as a necessary step before committing themselves to enduring relationships in the realms of love, family and work (Arnett, 2015).

Cessation Approach/Strategy Choice Implications. Given their self-focused nature, emerging adults may focus solely on their own wants, needs, or preferences such that other factors have no relevance to them. Similarly, they may dismiss outside influences when choosing a cessation strategy. Suggestions from health professionals, family members or even peers may be disregarded. Health promotion messaging about cessation strategies may also be ignored. Emerging adults who feel unaccountable to others, may be less concerned about making "mistakes", or about considering the outcomes of the choice of approach, believing they are the only person this decision matters to, that it impacts no one else. Conventional wisdom acquired from research and practice with adults suggests smokers may select which quitting approach to use based on personal assessments of economic or emotional costs to the household or how the management of physical or emotional withdrawal symptoms would impact family members or workplace performance.

On the other hand, emerging adults' growing sense of self-sufficiency and understanding of who they are may prompt them to give serious attention to messages about cessation approaches, and the advice of others who will play meaningful roles in their lives in the future. Ultimately, these hypotheses suggest that this defining feature of emerging adulthood—self-sufficiency—may be reflected in smokers' experiences of choosing a strategy for quitting.

Feeling In-Between. Emerging adults often express feelings of being in-between the life stages of adolescence and young adulthood. They no longer identify as an adolescent, a time that generally involves living with parents and attending high school, yet they have not yet entered adulthood which is typically marked by marriage, parenthood and entry into stable careers. Of interest, Arnett (2015) explains that this feeling of being in-between can persist even when marriage, completion of education, and successful pursuit of permanent employment occur. Emerging adults from all different backgrounds in the United States and around the world have consistently and repeatedly indicated the following criteria as personal markers of reaching adulthood:

1. Accept responsibility for yourself
2. Make independent decisions
3. Become financially independent

Contrary to life "events" such as marriage or getting a job, which can be identified as defined events, the criteria emerging adults cite as markers of young adulthood are gradual and incremental. It is the elongated process of achieving these criteria that largely leads to the "in-between" perception experienced by emerging adults (Arnett, 2015).

Cessation Approach/Strategy Choice Implications. Patterns of tobacco use in emerging adulthood reflect this sense of being "in-between." Uptake and cessation of smoking are all common behaviours in the 18-to-29 year age range—both across the cohort and within a single individual (Backinger et al., 2003; Bernat, Klein, & Forster, 2012; Bachmann, Znoj, & Brodbeck, 2012; ;Colder, Flay, Segawa, Hedeker, 2008; Diemert et al., 2013; Freedman, Nanette, & Feldman, 2012; Gagné& Veenstra, 2017; Hammond, 2005; Harris, Schwartz, & Thompson, 2008; Reid et al., 2017; McDermott et al., 2007; Messer, Trinidad, Al-Delaimy, & Pierce, 2008; Solberg, Boyle, McCarty, Asche, & Thoele, 2007b; Wetter, et al., 2004). Indeed, at different times during this period of their lives, individual emerging adult tobacco users may be engaged in different smoking or quitting behaviours found along the continuum between smoking initiation and becoming an ex-smoker. Also reflecting this sense of being in-between are emerging adults' self-perceptions that they are non-smokers or ex-smokers who sometimes smoke.

In terms of being in-between adolescence and young adulthood, smoking uptake during emerging adulthood may be interpreted as an act of personal choice and a statement of independence from social conventions that marginalize tobacco use and users. Equally, cessation may be seen as a demonstration of personal responsibility and an act of independence, gaining freedom from an addictive substance and the social triggers that maintain the behaviour.

The sense of being in-between has implications for choices emerging adult smokers make related to how they will quit smoking. On a broad level, emerging adults may anticipate that quitting is something they will do in the future when they more "fully" achieve adulthood and must act responsibly (Gray, Hoek, & Edwards, 2014). Any quit attempts made in the here-and-now of emerging adulthood may be based on a decision that is made less critically, under the

assumption that it is not a decision that merits care at this immediate juncture in their lives. Indeed this is consistent with the understanding that 18-to-29 year-olds are undergoing physiological changes that lead to greater cognitive functioning, allowing them to employ more complex decision-making abilities.

On the other hand, quitting may be reinterpreted as a necessary action as emerging adults move into more permanent adult roles and responsibilities where smoking is undesirable, or as they become more concerned with health outcomes associated with their smoking. In this case, the decision about what cessation approach to use when quitting might become more salient. It may be, too, that a sense of impending adulthood encourages a well-considered, independent, financially responsible decision. To this point, research with adult daily smokers revealed that looming vulnerability to health problems increased smokers' resolution to quit. Specifically, researchers found that compared to the control group, at one-month follow-up, smokers who had been exposed to videos intended to mimic the notion of ever more quickly approaching negative health effects of smoking were marginally (but not significantly) more likely to have made a serious quit attempt and to have sought out formal support for smoking cessation (McDonald, O'Brien, Farr, & Haaga, 2010). It may be that impending adulthood acts in a similar fashion for emerging adults, prompting them to engage in serious, comprehensive exploration for quitting.

Possibilities/Optimism. Emerging adulthood is a time of incredible possibilities, transformation and feelings of hope. With few commitments, and the chance to make choices and enact significant change relatively easily, emerging adults experience a time when nearly everything seems possible and the future is theirs to create (Arnett, 2015).

Cessation Approach/Strategy Choice Implications. It seems that the general sense of optimism emerging adults experience extends to behaviours such as smoking cessation. For example, in a study that explored smokers' "optimistic bias", Weinstein, Slovic and Gibson (2004) used U.S. National Survey data to examine both younger smokers' (i.e., 14-to-22 year-olds') and adult smokers' beliefs about addiction and ease of quitting. When asked to compare themselves to the average smoker, the younger smokers exhibited a sense of optimism, believing that they are both less addicted and more likely to have an easier time quitting. More than one-quarter (28%) of the younger smokers indicated that quitting would be easy. In his work, Arnett (2000b) also found that both adolescent and adult smokers reported an optimistic bias regarding successfully quitting. Compared to adult smokers, adolescent smokers were particularly likely to demonstrate optimism, believing that they could quit when they wanted to. Given that emerging adults experience such a high level of general optimism about their lives, it is possible that this optimistic bias about their own likelihood of easily quitting might be even higher for them relative to older adults, however no studies appear to have directly compared emerging adults to older adults (Arnett, 2000b).

It may also be that the sense of optimism and endless possibilities in life's choices, including the decision of how to approach quitting, may lead emerging adults to choose a cessation strategy haphazardly. They may not deem the decision as particularly important or worthy of much consideration given that they can simply "choose again", or try something different next time. Overall then it seems like optimism- a defining feature of emerging adulthood- might impact decisions smokers make about the approach they will take for quitting. Their sense of optimism might lead to potentially inaccurate beliefs that, with the right approach, smoking

cessation will be easy. The optimistic bias described above has been noted in various studies with emerging adult populations (Gray et al., 2014; Wolburg, 2009).

It seems possible that, when making a decision about a method to use, emerging adults might engage in a less belaboured decision-making process than adults do, or they might disregard actual or perceived effectiveness of cessation approaches since they expect quitting to be easy.

Heterogeneity. While the five defining features of emerging adulthood suggest an observable pattern in their thoughts, perceptions and experiences of 18-to-29 year-olds, emerging adults are found to be "extraordinarily diverse" (Arnett, 2006). Individuals in emerging adulthood, being free from strict social norms and controls dictating what they should be doing, may be pursuing a variety of life paths. They may be involved in full or part-time tertiary education, temporary or permanent employment, or neither. During this time period emerging adults might move away from home for the first time, change locations in an attempt to secure employment, or remain in or return to their family home. Changing relationships, finding long-term partners, co-habiting, getting married, and beginning child rearing may also be a part of this time, though many individuals may not experience these events until much later in life. These variations most likely have implications for emerging adults' smoking-related behaviours and decisions. Changes in personal circumstances, social networks, employment, family and peer relationships and cognitive capacity would influence decisions to smoke or to quit. Likewise they would influence emerging adults' decision-making processes about which cessation method to use.

Prevalence and Patterns of Tobacco Use Among Emerging Adults

Despite its intuitive appeal and empirical support, the theory of emerging adulthood has not been explicitly adopted in research addressing tobacco use by 18-to-29 year olds. Instead, the current understanding of tobacco use among 18-to-29 year-olds has been founded on two widely-held views of this age group that are consistent with, but not directly derived from, Arnett's theory. The first view is that 18-to-29 year olds represent a group distinct from teens and adults. The second view is that this age-cohort can be classified into smaller subsets based on typical milestones experienced after adolescence. This latter view seems to be guided by an implicit assumption that progress from adolescence into (young) adulthood follows one of three dominant trajectories in Canada (and the US):

(1) progress from high school into a post-secondary educational setting where typical adult behaviours and responsibilities are not yet expected or imposed; and then into the workforce where the tasks and expectations of adulthood become more immediate;

(2) progress from high school directly into an employment (or unemployment) setting where adult behaviours and responsibilities can still be delayed, and the interval of emerging adulthood is prolonged in much the same fashion as the post-secondary education trajectory

(3) progress from high school directly into an employment (or unemployment) setting where adult behaviours and responsibilities are quite immediately apparent and imposed upon individuals.

From *this* understanding of the 18-to-29 year-old population, heterogeneity within the cohort is often defined according to school attendance or employment status (as well as sex and chronological age) as opposed to the five defining features Arnett (2015) identifies. Thus, for

example, researchers have examined the relationship between tobacco use and school attendance. In this regard, research has shown that among post-secondary students, emerging adults who attend or have obtained a degree from a 4-year college have the lowest smoking prevalence compared to those who attend of have obtained a degree from a 2-year college or high school only (Lenk et al., 2012; Berg, An, Thomas, Lust, Sanem, Swan, & Ahluwalia, 2011; Solberg, Asche, Boyle, McCarty, & Thoele, 2007). Research further shows that 18-to-24 year-olds who are enrolled in school are more likely to be social or occasional smokers rather than daily smokers compared to age peers who are not in school (Lawrence, Fagan, Backinger, Gibson, & Hartman, 2006). Young adults in the United States who are not attending tertiary education and have no degree are found to have the highest smoking prevalence among emerging adults (Lenk, Rode, Fabian, Bernat, Klein, & Forster, 2012; Green, McCausland, Xiao, Duke, Vallone, & Healton, 2007).

Smoking prevalence has also been found to be higher among emerging adults who are employed or unemployed compared to those who are in school (Bader, Travis, & Skinner, 2007; Lantz, 2003; Lawrence et al., 2006). Finally, differences in smoking prevalence have been observed across occupations such that blue-collar trade workers have higher rates of tobacco use than those in professional or managerial positions (Caban-Martinez et al., 2011; Hammond, 2005; Lawrence et al., 2006; PHO, 2019).

Summary, Statement of Purpose and Research Questions

Summary

In the tobacco control literature, milestones such as graduating from school, securing employment, and marrying/cohabitating have often been construed as signs of transition from adolescence into young adulthood. The theory of emerging adulthood, and the empirical

literature related to it, argues against this approach. Instead it suggests that genuine understanding of emerging adulthood calls for attention to the developmental issues of emerging adulthood – identity exploration, self-focus, optimism, feeling in-between and instability– and not necessarily to an individual's progression through various events that typically occur during the late teens and 20s. Even so, there is likely a confluence of the two perspectives. For example, 18-to-29 year-olds who are marking few of the conventional "adult" milestones in their lives might feel no sense of impending adulthood, and simultaneously might be fairly frivolous about their smoking, expressing a noncommittal attitude to quitting, and lack of investment in their approach to quitting. Their approach to choosing a strategy for quitting may be quite different from their age-peers who are more quickly advancing into adulthood. Furthermore, while emerging adulthood theory *per se* may not offer compelling reasons to expect different patterns of quitting-related decision-making for student/non-student, or employed/unemployed individuals, the ubiquity of these classifications in the tobacco control literature—where they have been studied quite extensively—argues in favour of at least some exploration of these variables in the current study of emerging adulthood.

In addressing emerging adults' decision-making experiences related to the choice of quitting methods, it is important to recognize that past studies of cessation methods have typically elicited information from various groups of 18-to-29 year olds regarding their opinions, preferences and beliefs about various quitting approaches. Most often these studies have collected this information by asking smokers to *hypothetically* indicate what method they would use *if* they were to quit, or to simply provide their opinions about each cessation method in turn. Others have asked these emerging adult smokers what methods they have used in the past, but have not clearly explored how they came to choose the approaches. Ultimately, while

preferences may influence decisions about how to quit, it is important to recognize that "preferences" are not equivalent to "decision making", and plans do not always equate to actions.

Choosing a quitting approach is a fundamental part of the cessation process that emerging adults go through when they quit smoking. Gaining an understanding of the internal and external factors related to this decision is critical if we wish to forward our efforts of offering optimal cessation support to this population during critical years of the smoking trajectory. Overall, it is also unclear whether or how defining features of emerging adulthood (identity exploration, instability, self-focus, feeling in-between and possibilities/optimism) interface with the experience of deciding how to quit smoking. Studies to date lack the ability to fully explain the real-world choice made by emerging adult smokers when faced with the decision of what quitting approach to choose, and it remains largely unclear what factors are most salient to their decisions.

Statement of Purpose

Therefore, with consideration of the general process of decision-making, the theory of emerging adulthood, and the heterogeneity of the 18-to-29 year-old population, this study investigated emerging adults' experiences of choosing their approach to quitting. It examined how they experienced that decision-making process; what steps occurred in the process; and what internal/external factors influenced their decision-making experience.

Research Questions

Consistent with the objectives of the study, the following research questions were answered:

1. What decision-making process do emerging adults engage in when adopting a cessation method or approach for quitting smoking?

2. What internal and external factors influence young adults' decision-making process?

3. What factors are most salient?

4. How does the process of choosing a cessation approach fit within the defining features of emerging adulthood (if at all)?

Chapter III: Methods

Methodological Approach

Qualitative research offers researchers unique, integral exploratory research processes that lead to rich and complex data. The research questions answered here are highly suited to the use of a qualitative methodological approach. As noted by Creswell (2013, p. 44):

> Qualitative research begins with assumptions and the use of interpretive/theoretical frameworks that inform the study of research problems addressing the meaning individuals or groups ascribe to a social or human problem. To study this problem, qualitative researchers use an emerging qualitative approach to inquiry, the collection of data in a natural setting sensitive to the people and places under study, and data analysis that is both inductive and deductive and establishes patterns and themes. The final written report or presentation includes the voices of participants, the reflexivity of the researcher, a complex description and interpretation of the problem, and its contribution to the literature or a call for change.

Creswell (2013) further notes that qualitative research is used when a problem or issue needs to be *explored* or a *complex,* detailed understanding of the issue is needed. Qualitative research more richly *explains the mechanisms* or linkages in causal theories or models by elucidating the processes people experience, why they respond as they do, and what their deeper thoughts and behaviours are. "We use qualitative research to develop theories when partial or inadequate theories exist for certain populations … or existing theories do not adequately capture the complexity of the problem we are examining" (pp. 47-48). Corbin and Strauss (2008) add, qualitative research "…allows researchers to get at the inner experience of participants…" (p. 12).

Grounded Theory

Within qualitative inquiry are numerous methodological approaches that researchers can use. Grounded theory, developed in 1967 by researchers Barney Glaser and Anselm Strauss, is one such methodological approach (Creswell, 2013). Grounded theory aims to go beyond descriptions of experiences and instead proposes to "[generate] a general explanation (a theory) of a process, an action or an interaction shaped by the views of a large number of participants" (Creswell, 2013, p. 83). Theory in this case is formed from, or "grounded" in, data collected from participants who have experienced the process themselves (Creswell, 2013). The researcher focuses on a process or an action that has distinct steps or phases that occur over time.

According to Charmaz (2011), *how* grounded theorists use their methodological strategies is what most distinctly differentiates them from other qualitative researchers. She suggests that grounded theorists go through the following actions (p. 364):

1) Conduct data collection and analysis simultaneously in an iterative process
2) Analyze actions and processes rather than themes and structures
3) Use comparative methods
4) Draw on data (e.g., narratives and descriptions) in service of developing new conceptual categories
5) Develop inductive categories through systematic data analysis
6) Emphasize theory construction rather than description or application of current theories
7) Engage in theoretical sampling
8) Search for variation in the studied categories or process

9) Pursue developing a category rather than covering a specific empirical topic

Grounded theory research quite distinctly emphasizes theory construction and the pursuit of developing categories rather than covering specific empirical topics, offering a description, or application of current theories (Charmaz, 2014; Corbin & Strauss, 2008; Creswell, 2013). Instead of testing presupposed theories (as is done in much of quantitative research), or offering a description of a phenomena (as is done in other qualitative approaches), the grounded theory method requires the researcher to develop a theory (an explanation or an understanding) of the process under investigation. The theory is built with theoretical categories that are arrayed to show how the theory works (Creswell, 2013).

This theory construction emphasizes the need for an inductive approach where the researcher analyzes the actions and processes such as the process of choosing a cessation method (rather than themes and structures). Processes and experiences are explored and brought forth in the rich, in-depth data that are collected. Analysis of these data calls for the development of inductive categories through systematic data analysis where data comes directly from individuals who have experienced the process themselves. Memoing (writing down ideas as data are collected and analyzed) is used as a way to attempt to decipher the process and its flow. The researcher constantly compares data from the participants to the emerging theoretical ideas captured in memoing and other coding strategies. Thus data collection and analysis are done simultaneously in an iterative process. Data analysis in grounded theory research is not a single stage or step but rather uses a constant comparative method, where the researcher moves back and from data collection to analysis, engaging in the theoretical sampling, and searching for variation in the studied categories or process.

Concern arises when researchers "muddle" with the grounded theory method (intentionally or not) or simply "import concepts" rather than construct theory.

> Muddling of methods refers to a situation in which the researcher compromises, for example, the integrity of the grounded theory approach and instead generates long verbatim biographical narratives, a typology, or an outcome associated with any number of alternative qualitative approaches (Wilson & Hutchinson, 1996, p. 2).

Wilson and Hutchinson (1996) caution adherence to preconceptions, disciplinary perspectives, and conventional knowledge when examining the data can sabotage the ability to provide an original and grounded interpretation.

The research questions posed here indicate the intent to *explore* the *process* of decision making and generate a *complex* and detailed understanding of the *thoughts and behaviours* emerging adults experience when they make a decision about the cessation approach to use. Though the preferences emerging adults have about cessation methods have been examined in previous studies, these preferences are not necessarily equivalent to the real-world, manifest choice of approach that results from the decision-making process. The complete, holistic decision-making process emerging adults undergo, the steps that are taken, and the *inner experiences* they have when making this decision cannot be fully understood by assessing preferences and attitudes. This study addresses this gap. Specifically, it aimed to develop a theory (an explanation or understanding) of the process by which emerging adults choose their approach to quitting: how emerging adults experienced the decision-making process, what steps occurred in the process and what internal/external factors influenced their decision-making experience.

Paradigm and Epistemology

Unique to qualitative research is an acknowledgment and examination of the particular theoretical paradigms, perspectives and assumptions the researcher espouses. The following section represents a brief consideration and explanation of my own beliefs and perspectives as they stand today.

Creswell (2013) suggests that qualitative researchers operate under common philosophical assumptions that guide their research. Table 2 provides an explanation of particular assumptions and their application to qualitative research methods and writing.

Table 2

Philosophical Assumptions With Implications for Practice

Assumption	Questions	Characteristics	Implications for Practice (Examples)
Ontological	What is the nature of Reality?	Reality is multiple as seen through many views	Researcher reports different perspectives as themes develop in the findings
Epistemological	What counts as knowledge? How are knowledge claims justified? What is the relationship between the researcher and that being researched?	Subjective evidence from participants; researcher attempts to lessen distance between himself or herself and that being researched	Researcher relies on quotes as evidence from the participant; collaborates, spends time in field with participants, and becomes an "insider"
Axiological	What is the role of values	Researcher acknowledged that research is value-laden and that biases are present	Researcher openly discusses values that shape the narrative and includes his or her own interpretation in conjunction with the interpretations of participants
Methodological	What is the process of research? What is the language of research?	Researcher uses inductive logic, studies the topic within its context, and uses an emerging design	Researcher works with particulars (details) before generalizations, describes in detail the context of the study, and continually revises questions from experiences in the field.

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These basic philosophical assumptions are embedded within researchers' *interpretive frameworks* (Creswell, 2013). Interpretive frameworks (also referred to as paradigms by Lincoln, Lynham, & Guba, 2011) can be thought of as the core beliefs that guide the researcher's approach to the study and provide a theoretical lens through which the researcher views the data. Constructivist, feminist, social power, post-positivist and critical theory, are just a few examples of the vast array of interpretive frameworks. While some researchers quite comfortably place themselves within one specific interpretive paradigm and hold fast to its suppositions, I find myself embracing Denzin's (1998) view (as cited in Corbin & Strauss, 2008) that "…simplistic classifications don't work. Any given qualitative researcher-as-a-bricoleur can be more than one thing at a time …" (p. 9). Patton (2002) too suggests that "[w]hile a paradigm offers [a] coherent world view, an anchor of stability and certainty in the real world sea of chaos, operating narrowly within any singular paradigm can be quite limiting…" (p. 71).

With my background in quantitative health research I have long supported and worked from the *postpositivist* framework. This framework posits that there is not a "strict cause and effect, but rather…that all cause and effect is a probability that may or may not occur" (Creswell, 2013, pp. 23-24).

> [Furthermore], postpositivism has the elements of being reductionist, logical, empirical, cause-and-effect oriented, and deterministic based on a-priori theories. … postpositivist researchers view inquiry as a series of logically related steps, believe in multiple perspectives from participants, rather than a single reality, and espouse rigorous methods of qualitative data collection and analysis. (Creswell, 2013, p. 24)

I maintain many of the beliefs and values of this paradigm. This is perhaps most evident in my choice of the grounded theory methodological approach (which typically entails logical,

detailed and structured data analysis procedures). However, I also find myself aligning with elements of the *constructivism* paradigm that emphasizes subjectivity and "assumes that people, including researchers, construct the realities in which they participate" (Charmaz, 2014, p. 342). Researchers working within this paradigm rely on participants' views, seek out many and multiple perspectives, and position themselves within their research dismissing the concept of "neutral observer" (Creswell, 2013; Charmaz, 2014). My emphasis on deep and detailed interviews guided by open-ended questions, my pronouncement and presentation of reflexivity, as well as my support of Charmaz's (2014) flexible grounded theory methods (ensuring an inductive, emergent approach to this research) are all evidence of my adherence to this paradigm.

Ultimately, this "mixing" of beliefs has led me to identify with Patton's *pragmatic* framework most notably. In his own words, Patton describes this view as follows:

> My pragmatic stance aims to supersede one-sided paradigm allegiance by increasing the concrete and practical methodological options available to researchers and evaluators. Such pragmatism means judging quality of a study by its intended purposes, available resources, procedures followed, and results obtained, all within a particular context for a specific audience. … Being pragmatic allows one to eschew methodological orthodoxy in favor of methodological appropriateness as the primary criterion for judging methodological quality, recognizing that different methods are appropriate for different situations. (pp. 71-72)

It is from this pragmatic stance that I developed this research study. Ultimately, I am practical in what I want to accomplish with my research, and I aspire to create knowledge that will guide practice. My intention was to select methods and procedures that suitably allow for the construction of a new theory in the area of tobacco control research. The pragmatic use of

grounded theory methods has been discussed and utilized by other researchers previously (Timonen, Foley & Conlon, 2018; Remanadhan, Revette, Lee & Aveling, 2021; Parker, Dark, Newman, Korman, Ramussen & Meurk, 2017).

Data Collection Procedures

It is often noted by prominent researchers in the field of qualitative inquiry that the quality of the analysis and the resulting study findings are largely dependent on the quality of the data that the researcher collects (Charmaz, 2014; Corbin & Strauss, 2008). As Charmaz (2014) states: "A study based on rich, substantial, and relevant data stands out" (p. 32). With this in mind, it was clear that particular attention should be paid to the methods of data collection used, both in advance of and during the data collection and analysis process. The following sections outline the proposed data collection methods that were utilized in an effort to seek a full and rich exploration of the research questions outlined in the previous section of this document.

Sampling and Participant Selection Overview

While quantitative researchers use sampling strategies to ensure representativeness of the sample and thus generalizability of results to the population of interest, qualitative researchers, grounded theorists in particular, aim to ensure that emerging theories appropriately represent the data they have collected from their chosen cases (Charmaz, 2014). Qualitative research employs purposeful sampling strategies, where "information-rich" cases are selected based on the ability to provide detailed and rich information, or data, about the question under investigation (Patton, 2002; Creswell, 2013). Creating a sampling frame and drawing representative cases from it are not procedures associated with the qualitative methodology of grounded theory. Decisions regarding who participants will be, specific sampling strategies that will be used, and potentially the approximate size of the sample (Creswell, 2013) are dictated by the specific methodological

approach being used, the purpose of the research, and the research question being explored. Critical to the methodological approach of grounded theory, participants need to have experienced the process that is under investigation. Initial sampling of information-rich cases provides the starting point for data analysis and theory construction in grounded theory research. Once potential analytic categories have been identified, theoretical sampling is then employed in order to further explore and develop the initial categories and theory conceptions (Patton, 2002; Creswell, 2013; Corbin & Strauss, 2008; Charmaz, 2014). In the methodical approach of grounded theory, theoretical sampling is defined as:

> a method of data collection based on concepts/themes derived from data. The purpose of theoretical sampling is to collect data from places, people, and events that will maximize opportunities to develop concepts in terms of their properties and dimensions, uncover variations, and identify relationships between concepts (Corbin & Strauss, 2008 p. 143)

Theoretical sampling allows for further exploration, elaboration, viewing of variation and refinement of the concepts or theoretical categories being constructed (Creswell, 2013). Simplified, theoretical sampling is concept driven (Corbin & Strauss, 2008) and is entirely dependent on where the analysis takes the researcher. While theoretical sampling may be accomplished through a focused review of previously collected data, it also often involves the researcher developing new questions that are posed to previous or new interviewees. These questions are designed with the specific intent of eliciting information that will allow for further development of the theoretical categories that have been identified (Charmaz, 2014). This sampling method is considered a crucial part of the "constant comparative method" that is fundamental to grounded theory research.

This specific grounded theory study aimed to generate a theory that elucidates the decision-making process 18-to-29 year olds engaged in and enacted when choosing how they quit smoking. Appropriately, a sample of ex-smokers, who fully engaged in this decision making process in the past year, and were willing to discuss their process, comprised the sample. Of note, the initial participants were selected not because they were representative of a specific-sub-population of emerging-adults, but because they were able to provide information about the concepts under investigation - i.e. the decision-making related to selecting a cessation approach. This allowed for preliminary analysis of data leading to a foundational understanding and basic insight into their decision-making process.

From there, further interviewing and subsequent theoretical sampling proceeded until theoretical saturation was reached. Theoretical saturation refers to "the point at which gathering more data about a theoretical category reveals no new properties nor yields any further theoretical insights about the emerging grounded theory" (Charmaz, 2014, p. 345). Because theoretical saturation dictated the sample size, establishing a predetermined sample size was not appropriate for the proposed grounded theory research. Based on expert opinion within the literature, it was expected that theory development would require approximately 20-30 participant interviews (Creswell, 2013, p. 157 and 149). Other grounded theory investigations in the field of tobacco have used samples ranging from 15 and 21 participants (Banbury, et. al., 2013; Djachenko, Winsome, & Mitchell, 2016; Smith, Carter, Chapman, Dunlop & Freeman, 2014). In consultation with my supervisor, I determined that theoretical saturation was reached for this grounded theory study at 26 participants.

Recruitment and Sample Selection. Leave The Pack Behind (LTPB) (a comprehensive age-tailored tobacco control program previously housed at Brock University and funded by the Ministry of Health and Long-Term Care) maintained a list of email addresses of 18-to-29 year olds who had consented to being contacted by LTPB about any programming opportunities or research participation opportunities related to tobacco use. From 2013 to the time of this study in spring 2018, almost 40,000 Ontario young adult smokers, ex-smokers and never-smokers who previously participated in Leave The Pack Behind research or programming initiatives[1] had joined the list. Over half of these individuals (55%) self-identified as smokers at the time of subscription, with the majority expressing intention to quit in the near future.

From all subscribers, individuals who were 18-to-29 years of age, and not parents were considered eligible. These restrictions reflected Arnett's (2000) theoretical assertions that: emerging adulthood roughly spans 18 to 29 years of age; and, parenthood is a demographic marker that propels individuals to transition to the subjective "adulthood" status, regardless of being in the age range of emerging adulthood.

Initial recruitment of participants for this study took place through an email invitation (shown in Appendix A) in April, 2018. The email invitation provided a brief description of the study, and directed interested individuals to the study specific website which provided a detailed description of the study, and instructions to confirm (click) their consent if they wished to participate. As part of the consent process (Appendix B), it was made explicit to all interested

[1] Research initiatives include randomized control trials evaluating age-tailored smoking cessation resources. Programming initiatives include the annual "wouldurather…" quit smoking contest, and the online platform for ordering free nicotine replacement therapy (patch and gum).

individuals that not everyone who consented would be contacted to participate in the study due to the nature of qualitative research.

Individuals who provided consent were immediately linked to a brief screening questionnaire that included questions shown in Table 3. To be eligible for the study, individuals had to affirm that they:

- Were 18-to-29 years of age at time of the study
- Resided in the province of Ontario
- Quit smoking cigarettes within the previous 7 months
- Had been smoke-free for a minimum of 1 month
- Were previously daily cigarette smokers
- Were not parents/raising children
- Could conduct an online interview in English

Participants who did not meet the screening criteria were immediately advised of this and thanked for their interest.

Table 3

Eligibility (Screening) Questionnaire

Variable	Criteria	Question
Age	18-to-29 at time of study	What is your date of birth?
Smoking status	Previously a smoker	Were you previously a cigarette smoker? Yes | No | Still Smoking
Quitting Status	Quit within last 7 months; and smoke free for minimum of 1 month[a]	In what month and year did you most recently quit smoking cigarettes? _____/_____
	Smoke free (No)	Have you resumed smoking cigarettes since then? Yes | No
	Previously a daily or almost daily smoker	Before quitting smoking, how often did you smoke cigarettes? Daily or almost daily | Less than daily
Parent status[b]	Not raising children	Are you raising children? Yes | No
Reside in Ontario[c]	Ontario resident	Do you currently reside in Ontario? Yes | No
English proficiency/ Technology Competent	English proficiency/ technology competency	Are you able to complete an online video conferencing interview in English using Skype? Yes | No Concerns about this? _____

Contact Information	Name _____
	Email Address _____

[a] The 1 month/30-day abstinence period was chosen because it is a conventional cessation measure in tobacco literature. The 7-month timeline was chosen as it is believed to represent a cessation choice experience recent enough for accurate and detailed recall.

[b] These restrictions reflect Arnett's (2000) theoretical assertions that: emerging adulthood roughly spans 18 to 29 years of age; and, parenthood is a demographic marker that propels individuals to transition to the subjective "adulthood" status, regardless of being in the age range of emerging adulthood.

[c] Provincial residence criteria is set given that this proposed study will receive partial funding through Leave The Pack Behind, a program which is provincially funded, and as such is mandated to offer services and programming to Ontario residents only.

Participants who did meet the screening criteria completed the demographic and descriptive questions shown in Table 4. Demographic and descriptive data were collected so that the sample could be fully described in a manner that allowed for assessment of transferability. These data were not intended to be included in the qualitative process of theory development.

Table 4

Demographic and Descriptive Data Questionnaire

Variable	Question
Sex	Sex assigned at birth: Female Male Another Prefer not to say
Gender	What is your current gender identity? Check ONE only Female Male Another Prefer not to answer
Employment Status	What **best** describes your current employment status: Full time paid employment Part time paid employment Self-employed Unemployed Disability Retired Student Homemaker Working without Pay Other (please specify)
Education	What is the highest level of education you have completed? Some elementary or some high school Completed high school

	Completed some university or some college College diploma University degree Post-graduate
Marital status	Marital status: single, never married married living common-law widowed divorced separated
Cultural or racial background	Which of the following best describes your racial or ethnic background? Asian- East (e.g. Chinese, Japanese, Korean) Asian- South (e.g. Indian, Pakistani, Sri Lankan) Asian- South East (e.g. Malaysian, Filipino, Vietnamese) Black- African (e.g. Barbadian, Jamaican) Black- North American (e.g. Canadian, American) First Nations Indian – Caribbean (e.g. Guyanese with origins in India) Indigenous/Aboriginal- not included elsewhere Inuit Latin American (e.g. Argentinean, Chilean, Salvadoran) Métis Middle Eastern (e.g. Egyptian, Iranian, Lebanese) White- European (e.g. English, Italian, Portuguese, Russian) White- North American (e.g. Canadian, American) Mixed heritage (e.g. Black- African & White- North American) Please specify: Do not know Prefer not to answer

The study commenced as soon as consent was obtained from the first eligible participant. Consistent with the tenets of qualitative research, the sample needed only to be composed of "information-rich" cases; a sample frame did not need to be established for selection of representative cases. As such, the interviewees were selected only on chronological receipt of

their consent and screening/demographic data, and were not based on any particular characteristics. In total, 26 participants were interviewed from April to June, 2018.

Research Location and Structure. Where interviews take place is an important consideration in any qualitative study using this particular method of data collection. For this grounded theory study in particular, the interviews needed to take place in a setting that was conducive, as well as ethically appropriate, for lengthy personal discussion. To meet these needs this study used the online platform Skype for interviews. While different locations may offer unique pros and cons and create different potential biases to the data collected, the use of Skype to conduct interviews had several advantages. Emerging adults are frequent users of technology and are most often considered highly digitally literate, making this format of data collection a natural and familiar one for this age group. The free-to-use Skype service also allowed for both audio and visual communication between researcher and participant while reducing the traditional barriers typically associated with securing face-to-face interviews including geographical, financial and time constraints (Deakin & Wakefield, 2014; Janghorban, Roudsari, & Taghipour, 2014). Furthermore, conducting interviews online permitted emerging adults to choose their own comfortable and familiar setting that was conducive to speaking candidly, further promoting a non-threatening interview environment that encouraged thoughtful, fulsome and authentic discussion. Giving emerging adults the choice of interview setting had the additional advantage of reducing the potential power-imbalance between participant and researcher that might have occurred if a chosen interview setting was instead only familiar to the researcher. All interviews were audio recorded, as discussed further below. Interviews began with the researcher reaffirming consent and ensuring that the emerging adult was comfortable with the interview and recording process, and understood their rights as a research participant.

Semi Structured Interviews. Most often in grounded theory research, in-depth interviews are the main method of data collection because they allow for the gathering of detailed and focused data required for high quality grounded theory research and analysis (Charmaz, 2014; Creswell, 2013). Through interviews, detailed discussions about participants' feelings, experiences, thoughts and actions can be elicited.

Patton (2002) identifies three common alternative interviewing strategies: 1) the informal conversational interview; 2) the general interview (which offers varying levels of structure based on the researcher's needs and purpose of research); and 3) the standardized open-ended interview (which is highly structured, with specific interview questions outlined in full). Assessing the merits as well as weaknesses of these approaches, Corbin & Strauss (2008) indicate that "…the most data dense interviews are the ones that are unstructured; that is, they are not dictated by any predetermined set of questions" (p. 27). Even so, they acknowledge the need for "backup" questions to be used when interviewees are hesitant to talk, or have little to say during unstructured interviews. "Asking a few [structured] questions often relaxes the study participant and stimulates his or her memory so that he or she becomes more talkative and spontaneous" (p. 28).

Charmaz (2014) suggests that a detailed interview guide, when it is treated as a helpful but flexible data collection tool, generates rich data, offers some focus to participants, and allows for exploration of topics or areas that arise during the interview but had not been previously considered by the researcher. Furthermore, Charmaz (2014) suggests "constructing an interview guide prepares you for conducting the actual interview. When you grapple with creating, revising, and fine-tuning your interview questions, you gain a better grasp of how and when to ask them in conversation" (p. 63).

The current study used semi-structured interviews steered by a flexible interview guide. Construction of a detailed, semi-structured interview guide reasonably begins with attention to "sensitizing concepts" - the researcher's loose, pre-existing formulation of important concepts underpinning the study. Sensitizing concepts give researchers an initial but tentative place from which to start their inquiry. In this study, for example, sensitizing concepts included "decision-making", "approaches to quitting" and "emerging adulthood" (explained in greater detail, below). In keeping with the inductive nature of grounded theory, these sensitizing concepts should be used as guides only, and should be changed, corrected or even discarded if they are shown to be irrelevant (Charmaz, 2014). Furthermore, from the initial starting point suggested by the sensitizing concepts, the researcher should be prepared to use the emerging understanding of how individuals experience the process to develop and pose more detailed questions that help shape substantive coding and development of thematic categories. Thus, interview questions would evolve from "What is central to the process; how does it unfold?" to "What is central to the process; what influences or causes this phenomenon to occur, based on what strategies, and with what effect?" (Creswell, 2013)

In this study, I explored emerging adults' experiences of choosing their approach to quitting: how they experienced that decision-making process; what steps occurred in the process; and what internal/external factors influenced their decision-making experience. The literature review and current disciplinary perspectives suggested the following sensitizing concepts as starting points for inquiry:

- Emerging Adulthood - Are identity exploration, instability, self-focus, feeling in-between and possibilities/optimism part of the experience of deciding how to quit smoking?

- Smoking Cessation - To what degree do emerging adults see cessation method choice as an independent choice driven by personal variables versus a social behaviour influenced by social conventions, structural supports/barriers, personal networks, media etc.
- Decision-making - How do emerging adults articulate the process by which they chose a particular approach to quitting smoking?

Based on these sensitizing concepts, an initial, semi-structured interview guide was created (shown in Appendix C). An additional question - 5. "Why did you decide to stick with this particular approach"- was generated during the iterative process of data collection and coding.

Recording Procedures, Researcher Journal, Field Notes and Memoing

Intensive interviewing was used to collect the data for this study. Allowing for in-depth exploration of a topic, intensive interviewing generates large amounts of data. To ensure all data were captured, audio recording, field note taking, and memoing were used.

Audio recording. Audio recording was used for the following reasons. Audio recordings: (1) provide a complete, concrete and detailed record (Montgomery & Bailey 2007) that ultimately allow the researcher to conduct detailed line-by-line analysis; 2) allow the researcher to ensure detailed data are collected while the researcher remains attuned to what is being said by the participant rather than being concerned writing copious notes (Charmaz, 2014) and (3) ensure that "participants' tone and tempo, silences and statements, and the form and flow of questions and responses" are captured for further analysis (Charmaz, 2014; p. 91).

Field Notes. Field notes were an integral part of data collection. Field notes are commonly defined as written records of observational data produced by fieldwork (Montgomery

& Bailey, 2007). They include data about items and observations such as the setting, the participants' self-presentation, direct quotes, researcher's reactions, how complex conversations unfold, etc. (Montgomery & Bailey, 2007). Field notes allow the researcher to document, comment upon, (and later recollect) impressions, environmental contexts, behaviours, non-verbal cues that seem important at the time but are not captured by audio-recording alone (Sutton & Austin, 2015). Drawing on work of LeCompte and Preissle (1993) and Lofland and Lofland (1999), Montgomery and Bailey (2007) offer practical advice for field notes (see Table 5). This advice steered my maintenance of field notes. I hand-wrote field notes throughout the interview process. As suggested by Creswell (2013), my field notes included the time, date and place of the interview as well as my responses/reactions to the answers given by participants. I followed Charmaz's (2014) advice to jot down key points during the interview as long as it did not distract me, or the participant. I used these notes as reminders to ask and frame follow-up questions.

Table 5

Guidelines for Field Note Taking

Guideline	In Practical Terms
Mechanics	Keep interviews to 1 hour to assist with recollection
	Jot a word in presence of participant if not intrusive
	Reserve time for fuller accounts after each interview
	Put aside equal amount of time for field notes as interviewing
	Hand write impressions versus verbal recordings or word-processing to stimulate recollection about encounter with participant
	Use quotes to indicate participant's words
	Demarcate data from interpretation of the data using [ ] and quotation marks
Content	Freely write observations and impressions
	Attend to participant's use of language
Style	Be aware that the focus of the notes may narrow over time
	Recognize that the length of notes vary
	Free write to maintain flow of ideas
	Leave wide margin for coding

Source: Montgomery & Bailey, 2007. Modified from LeCompte and Preissle (1993) and Loflan and Lofland (1999).

Corbin and Strauss (2008) make the important distinction between field notes and memos (a critical component of grounded theory analysis) indicating: "Field notes are data that

may contain some conceptualization and analytic remarks. Memos, on the other hand, are lengthier and more in depth thoughts about an event, usually written in conceptual form after leaving the field" (p. 124). Thus, memos can transform field notes into theoretical accounts. As Patton (2002, p. 436) remarks, "Ideas for making sense of the data that emerge while still in the field constitute the beginning of analysis … Recording and tracking analytical insights that occur during data collection are part of fieldwork and the beginning of qualitative analysis".

Because memos are more closely associated with data analysis—i.e., representing the researcher's thinking about codes and categories, emergent theoretical constructs, and tentative labels for constructs—memos are discussed in more detail in the Data Analysis section, below.

Data Analysis Procedures

Consistent with the conventions of grounded theory methodology, analysis - the "process of generating, developing, and verifying concepts" (Corbin & Strauss, 2008) through rigorous data review - began immediately following the first interview. In this, I was guided by Corbin and Strauss (2008, pp. 51-52) who state:

> [Concepts in grounded theory] are derived from data. They represent an analyst's impressionistic understanding of what is being described in the experiences, spoken words, actions, interactions, problems, and issues expressed by participants. The use of concepts provides a way of grouping/organizing the data that a researcher is working with. … Concepts vary in level of abstraction. There are basic-level concepts and higher-level concepts that we call categories. Lower-level concepts point to, relate to, and provide the detail for the higher-level concepts.

The initial set of concepts I framed were reviewed against the data that I collected in subsequent interviews, which were themselves coded and explored for substantive categories.

Through this constant comparative approach I assessed whether new concepts were needed, whether previous concepts or categories I had devised needed to be revised, whether negative (disaffirming) cases existed within the data, and so on. Based on the categories that tentatively emerged, I implemented theoretical sampling to gather data specifically for the purpose of further developing and refining the initial categories. This "zig-zag" process of data collection and analysis was repeated as more interviews were conducted and concepts were derived from the data. Using this constant comparative approach to data collection and analysis allowed me to identify salient concepts, sort data, refine or dismiss earlier ideas, introduce relevant questions in subsequent interviews, and observe my participants' experiences in more sensitive ways.

Coding

Coding as defined by Charmaz (2014, p. 111) is "naming segments of data with a label that simultaneously categorizes, summarizes, and accounts for each piece of data." For this grounded theory study of emerging adults' decision-making processes related to smoking cessation approaches, I followed Charmaz's (2014) approach to coding which included initial coding, focused coding and theoretical coding.

Initial coding began with the first interview transcript. After reading the entire transcribed document as a whole to become familiar with its contents, I examined the data in detail, line-by-line (Glaser, 1978 in Charmaz, 2006, p. 50), in order to consider all possible theoretical directions, staying open to where the data led me. This involved "sticking close to the data" and coding with simple, short phrases that reflected action that was present in the participants' dialogue. Throughout this coding I kept in mind my sensitizing concepts related to emerging adulthood, decision-making, and smoking cessation, but they did not dictate my codes. Rather, line-by-line coding forced me to look at small nuances in what the participants were saying and

find words to capture it accurately, rather than immediately jumping to coding larger themes or finding ways for the data to fit the sensitizing concepts. An example of this line-by-line coding is shown in Appendix D. In total, fifteen participant transcripts were coded line-by-line. The initial codes remained provisional, and grounded in the data. Slowly, as line-by-line coding progressed and data were compared to subsequent data in the 'zig-zag' approach of grounded theory research, an analytic direction emerged.

Following line-by-line coding I engaged in a more focused, selective data analysis that "use[d] the most significant or frequent initial codes to sort, synthesize, integrate, and organize large amounts of data" (Charmaz, 2014, p. 113). In this second phase of coding, focused coding, I sought to determine which codes among the initial codes appeared most frequently or seemed to have more significance than other codes (Charmaz, 2014, p. 138). During focused coding, theoretical constructs began to emerge from the data and initial codes. For example, my initial coding suggested numerous features of cessation approaches emerging adults seemed to consider when choosing a smoking cessation approach and so through focused coding I introduced and labeled categories into which these features would fall. For example, "cost", "convenience", "effort required", and "daily living" were initial constructs I conceptualized. I believed these fell under the more substantial construct of "envisioning the approach in life" as this seemed to be a common thread among my participants. The first list of focused codes that were identified based on the line-by-line coding analysis are shown in Appendix D. As more interviews were conducted and analysis continued, this list became more refined as constructs were added, removed and modified.

In my final phase of coding, theoretical coding, the categories I established during focused coding were examined with the aim of creating theoretical codes that were integrative

and lent form to my focused codes. As Charmaz (2014) suggests, through theoretical coding I aimed "tell an analytic story that has coherence" (p. 150). In other words, it was during theoretical coding that I developed and refined the theory, presented in this thesis, as a conceptualization of how emerging adults make decisions about the approach they use for quitting smoking.

Memoing

Memos are the "written records of analysis" (Corbin & Strauss, 2008). Through memos I recorded my analysis process and construction of the substantive theory. Specifically, I recorded my thoughts, the comparisons and connections I made, and the questions and directions I wished to pursue. As suggested by Corbin and Strauss (2008) and Charmaz (2014), my memos were used to:

- Record the initial data codes.
- Identify and develop the properties and dimensions of the concepts and categories I saw emerging.
- Define each code or category by its analytic properties and describe the processes subsumed by the codes or categories.
- Sort and order codes and categories and elaborate the relationships between categories- conditions, actions/interactions and consequences.
- Record sufficient empirical evidence (e.g., quotes, raw data) to support definitions of the categories and analytic claim about them.

- Offer conjectures to check in the field setting, and identify gaps that required me to "interrogate" (i.e., further explore and critically appraise the meaning of) a code or category by asking questions of it.

I wrote memos throughout the analytic process, from beginning to end as is suggested by both Corbin and Strauss (2008) and Charmaz (2014). These memos naturally progressed from shorter and less rich to lengthier and more complex as the research progressed (Corbin & Strauss, 2008). For example, an early memo I wrote said:

> *"Interesting that effectiveness didn't matter. The idea that it was her choice how effective something was rather than the other way around- maybe effectiveness isn't relevant?"*

Another said:

> *"If people rely on peer recommendations, how does this start and how can we influence this (if we want to). Perhaps the idea is that we are similar to our peers and so what worked for them is likely to work for us (leading to success)? Or is it that it is approved by peers and therefore acceptable? Socially approved? Is it just a case of trusting peers more than others? Is this related to the theory of emerging adulthood because individuals are moving out on their own? How does this relate to family though? When a sibling acts as a trusted "peer/friend"?"*

Memos also showed progression of my thinking. Early on in interviews I was trying to determine why participants talked so frequently about their reason for quitting. A memo I wrote on this topic said:

> *"I wonder if the confusion between the decision of how a method was chosen vs. a decision around quitting, means that individuals don't consider method choice a real decision. Are they not conscious of the thought process? Or is it that the two are entwined? Is the reason for quitting related in a way to the reason for choosing a particular approach"*

This led me to modify the way that I was asking my questions during subsequent interviews in an attempt to glean more information from participants more specifically about their choice of cessation approach. However, as the interviews progressed, my memos note my realization that the persistent discussion around reasons for quitting was not simply about lack of clarity in the questions I was asking. For example, a later memo I wrote on the same topic stated:

> *"There is constant confusion despite my attempts to make it clear that I am talking about method choice. Participants keep going to reason for quitting. When clarification is requested explicitly they do understand and clarify their response but I believe this is at least partially a reflection of just how prominent the reason for quitting is in their minds. The choice of method is often secondary. I also wonder if the intensity of desire to quit influences decisions about the method, in both directions. As in, if the reason for quitting is salient, they might take more time choosing the method rather than being haphazard about it. On the contrary, method might not matter when the reason for quitting is particularly salient?"*

Other memos were early sketches of how constructs that I was developing in focused coding might be connected in the depiction of the theory.

Strategies to Ensure Validity and Reliability of Findings

Techniques for assessing the "validity" and "reliability" of qualitative research vary greatly and remain highly debated among qualitative researchers (Creswell, 2013; Merriam & Tisdell, 2016; Patton 2002). Even the terminology lacks consensus. With no singular set of terms or approaches regarded as superior, I chose to address the traditional quantitative constructs of validity and reliability using the terms and approaches first proposed by Lincoln and Guba (1985). Seeking methodological rigor and "trustworthiness" (Lincoln & Guba, 1985) I used

several strategies to address credibility (internal validity), consistency/dependability (reliability), and transferability (external validity) in this study.

Credibility (Internal Validity)

Merriam & Tisdell (2016, pp. 242-243) remind us that "one of the assumptions underlying qualitative research is that reality is holistic, multidimensional, and ever-changing; it is not a single, fixed, objective phenomenon waiting to be discovered, observed and measured as in quantitative research. [Furthermore] because human beings are the primary instrument of data collection and analysis in qualitative research, interpretations of reality are accessed directly through their observations and interviews." Thus, credibility is dependent on rigorous methods, credibility of the researcher and philosophical belief in the value of qualitative inquiry (Patton, 2002).

In an attempt to increase the credibility of this work through rigorous methodological practices, I adequately engaged in data collection. Adequate engagement in data collection was accomplished through ongoing data collection (participant interviews) until theoretical saturation was reached. Saturation in this case was not simply hearing the same things repeatedly from participants but rather was achieved when "your categories are robust because you have found no new properties of these categories and your established properties account for patterns in your data" (Charmaz, 2014, p. 213).

Looking for data that supported alternative explanations, both inductively and logically (Patton, 2002) was also employed as a strategy to increase methodological rigor. Specifically, I intentionally and systematically searched through the interview data I collected "for alternative themes, divergent patterns, and rival explanations" in order to enhance the credibility of my analysis and ultimate findings (p. 553).

Through close consultation with my supervisor I engaged in the strategy of peer examination (Merriam & Tisdell, 2016) or debriefing (Creswell, 2013). They reviewed portions of my raw data and analysis/coding in order to assess whether the findings were plausible and asked critical questions about the methods I used and the meanings I ascribed as I interpreted the data, codes and categories (Creswell, 2013).

Reflexivity- an exploration and acknowledgment of how the researcher affects and is affected by the research process- is the final strategy I used to increase the credibility of this study. To that end, I offer an account of my "biases, dispositions, and assumptions regarding the research…[my] experiences, worldview and theoretical orientation…" (Merriam & Tisdell, 2016, p. 249). This assessment of my credibility as a researcher is presented below, in the section, Reflexivity.

Consistency/Dependability (Reliability)

The traditional, quantitative concept of *reliability* "the extent to which research findings can be replicated" (Merriam & Tisdell, 2016) is ill fitting for qualitative research. While quantitative researchers may believe in a reality that could foreseeably be replicated repeatedly in experimental studies, qualitative researchers instead "…seek to describe and explain the world as those in the world experience it" and recognize that "human behaviour is never static" (Merriam & Tisdell, 2016, p. 250). Understanding this incongruity, the terms dependability and consistency**,** as outlined by Lincoln and Guba (1985), suggest a distinctive way of appraising so-called reliability in qualitative research. Rather than seeking results considered to be repeatable, the researcher aims to have external reviewers agree that the findings presented are consistent with the data that were collected, and dependable.

There are a few ways that I addressed dependability in this research (Creswell, 2013; Merriam & Tisdell, 2016). I audio-recorded and transcribed all interviews. Additionally, I kept an audit trail throughout the research process**.** Specifically, I maintained a researcher journal and series of memos that include information about how I collected my data, what questions, deliberations and decisions were made throughout the data collection and analysis process, and how I interacted with my data. In this way, I produced an audit trail showing the progression of decisions and actions (Merriam & Tisdale, 2017).

Lastly, consultation with peers and reflexivity lent support to the dependability of my findings. I intentionally sought out feedback from both my supervisor and colleagues in order to assess whether presented findings were considered consistent with the data. A reflexivity section is presented below to offer further details about the ways I acknowledged and reflected on my own biases, values and beliefs throghout the research process.

Transferability and Extrapolation (External Validity)

The concept of external validity- the extent to which findings of one study can be generalized to other situations or groups- is highly contested within qualitative research. In place of "generalizations," Lincoln and Guba (1985) suggest the term "transferability" and state that when considering the transferability of findings, the assessment of generalizability must be made by the person seeking to apply the findings elsewhere, not by the original researcher. They recommend that "The best advice to give to anyone seeking to make a transfer is to accumulate empirical evidence about contextual similarity; the responsibility of the original investigator ends in providing sufficient descriptive data to make such similarity judgments possible" (p. 298). Patton (2002, p. 584) offers this interpretation:

> Unlike the usual meaning of the term generalization, an extrapolation clearly connotes that one has gone beyond the narrow confines of the data to think about other applications of the findings. Extrapolations are modest speculations on the likely applicability of findings to situations under similar, but not identical, conditions. Extrapolations are logical, thoughtful, case derived, and problem oriented rather than statistical and probabilistic.

Ultimately, as Lincoln and Guba (1985) note, my responsibility as a researcher is to provide a description of study participants, the context of the study, and the findings of my research, so that readers can make their own assessments about transferability (i.e., generalizability). Therefore, in my results, I have offered a description of my participants using demographics and descriptive data collected during recruitment and provided information about the context in which the study took place.

Reflexivity

Reflexivity represents qualitative researchers' acknowledgement that their own biases, values, ways of understanding, influence their collection, coding and interpretation of data (Creswell, 2013). "Reflexivity reminds the qualitative inquirer to be attentive to and conscious of the cultural, political, social, linguistic, and ideological origins of one's own perspective and voice as well as the perspective and voices of those one interviews and those to whom one reports" (Patton, 2002, p. 64).

While it is expected that qualitative researchers address reflexivity in their written documents, how, when and to what degree reflexivity is attended to varies significantly (Corbin & Strauss, 2008). I agree with Charmaz (2014) when she states:

> We are not passive receptacles into which data are poured (Charmaz, 1990, 1998; cf. Glaser & Strauss, 1967; Glaser, 1978). We are not scientific observers who can dismiss

> scrutiny of our values by claiming scientific neutrality and authority. … Researchers and research participants make assumptions about what is real, possess stocks of knowledge, occupy social statuses, and pursue purposes that influence their respective views and actions in the presence of each other. Nevertheless, researchers, not participants, are obligated to be reflexive about what we bring to the scene, what we see, and how we see it. (p. 27)

In my own case, I am someone who has never smoked and has not directly experienced the process of choosing a cessation method. My experience with this phenomenon instead comes through my interactions with smokers throughout my various employment and volunteer positions as well as through my previous research endeavors. For more than 10 years I have been involved in the area of tobacco control, in several different capacities. As an undergraduate student in Health Sciences I had a keen interest in public and population level health initiatives. My first role in tobacco control was as a volunteer member of the Leave The Pack Behind (a comprehensive tobacco control program funded by the Ministry of Health and Long-Term Care) peer-education team at the University of Western Ontario. In this role I spoke with fellow students (mostly emerging adults) about their tobacco use, beliefs, and experiences with quitting. Following this role, I obtained employment as a Quit Specialist at the Canadian Cancer Society's Smokers Helpline. As a Quit Specialist I spoke with people of all ages and backgrounds and applied Motivational Interviewing techniques to counsel clients through the quitting process using the Stages of Change theory. During this time I observed some seemingly unique and dynamic differences between people in different age groups in the ways they spoke about and experienced the quitting process. This sparked my interest in age-tailoring public health practices and led me to seek out graduate studies where I was able to focus my research attention on

tobacco control issues specifically within the young adult population. Throughout both my masters and doctoral studies I was immersed in the field of tobacco control through my own research and through further work with Leave The Pack Behind. I have supported and applied a "young adult lens" in all of this work and continue to strongly believe in both the value of promoting and encouraging cessation among tobacco users in this particular age group as well as the necessity of age-tailoring promotions and resources.

As I continued with each stage of this research, I kept in mind and reflected on these experiences, beliefs and values. In these ways, I attentively engaged in reflexivity. For example, because these experiences had the potential to shape my coding and categorizing of the data, and the conclusions and interpretations I drew in the study, it was important to continuously engage in reflection and ensure I could draw on it accurately when writing my final document. Accordingly, I kept a methodological journal (Charmaz, 2014) which included personal reflections arising from my interactions with the data vis-à-vis my own beliefs.

Ethical Considerations

Credibility of the *researcher* influences credibility of the *research.* Part of a researcher's responsibility is to ensure that the study is conducted in an ethical manner. While ethical issues in qualitative research can arise during any stage of the research process, and not all ethical issues can be anticipated in advance, I have explained some of the steps I took during various phases of the research in order to ensure that the study was conducted in an ethical way that ensured credibility was upheld.

As is necessary for all research involving human participants, a research ethics application outlining the details of this proposed study was submitted to the Research Ethics

Office (Brock University) for review and clearance was provided prior to commencing interviews (Appendix F).

Privacy and confidentiality was maintained during all stages of the research process as I collected, recorded, stored, and analyzed data and subsequently shared research findings. For example, pseudonyms replaced participant's names in field notes, memos, and the transcription of data and presentation of findings.

Though the topic area being investigated in this research is not perceived as particularly sensitive, I was aware that participants were sharing personal stories, feelings, and experiences. All data collection occurred in a respectful manner with attention to interviewees' willingness and ability to share information.

Chapter IV: Results

The purpose of this grounded theory study was to explore emerging adult's experiences of choosing an approach to quitting smoking, and subsequently develop a theory to explain the decision-making process that successful quitters engaged in. The results section presented here first offers a description of participants sociodemographic charactersitics. An overview, both visual and written, of the newly developed theory, named the Choosing How To Quit (CHQ) Framework, is subsequently provided. In-depth descriptions of each of the phases and components comprising the theory, including supporting quotes from participants, follows.

Description of Participants

Sociodemographic characteristics of the 26 participants are shown in Table 6. Participants ranged in age from 19-29, with a mean age of 24.

Table 6

Sociodemographic Characteristics of Participants

Characteristic	n	%
Sex		
Female	16	61.54
Male	10	38.46
Gender		
Female	15	57.69
Male	10	38.46
Another	1	3.85
Employment		
Full-time paid employment	8	30.77
Part-time paid employment	5	19.23
Unemployed	1	3.85
Self-employed	1	3.85
Student	7	26.92
Disability	2	7.69
Prefer not to say	1	3.85
Other (casual paid employment)	1	3.85
Education		
Post-graduate	1	3.85
University degree	10	38.46
College diploma	5	19.23
Completed some university or some college	6	23.08
Completed high-school	4	15.38

Marital Status		
Single, never married	20	76.92
Living common law	4	15.38
Married	1	3.85
Prefer not to say	1	3.85
Culture/Race		
White-North American (e.g. Canadian, American)	10	38.46
White- European (e.g. English, Italian, Portuguese, Russian)	4	15.38
Asian-South (e.g. Indian, Pakistani, Sri Lanken)	3	11.54
Asian-East (e.g. Chinese, Japanese, Korean)	3	11.54
Black- North American (e.g. Canadian, American)	1	3.85
Metis	1	3.85
Mixed heritage (e.g. Black-African & White- North American)	1	3.85
Middle Eastern (e.g. Egyptian, Iranian, Lebanese)	1	3.85
Black-African (Barbadian, Jamaican)	1	3.85
Prefer not to say	1	3.85

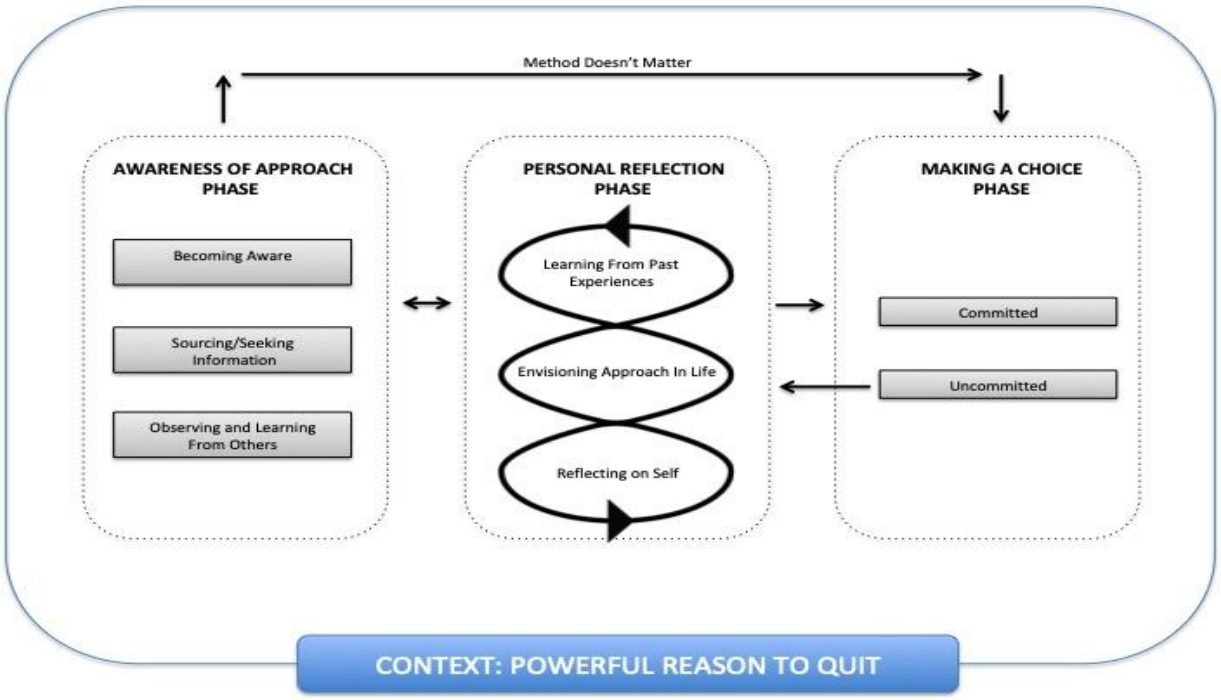
Theory of Emerging Adults Decision-Making Process When Selecting a Smoking Cessation Approach

The theory that emerged from this grounded theory study is presented below. To provide context and clarity, a summary of the proposed theory is presented here first. Both a visual and written overview is offered to support the reader in conceptualizing the theory as a whole. Then, detailed descriptions of the phases and components are offered.

Figure 1 shows the decision-making process that the emerging adults in this study engaged in when selecting their smoking-cessation approach. To communicate the essence of the model, this straightforward and reasonably descriptive name was applied: Choosing How to Quit (CHQ) Framework. The CHQ Framework includes distinct **phases** in the decision-making process: Awareness of Approaches; Personal Reflection; Making A Choice. Each phase includes additional **components**, cognitions or actions, that emerging adults engaged in. While the model shows these phases as distinct elements, not every emerging adult moved through each phase simply sequentially. Therefore, careful attention should be paid to the lines that show the important connections between each phase. Furthermore, while most of the emerging adults in the study undertook a decision-making process that included each of the phases shown in the model, the model also shows a more abrupt decision-making process labeled "Method/Approach Doesn't Matter". This path demonstrates a more simplified and possibly impromptu decision-making process that some emerging adults engaged in. Finally, a notable feature in the CHQ Framework is the context in which selection of a cessation approach occurs. Choice of what cessation approach to use was most often embedded within the context of the powerful or valued reasons emerging adults had for quitting smoking.

Figure 1

Choosing How To Quit (CHQ) Framework



The way in which the CHQ Framework emerged from the data is summarized below. A complete conceptualization of the framework, including all of its ***phases***, the ***components*** that comprise the phases, their connections to each other, and the broader context of the model is offered. In line with the grounded theory approach, generation of the model began with components- the primary building blocks of the CHQ Framework. Accordingly, quotes are offered to show how these emerged. The phases were built to house these components, and emerged from my understanding of the participants' data.

Movement Through Phases and Components

The CHQ Framework shows three sequential phases that emerging adult participants moved through as they engaged in the decision-making process of choosing a cessation

approach: Awareness of an Approach; Personal Reflection and Making a Choice. Arrows on the diagram show that participants experience both a simple linear progression through the phases, as well as a back-and-forth, fluid movement through the phases. Arrows also demonstrate the connections between components including the psychological processes and related behaviours that emerging adults experienced *within* the phases. Of particular note is the helix shown in the Personal Reflection phase. This three-component helix reflects the interwoven nature of the thought processes: Learning From Past Experiences; Envisioning Approach in Life; and Reflecting on Self. The helical movement reflects data from this study indicating that insights or information emerging adults gleaned from one of these thought processes often related to thinking about the others in a very fluid and reciprocal way.

An alternative route through the decision-making process, "Method Doesn't Matter" is also shown. Arrows here show a decision-making process that circumvents the "Personal Reflection" phase and related components.

Timeframe

No standard or common timeframe for this decision making process was noted with this particular group of emerging adult participants. The timeframe in which participants moved through the phases of the model varied significantly, from days to years. At times the timeframe was influenced by the context (reason for quitting) in which quitting took place.

Phase: Awareness of Approaches

While perhaps obvious, it deserves mention that in order to select a cessation approach, smokers have to be aware of it. Emerging adults in this study discussed several ways that they became aware of the smoking cessation approaches that they considered and ultimately selected

for themselves. Interestingly the process of becoming aware of the plethora of cessation approaches available to them occurred both before and after participants made the decision to quit smoking. Some emerging adults seemed to have been taking an inventory of cessation approaches well before they selected one for themselves. At times, this awareness was gained in a passive way. For example, emerging adults spoke about seeing cessation approaches advertised or discussed on television, online, or in other media sources. Some spoke about seeing approaches displayed in retail locations. At other times, awareness of various approaches was gleaned from casually observing other smokers who were quitting, or hearing from smokers and ex-smokers about their own approaches to quitting. While these observations were often of partners, friends, or family members, at times more casual relationships within emerging adults' social circles such as co-workers and individuals they came into contact with as they moved through their lives (e.g., gym trainer, hairdresser), were found to bring about this awareness of cessation approaches.

Awareness also came from deliberate seeking of information about cessation approaches, typically after the decision to quit had been made. Researching approaches online or purposefully gathering information through discussions with others such as partners, family members, or friends was another way emerging adults became aware of cessation approaches. A select few also spoke to or heard about cessation approaches from health professionals (such as doctors, pharmacists or counsellors).

Interestingly, the duration of the process of becoming aware of cessation approaches varied greatly. Some emerging adults' awareness of cessation approaches was gleaned from recent experiences, interactions and personal 'research' they undertook. For others, awareness was gained over a lengthy period of time.

Component: Becoming Aware

Components comprising the "Awareness of Approaches" phase are described below in greater detail and with supporting quotes.

Emerging adults in this study became aware of various approaches they could use for smoking cessation from diverse sources and over different spans of time, both before and during their decision-making process. Some participants spoke about gaining awareness of approaches, or information about approaches, passively. In other words, even absent of a deliberate effort to seek out information about cessation approaches, emerging adults found they had collected information related to cessation approaches that they were able to utilize when making their decision about how to quit.

The two major sources that emerging adults mentioned for this information were media (e.g. mass media, advertisements, social media), as well as word of mouth recommendations from people in their lives. While in some cases the approaches that the participants learned about were the ones they ultimately chose to use when quitting, this was not always the case. Sometimes, these options were simply identified as one of the approaches within an arsenal of approaches that emerging adults considered when making their decision.

Below are some quotes from participants that demonstrate the ways media played a role in emerging adults' awareness of approaches.

> Participant ID 100 Honestly, the other one's didn't help me out so much and the Mist just seemed like a good option. I've seen a commercial for it probably watching a hockey game or something, and that's probably what kept ... putting in my head a little bit 'cause I'm just not really paying attention, yet it just keeps playing over and over every commercial break.

> Participant ID 28 I don't know how I got the contest. I think it was just through an e-mail that our university was passing out. That was my, I think, the instant I said I need to quit.

> Participant ID 34 The spray was the commercials, because I saw it on TV, and they looked, like, so relieved when they got their spray. It was like, "Oh, that looks good," and the patches, too. Like, I saw it on the TV, so it kind of got my interest and curiosity, and checking what it was, and how effective it was.

> Participant ID 64 An ad on Instagram just came up. They're like, "Hey, yeah, we offer eight weeks of the patch. If you want to try it, go ahead." [inaudible 00:02:25] kind of deal.

The following quotes show how some participants found out about cessation approaches from people they encountered in their lives in various ways. The first one comes from a participant who was admitted to the hospital and was given the patch from health professionals during their stay. The remainder similarly show information passively gleaned from others.

> Participant ID 85 Initially, when I first tried the patch it was when I ... I'd actually been ... spent some time in the hospital when I was a teenager for some issues I'd had with ... with concurrent disorder, like mental illness. Not like any formal diagnosis or anything like that, but ... and then they gave me nicotine patches there was where I first ... guess I'd been exposed to it '

> Participant ID 55 my counselor for my school told me about the program. So, she just sent me the information. And then I applied online.

> Participant ID 30 To be honest, it wasn't even an intentional thing…I don't know if that's right but essentially, there's a bunch of doctors that are training younger doctors that are still in school and med school at I guess like a placement sort of thing. And the particular doctor I had that day had suggested maybe looking at options and Champix was the one they brought up.

> Participant ID 33 One of my trainers at the gym is one of the program managers, and I kind of started talking to him and knowing that there was kind of no judgment by him, and he kind of gave me a breakdown of what the program was like, and what the benefits are, and how they work. That helped me, so it was kind of like having someone that i knew talk to me about it beforehand. I'm not quite sure if I would've just found a program and joined it right away if I didn't know anybody.

> Participant ID 63 My mom is a physician and so she was obviously a little distressed that I had taken up smoking, and so she was doing everything that she could to help me stop. So, she would bring home all kinds of samples and stuff for me to use.

Component: Sourcing/ Seeking information

To aid them in their decision making process, emerging adults spoke about deliberately seeking information about cessation approaches from a variety of sources. This was done throughout the decision-making process with some participants seeking information not only before choosing a method, but at times before choosing to quit.

A variety of online resources including government websites, chatrooms, reddit etc. were frequently cited by emerging adults as places they went to for information about approaches. They also mentioned the unspecific "google" as a resource for finding knowledge. A few participants also spoke to others such as family members, friends or health professionals (e.g., doctor, pharmacist, counsellor).

Interestingly the information that emerging adults sought varied as well. Some were interested in simply hearing about different options for approaches while others were interested in more specific information such as effectiveness or side effects associated with particular approaches.

The following are quotes from participants who were gathering information prior to deciding to quit:

> Participant ID 11 It was a website. It was on a website called Discord, it's like a gaming-chat room platform...I was, like, oh, I'm tired of smoking guys, has anyone quit? And then a few people piped up and said ... Actually, a lot of people on there were vaping, but a few that had totally quit said cold turkey was the way to go...They told me what had worked for them. I was already aware of, you know, what nicotine replacement is, cutting down ... Like, I knew what they were, but they just told me how they had quit….

> I don't really know anyone in real life that's quit smoking completely. Actually, I do know one person, but she still smokes occasionally, and actually, coincidentally, she also got really sick, and that's how she ended up quitting. She had ... I don't know, like, a sore throat or something. But, like I said, she still smokes every once in a while. But yeah, so, talking to people in the chat room, kind of hearing that a lot of them had quit cold turkey made me think, okay, maybe this is, like, my only option, because everything else really hadn't worked.

> Participant ID 23I don't remember any of the online resources that I used, but I found that I had previously read it, but some of the key kind of concepts stuck with me, the Allen Carr's Easy Way book. When I did read I only quit for three weeks, unfortunately, but a lot of those core concepts that he speaks about, or writes about in that book really kind of stuck with me.

> Participant ID 45 And then, at work, people knew I smoked and people were obviously encouraging me, you know, you shouldn't smoke, you should try this. So then I literally said, "So how did you quit smoking," to someone I worked with. And then they said, "Oh I used that pill." But other than that, I've heard of those alternatives, but I never really considered them. …To be honest with you, it was just more out of curiosity to see if a lot of people had the same kind of alternative or ... Because even though I really did not wanna quit, it was in the back of my mind that I'll probably have to some day, or something's gonna lead me to have to do that. So it was really just out of curiosity to see how easy it was for people or if people needed something else.

Below are some quotes from participants who spoke about purposefully collecting information during the immediate decision making process. These quotes show the variety of sources emerging adults went to, and the variety of information they sought:

> Participant ID 26 Well, just like the websites of the different stores. So in our town here, there's something called Vape Vine. So just looking online, and then review, and stuff like that.

> Participant ID 33 After they gave me the options, I did research a lot before I decided exactly what I was going to take. Because they gave me the card to buy whatever I wanted, I kind of read up about the patch, the inhaler, the gum, as well as I did speak to my family doctor too. …Then reading more about the Wellbutrin when the time came, and knowing that its been very successful for a lot of people

> Participant ID 34 Leave The Pack Behind had a lot of information on the nicotine patch, but also, like the Nicorette boxes as well, so you just go on their website, and they talk about, like, side effects and all that, and even like brochures at the doctor talked about

> different quitting methods, and the side effects, but the advantage, benefits as well. So just that kind of information.
>
> Participant ID 40 So I always knew I had to quit. I didn't knew how to get help. I didn't know how to start. I searched online. I searched Google …
>
> Participant ID 84I did some research online. That's when I saw that and then I saw ... What else did I see online? It was just a little overwhelming online I think for myself, so I didn't really bother. I was like I know people so I'd rather use word of mouth than even use the internet….Well, I think that's the first approach for anyone. If they want to learn about something you have to go online and look, so that's what I did but I was like this is too much. I'd rather talk to people and just see what worked for them instead. Or even look at my own body and see what's going to work for me instead of going online.
>
> Participant ID 33 I had read a little bit about it that Wellbutrin was actually quite frequently used to quit smoking, given the fact that it was, I believe it's more for anxiety and like anti depressants, so I wasn't sure if that would've been something strong enough but I figured basically because it's used for those things, I'm sure it could help possibly with mood, or anger, and withdrawals so it was a little bit more positive than thinking of something like Champix, where I find I think that one was a lot stronger. There was a lot more side effects.
>
> Participant ID 19 I, again, read a little bit about the success rates amongst quitting techniques, and it seemed like cold turkey was by far the most successful at keeping people off cigarettes long-term. There were other methods that were more successful, immediately, but cold turkey quitting seemed like it was the only one that was consistently keeping people smoke free, three, six, 12 months later,

Component: Observing and Learning from Other Quitters

Observing and learning from others who had experience quitting smoking was one of the ways emerging adults became aware of cessation approaches. Observing or asking about others' approaches to quitting, or recollecting about past observations of others' quitting experiences, was also often a part of the process of making a decision about a cessation approach for themselves. The 'others' whom they observed or spoke to were close friends, family members and partners. Interestingly however, emerging adults also mentioned observing or

listening to quitting experiences of co-workers or others they encountered in their daily lives (e.g.. hairdresser, trainer).

Sometimes witnessing and/or speaking to others who were able to successfully quit using the particular approach was enough to make the emerging adults want to use the approach themselves.

> Participant ID 19 Just seeing her, seeing that she successfully quit I think a few years ago, probably over five years ago, and she hasn't still smoked again after that. Just seeing her story, a success story, right in my face was like, "Okay. I've got to try that too, see if it works for me."

> Participant ID 02My brother told me. He was using it and I followed him. He tell me to use it. I followed and started using Nicorette gum instead of cigarettes when I have craving. And it helps. My brother is like social butterfly. He goes to different places, find information. Myself, I just got Nicorette gum and started using it. It's more like I followed my brother, so to say.

> Participant ID 03 one of my friends cutting smoking as well, she brought me to this running group. Actually introduced me to it, and we joined it together…But like I said, it was my friend who joined in the first place. It was my ... one of my good friends who I really look up to who joined it and managed to quit smoking based on that. And I said, oh, that seems to be really powerful.

> Participant ID 34 So my mom has quit. She did the patch, so I saw her experience as well, and one of my friends had done the patch as well, so just asking around, how they felt, what was the experience.

> Participant ID 84Well, my dad used to smoke too, so he basically told me that was the right thing to do. He was like, "I know if you cut it out completely, you're going to start smoking again." He basically told me that and that's how I got the idea, and he hasn't smoked in 10 years or so….Well, [inaudible 00:05:38] someone's method and it works, you'd rather go that way. Because I saw my friend's methods and they're still smoking today, right? Yeah.

> Participant ID 92 The only reason why I opened up that book at first was because, again my boss, she told me that it had helped her. She said, she's like, "This is a pretty famous book. I'm sure you can find it online, too." She's like, "But, I wanted to give you a paper copy." And because I actually looked online before I started reading it. I figured this is a

> staple of quitting culture. Like most people do reference this book. So, you might as well open it and actually see what's inside.

In addition to observing successes, emerging adults also observed how others had failed to successfully quit with certain cessation approaches. As illustrated in the first quote (below), a few emerging adults saw the failure of the cessation approach as the fault of the user rather than the method and decided to use the approach anyways. For most emerging adults though, witnessing others fail with an approach was enough to make them want to avoid using that approach. For example, as the first quote (below) shows, one emerging adult who used the Quick Mist indicated that a friend had used it previously but had not found success with the approach. Despite this, the participant indicated that this experience provided them with information about the approach while not discouraging them from using it.

> Participant ID 100A few years ago before I knew what the Mist was, I had a friend that had it and she was trying it. I never tried it, but she said it didn't work for her, but I didn't know ... I wasn't just gonna take her word for it. So, I was gonna do it. Really, she kind of told me about the Quick Mist in a way.

> Participant ID 23For the most part. There obviously are definitely tons of people who have successfully quit that I've seen via patches, and gum, and e-cigarettes and stuff like that. I think one of the biggest things that kind of made me avoid that side of things was I spoke to this guy at a vape shop that was near where I had previously worked. He was talking about how he had finally gotten down to zero. I think it took him eight months. I said to myself, I don't want to be fucking dependent on something for eight more months, like if I want to quit I want to quit. I want to be done. I want to get it over with.

> Participant ID 09 I just kind of did my own thing. Because I saw other people that did things like go to vapes and cold turkey, but then those I could tell didn't work because a month later they'd be back smoking, so I didn't even want to bother with their opinion and them trying to say what they think is good, because you know whatever you tell them you did is not right, and take it offensively .

> Participant ID 34 I considered the electric cigarette, the vaping, but my mom's on that, and she hasn't quit that, so I didn't want to start something ... I wasn't sure about how effective it was to really quit smoking. …Because I see a lot of people that, like, start

> that, and they're still on it, like two or three years after, so I wasn't sure. And like, we don't know the side effects of that yet, either. So I'm not going to quit a cigarette for another cigarette kind of deal.

> Participant ID 45 It was honestly, my sister started, I think she started before me, and she was saying how ... Like she started vaping and using a nicotine vaporizer sort of thing. And I still noticed, it was kind of watching her. We would be out somewhere and you wanna smoke after a big meal, you wanna smoke in the morning. And she would say, "Oh I quit smoking." But after meals or with a coffee, she would still need that. So that was like a big thing as well. Also watching someone doing it, too. …Because it was still ... I'm like okay, sure, you quit smoking, but you still needed it kind of thing.

> Participant ID 23 … a lot of the people on patches, and gum seemed to jump back onto them not too long after, including my own oldest sister, I kind of watched as a younger child, her patch every couple of years, and she would quit for like three months, and then just get right back onto it.

A participant who observed her friends failing with various approaches, and who ultimately went with an approach that was successful for her father concluded with the following sentiment. It summarizes how many emerging adults in this study seemed to use information gained from other quitters as just one aspect within their holistic decision making process:

> Participant ID 84 so when I was making that decision, it was more okay, what have I seen that has worked on people? What have I seen that hasn't worked on people? What do I think I'm actually going to do? And what's the most cost-effective as well? Because I'm not going to do something when I know I'm going to be paying more for it than I would even be spending on a pack of cigarettes or whatever it may be. I thought about all of that and then I think that's when I was like okay, well I know my dad's method is the right method.

Phase: Personal Reflection

The personal, introspective reflection process is positioned central in the theory diagram as it manifested as a critical component of the decision-making process emerging adults, who were successful quitters, engaged in. Several constructs became evident as vital components of

this phase: Learning From the Past; Envisioning a Cessation Approach in Life; and Reflecting on Self. Reflecting on Self included sub components: Who I Am, Who I Want to Be, What I Need, and What I Believe. As the diagram demonstrates through the use of an interconnected figure eight-esque shape, these components emerged as deeply interwoven thought-processes that naturally informed each other.

Specifically, successful quitters considered and reflected on what approach(es) had worked and not worked for them in past cessation attempts. Some also thought about other behaviour changes they had made and how they could apply knowledge gleaned from that work to their choice of a smoking cessation approach.

Through careful and perceptive self-reflection, emerging adults also considered how they believed different cessation approaches would fit with their own ideas about who they are, what they need, their personal beliefs, and their hopes for their future selves. In doing so they made cessation approach selections based on what they thought would best suit their unique selves.

Participants also reflected on the practicalities of using a cessation approach within their own life. Combining their understanding of their past experiences and their introspective reflection, they considered ideas including cost, accessibility (ease of availability), how a cessation approach needed to be used, what a cessation approach offered or required of them, and how these features of cessation approaches would work within their daily life.

Components comprising the "Personal Reflection" Phase are described below in greater detail and with supporting quotes.

Component: Learning From Past Experiences

Learning from past experiences became evident as a core component of the Personal Reflection phase in this theory. Emerging adults spoke about their previous quit attempts and

personal experiences with a variety of cessation approaches. These experiences, both positive and negative, informed the current cessation approach choice in several ways.

Specifically for some participants, the choice to use a particular quitting approach was driven by their perception that it previously worked for them, at least in some way, or that they had learned enough about it to make it work for them this time.

For other participants, past experience was used to reject approaches that had been complete failures for them, and to narrow down their current choices to approaches that seemed to have more potential for success. Along similar lines, emerging adults sometimes drew upon previous experience to make decisions about the specific characteristics they did or did not want in a cessation approach.

Finally some participants seemed to use their past experience to reject approaches without coming to any apparent understanding of what other approach(es) might possibly work this time.

In the quotes below, participants describe approaches they previously used with enough success that they decided to try the approach again.

> Participant ID 08 And the approach that I took was one that worked for me before, so that's kind of the reason why I'd taken that.
> The only reason why I'd quit that way was mainly based on the fact that it had worked for me in the past, quitting smoking.
> What happened when I had quit before, and the method that I had used quitting before was the most important factor, because I knew that it worked.

> Participant ID 12 I just thought back to what I did when I first quit initially for almost two years. I'm hoping that this time I don't go back to it. I'm sure that I won't. I'm much older and wiser now than I was when I finished high school. If it ain't broke don't fix it really. If it worked before then it's going to be able to work again, right?

> Participant ID 54 I had noticed that the days that I was using it I had no interest in smoking for the most part. Like I'd still want one habitually but I didn't really crave them, you know as anxiety-filled as I would if I didn't have the patch. So, I just, when I did get the patches this time, I just went all out and bought, you know, five weeks worth of patches and no cigarettes….I know it worked like I said, when I tried the year before, at least when I was doing it properly, so I knew if I put my mind to it and put myself to it that it would do its job to get rid of the cravings kind of thing or take care of the cravings through it.

While past experiences helped certain participants identify approaches that did (or could) work for them, past experiences allowed others to identify approaches that did not work for them. Specifically some emerging adults used their past experiences to reject approaches that they saw as complete failures- either from lack of quitting success or intolerable side effects. Of note, some used this rejection to narrow down their current choice to approaches that seemed to have more potential for success. Others used this rejection simply to eliminate options and move on to the next choice with little or no insight into what might possibly work this time.

The following quotes show how past failure of an approach or its intolerable side effects led to insight about what might work this time, and thus a narrowing in of choices.

> Participant ID 55 Trial and error, I guess. The first time around I used everything. I had to shop around for what worked and what didn't, and again, the first time nothing worked, but I had tried. I was familiar with the patch, the Nicorette inhaler. Nothing comes out of it, but yeah, I tried that. I tried the gum. So, I thought the patch had worked best. So this time around I got the patch and the gum, and those together kind of ... Yeah. I didn't use the gum very much, but once in a while, in conjunction with the patch, it gave me a little bit of an extra dose that got me through when I had stronger cravings.
>
> In terms of choosing which methods, it was just, "I hope something will work," and I just went with what had been the most effective in the past.
>
> Well, this time I had had experience with the various methods, so I knew which ones I liked and which ones I didn't, whereas the first time around, I was just trying everything.

> Participant ID 85 I just ... I kind of ... I tried all ... I tried using the gum and stuff like that and I had been in the hospital and stuff before. I'd bought the patch for awhile, too, but it's just like crazy expensive. It's more expensive than smoking if you're not a heavy smoker. So, I don't know. I tried the gum and I just found gum doesn't work. That's

probably the next popular ... most popular one, but the gum ... work if you're drinking or eating and you feel like smoking. That's often times when I would ... you can't chew gum all the time, right? So, the patch ... I don't know, just made the most sense out of all the options….I feel like maybe this time I felt like I was more wise because I had done the trial and error before. I've seen firsthand that didn't work for me to try and cut back or try and do cold turkey or try and use gum or ... or a nicotine inhalers, or yeah.

Participant ID 24 I think it was more beneficial to have my family support around. I guess trying the gum was a good eye-opener that it wasn't going to work and any type of nicotine wasn't going to help me at all. But, definitely, family support was more beneficial.

Participant ID 12With Leave the Pack Behind I tried multiple times. I tried the gum with you guys. I tried the patch with you guys. I even tried Champix. I got the doctor to write me a prescription for Champix. I even tried some of the other Nicorette, like the inhalers and also the lozenge. I tried I would say almost every smoking cessation product out there, including e-cigarettes and the vaping cigarettes like the vaping machines. I almost tried everything. Nothing worked….I had tried most of all the other options. They didn't work. They didn't particularly work for me. And the last time I had quit I went cold turkey myself as well. And I knew the cold turkey worked for me. So between the time I quit after high school and the most recent time that I quit, I had tried a lot of smoking cessation products to try to quit again. Because I knew the last time I quit cold turkey it was rough. The withdrawal from the nicotine was absolutely terrible. I didn't want to go through that again so that's why I tried a lot of the other smoking cessation products but without them really working. Looking back now - hindsight's always 20/20 - I don't think I had the willpower when I was using them. So I think I just needed the willpower and the honest to God drive just to say enough is enough

Participant ID 55 I've had a Nicotine patch before. It was a couple of years ago. But, I didn't like ... The patch made me feel really, really hot. And sometimes I did fall asleep with it. Even though it says not to. And I had crazy dreams and stuff. So, I just ... There weren't really side effects from the gum, I don't think. Nothing too noticeable anyway.

Participant ID 33 I think it was more just I was so nervous because the Champix, the worst reactions I got from that was actually suicidal feelings and vivid dreams and visions that I was really looking for something to tell me if it had any indications of those type of side effects I didn't want to touch it at all just because they were so scary to go through, and not worth, not not worth quitting over but just not worth dealing with to try to quit. So I think I was just really looking for really bad side effects to kind of lure me away from certain products, but for the most part everything was quite positive. You know, I think certain things work better for other people potentially, or some people just want to go for one thing at a time, whereas I figured there was no harm in trying the combination therapy.

The quotes below show how past failure of an approach or experiences of intolerable side effects produced no real insight but simply led to trying another approach seemingly at random.

> Participant ID 64 I've tried multiple times, just cold-turkey, and that was just clearly not working. And then I tried the gum, the nicotine gum. That tasted like total garbage. The worst I have ever tasted in my mouth. That clearly didn't work, so now I just have an over-excess of gum. It was like, I don't know what to do with this. Then I tried again, cold turkey, no luck. So I'm probably at the eighth try, and then I tried the patch and that worked.

> Participant ID 40 I tried quitting altogether. It didn't work. So I thought it was time to switch it up a bit.

> Participant ID 54 I went with the patch because I tried other methods the year before and was not successful, so I figured, you know utilizing some of the things that are out there would work.

> Participant ID 23 Past experiences of my own, I guess. Again, as I said, I've tried the gum, I've tried the e-cigarette, I've tried tapering, and all of those things did not work great for me. The e-cigarette was the closest, but I was still spending money, and I was still feeding my nicotine. I was fed up and I wanted to not deal with it at all.

> Participant ID 100I tried to quit two times previously. I tried to use the Nicorette Gum. I've tried to use the patch, but the patch would irritate my skin, give me really bad rashes. So, I couldn't go forward with that. The Nicorette Gum just didn't really do it for me. For some reason, the craving actually would never go away with the gum. So, it might work for other people, but definitely it just didn't work for me. So, the Quick Mist was essentially the next thing that I've never tried. I was willing to try anything because anything's better than not trying. ...It's just I've done that before too, when I've tried to previously quit and then I also had one of those apps that you get on your phone and it keeps track of all the chemical levels that are coming outside your body as days progress. I was so wrapped around that. I wouldn't stop thinking about it. Then I started getting more stressed from it, and then the stress is gonna give me triggers, and then here we go again. The roller coaster continues.

> Participant ID 35I did try Champix at once point, and it worked very, very well. I just, actually not covered on my benefits, so it was costing me more. So I just was like, "Probably put too much money into this, just quit."

> Participant ID 30 I never tried the gum, I'm just not a fan of gum. I did the inhaler but I found out that it's really costly for that….The other methods I tried, the inhaler, again, it did work for the time but it still kept with the whole, the motion of inhaling, having a cigarette in hand. The gum, I was never really fond of the taste and the patch actually made me sick to the point ... so I used to use ... because I used to have trouble putting it on in certain spots. Either that or they would fall off midway through the night and I would get the cravings in the morning….I didn't want to try something I've already done when I realized it wasn't gonna work before.

> Participant ID 84 I tried that, and my boyfriend bought me a vape and he told me to try that. It wasn't effective for me at all, so I just stopped that because I knew ... I think I tried that for a week before I went to my dad. Because I knew I would vape and then smoke, too, so I knew it wasn't the right method for me.

Interestingly it wasn't exclusively *smoking cessation* experiences that acted as learning experiences and informed the process of choosing a cessation approach. Participants also applied **learning from other behaviour change experiences** they had had- such as dieting, medication changes and other addictions. Examples of this are shown below.

> Participant ID 09 I think myself I have an addictive personality. I just [inaudible 00:10:22] I love casinos, not that I go every day, but I love, like I know I have that way of being attached to something so much. Sometimes in other circumstances for other things that are being addicted to, I couldn't just stop right away because it didn't work for that. But, maybe the person I am, I needed to slow down or else I'll miss it too much and [inaudible 00:10:48] Just the same as eating. I'll be like healthy, healthy, healthy and then I'll just completely cut it out because I didn't make it in moderation with my day or something and then I fully run back to junk food. So I kind of take it as the same kind of thing, if I completely cut it out I would just completely miss it and go straight back to my old self….I didn't talk to anybody and I didn't want to call a hotline anonymously, I couldn't talk to my parents about it, and then the whole friend thing, they have their own thing that didn't work, I didn't want to talk to them either. I thought of little things, coming from other experiences and ways I approach other things, how could I do it for this and just apply it to smoking

> Participant ID 84 I know even when I was dieting, I knew cutting out junk completely wasn't the right approach. So when I did this, I thought okay, let me just go slowly instead of doing something that I know is not going to work. When I said two a day, instead of what I smoked before, which was say five or more a day, it was like ... I thought it was a better approach for me. So after the two, I did two for maybe a week or

> so, and then after that did one. Then after that, I was like okay, let me cut it out completely. It was more a mindset than anything after that.

> Participant ID 92 I used Reddit. So, to share something personal about myself. I worked in harm reduction. And I've been an active drug user for a few years now. So, being online has been an important part of staying safe.

Another participant who chose to use the nicotine patch, which comes in three doses, or steps, discussed how previous experiences with changing medications applied to her choice of cessation approach:

> Participant ID 54 I've been on a lot of medications over my years for different, for my mental illnesses. Every time we came out of a medication, we would go down in steps. So I figured smoking would make sense to do the same way.

Of note, the diagram of this theory shows how learning from past experiences at times informed other components of the Personal Reflection phase of this theory. This interchange is illustrated in the quote below in which the participant explains that what she learned from her past quitting attempts helped her to determine what she personally needed in an approach when quitting (i.e. Reflecting on Self).

> Participant ID 34 So, I knew that in the past, or from my experience, I guess I kind of related to the past experience of knowing that it was really hard to try to quit cold turkey, that I would need help. So I talked to my doctor, and she connected me with the Heart Institute in Ottawa, so I saw a nurse….I wanted somebody to really support me, and somebody I could talk to, because the first time I quit, the reason why it didn't work was emotionally, I was a mess. So, I didn't recognize myself. I mean, I'm usually a happy person, optimistic, and then I was just like, ugh, ready to bite off some heads, right? Just not myself. So I didn't like that. It was too much of a cost for me, to do that….So, when I started, I thought like, "Okay, I'm going to need some support," and that's why I reached out to my doctor, saying, "I'm going to need somebody to talk to for that," so that's why they connected me with the Heart Institute, which is our nurse, especially for stopping smoking.

This idea of self-reflective learning or knowing what one personally needs in an approach is further illustrated in the "Reflecting on Self" construct and is discussed in detail there.

Component: Envisioning Approach In Life

As emerging adults engaged in the process of selecting a cessation approach, some seemed to envision how approaches would fit within their daily life. While this thought process included a range of considerations, some of the more common aspects seemed to be: accessibility and cost of approaches, how the attributes of an approach would work with daily habits and routines, and how other people would perceive the approach or how they believed they themselves would be perceived. As they envisioned the fit of an approach in their lives, some emerging adults focused exclusively on a single consideration, such as ease of access. Others cast their thoughts more broadly, considering multiple aspects of accessibility, convenience, cost, social acceptability and so on. Finally, when envisioning an approach in their lives, emerging adults sometimes reflected on approaches that wouldn't work, and other times considered approaches they believed would suit them.

As evidenced by the quotes below, the features of cessation approaches that most often received attention from emerging adults as they envisioned the approach in their life were: cost, convenience of both access and use, physical manifestations of use, and others' perceptions.

The quotes below show how **cost** could range from tremendously influential to fairly inconsequential.

> Participant ID 55I think just 'cause it was available for free is a main reason why I used it.

> Participant ID 64 I moved, probably, about six times in the past year. So just ... Money wasn't really an option for me to spend on something that I could probably do without having to spend money. So, having that option to have a free product helped me quite a bit more.

> Participant ID 23 I think a lot of it was cost, honestly, I think I just wanted to not have to budget for nicotine any more, because whether it's vapor, patch, or gum, or anything it's still something that you have to think about spending money on, and I don't know, it's not necessarily that I was always strapped because of it, but I just wanted to never have to worry about it again.

> Participant ID 100 I wasn't necessarily going there, right there to quit smoking, but it just happened to be a good opportunity to check it out, to see if perhaps they were on sale or what the price was. They were on sale so I figured, what's a better time than now?

> Participant ID 35 I did try Champix at once point, and it worked very, very well. I just, actually not covered on my benefits, so it was costing me more. So I just was like, "Probably put too much money into this, just quit.

Thinking about how an approach would fit within their day-to-day activities, emerging adults engaged in imaginative but practical thinking about whether an approach would be **personally convenient to access and use**.

The quotes below demonstrate how the same approaches- in this case the patch and the gum- were evaluated differently by participants. The quotes illustrate the idea that "convenience" is a personal consideration or perception, rather than a common or universally accepted view of approaches. A participant who selected the gum over the patch said:

> Participant ID 55 I think it [gum] was just overall a lot easier and more controllable than a nicotine patch.

In contrast, the quote below is from a participant who selected the patch over the gum:

> Participant ID 54 I do know that having the patch was, it made things convenient because you could get around, and you didn't have to always have something in your pocket. You could just put it on once a day and go about your day, and it survived showers, so I could

> go out and swim and stuff like that too because it was last summer that I quit, so not being able to go swimming would have been brutal.
>
> Mainly convenience because of being able to get around for the day and not having to carry a pack of gum that you might forget or have to eat, and then chew the piece of gum afterwards, which those things are gross. So bad. The patch doesn't taste bad at all 'cause it doesn't go anywhere near your mouth.

The remaining quotes show other ways participants considered the **convenience of using approaches** to quitting.

> Participant ID 100 It just fits in your pocket really easy. It's one squirt. You don't have to keep chewing on something. If the patch is bugging you you don't gotta worry about that. Your mind's not gonna be constantly on the patch when you're at work or you're trying to do something.

> Participant ID 33 I think I figured, you know, I would be open to kind of doing a trial and error based on my lifestyle, based on what's best for me. Because I work in an office, that inhaler wouldn't have been a good form of therapy for me. The gum was easy. The patch was also easy because I could wear it overnight. I could shower with it. There wasn't a lot of maintenance with it, I guess.

> Participant ID 54 Mainly convenience because of being able to get around for the day and not having to carry a pack of gum that you might forget or have to eat, and then chew the piece of gum afterwards, which those things are gross. So bad. The patch doesn't taste bad at all 'cause it doesn't go anywhere near your mouth.

> Participant ID 64 It's kind of a mindless kind of approach, where you just throw it on your arm and you don't even think about it, and you hope for all, dear God, it works. It's just super-mindless. I didn't want to have to think about, "Okay, I need a gum right now because I'm having a craving. Or I need to distract myself because I'm having a craving." It's just there. If you have a craving, well, you suffer through it, kind of deal.

While the quotes above refer to the convenience of *using* an approach, the quotes below show participants also considered the **convenience of accessing** an approach.

> Participant ID 19 It was just solely because I was with my sister. She recommended it. I had access to it. She got it for me. I know if I was in Toronto ... because she lives in the States. If I was Toronto, I'd have to pay for it. I would probably choose something cheaper. But because she said, "I'll get it for you. Don't worry. Just try this. It really

worked." Then, that was just my ... the only reason. I didn't even know about it before that….Maybe just the difference this time was just really what I had access to, I think.

Participant ID 26 Accessibility for that one, because you can just go buy it in store. There's lots of stores, lots of online. It comes really quick. Like, I ordered it last week and it came in the mail for that. There's also lots of stores where you can go and choose lots of flavors. So it just suits, I don't know, whatever needs or whatever flavors you want, kind of thing.

Participant ID 54 the patch just seemed like the most [easily] to get.

Participant ID 55 I think just that it was really accessible and free. And just the way I found out about it. It was all just really good timing.

In thinking about an approach and how it would fit into their life, participants also considered the actual **look of an approach, whether it was congruent with their image, how obvious to others it would be, and how others would perceive them when using the approach.**

Participant ID 26 Then there's the little feminine ones, so it's like a little pen, so it's not big and bulky. [inaudible 00:05:15]. Yeah, it's just a quick thing and then I never went back, so it's wonderful.

Participant ID 55He said it was the exact same thing as the NicoDerm, I guess is what it's called, and you could get the clear patches, which our health unit will give out free patches, but they're huge, and they're these big dark beige warts that you're sticking to yourself, so it's kinda ... That definitely would have interfered with my image, if you will, because it was just, stood out like a sore thumb, so you'd be constantly thinking about even though you wouldn't really normally think about something like that, so the clear ones and having that option was kind of nice because it helped me not think about it at the same time too.

Participant ID 02I don't know. For me it look very strange. You open your mouth in public and started spraying. I don't know. I prefer gum. … because it's more natural way to do it in the public. If you opened your mouth and started spraying, people look at you like ... I don't know what to say….For me, I felt much more comfortable with gum instead of spray or anything else. Because I'm self-conscious how I look in public.

> Participant ID 33 Like the patch was easy that I could switch the spots so you wouldn't see it on my shoulder or my back, so nobody would ever know. Yeah, I think even the gym the biggest thing was it was hard, nobody would really know that I'm a smoker. I didn't want to tell anybody because I was ashamed. It's almost like you know you don't work out six days a week and you're a smoker. So everything was easy to, you know, pretend like I'm not a smoker when I'm at the gym as well as when I was trying to quit that all those methods were hidden, because I actually do chew gum when I work out, so it worked out that I had the Nicorette in my mouth if I needed it. Nobody would know what it is. The patch is hidden, but yeah, it encouraged me to quit even more.

> Participant ID 23 I think it's a lot harder to hide the Nicorette gum, than it is to hide just not smoking at all, because at the end of the day if a pack of cigarettes can fall out of your coat then so can a pack of Nicorette, and everyone knows what they're for. Nobody ever casually buys Nicorette just because it feels good, and they like the buzz.

Finally, in terms of envisioning how an approach would fit within their daily living activities, the quote below demonstrates how for some emerging adults a whole host of ideas were used together to create a multifaceted evaluation of how an approach might work within their life:

> Participant ID 02 It's easy accessible. Easy to carry in your pocket. No one notice. It look like regular gum. Less noticeable. I could put it anywhere in my pocket in, my back pocket. Or I could keep it in my table drawer it does not bother me. You don't have to assemble anything. You don't have to turn it off, turn it on, or breath in your mouth, for everybody to see what you're spraying. Gum, you just pop out of a blister, stick it in your mouth and then put it at the back of your cheek and that's it, basically.
> It's easy accessible and with discount coupons it's easy to buy. For me, it's convenience.

Component: Reflecting On Self

Emerging adults spoke about their engagement in self-reflection as an important aspect of their decision-making process when selecting a cessation approach. Using this knowledge, their decision making process had them considering and/or seeking out cessation approaches that they deemed to be analogous with their evaluation of self, choosing methods that they felt 'fit' with 'who I am'. Participants spoke fervently about choosing a cessation approach

that was best for ***them,*** after thoughtfully considering their unique and multi-faceted selves. In this way, choosing an approach for quitting smoking involved considerations of personal identity and how an approach would impact their sense of self now and/or in the future; a combination noted in this quote:

> Participant ID 03And keeping in mind my preferences or my ... what's more feasible to me based on my schedule and my interests, my personality.

The complexity of this particular component within the Personal Reflection phase was deconstructed into four unique but highly related notions: Who I am; Who I Want To Be; What I Need; and What I Believe. These are described, with supporting quotes, below.

Who I am. Emerging adults spoke about self-reflective thinking and how examining their personality, or character traits, played a role in their selection of a cessation approach. They appeared to have a clear idea of who they saw themselves as. They felt confident that the approach they selected was compatible with their self-assessment, or was more suited to them than other approaches might be. The quotes below show how emerging adults selected approaches that matched their own traits.

> Participant ID 16 So I figure like Cold-turkey, I think, takes a lot of strength, like inner strength and I think it's something very, very proud ... like you can feel really proud of yourself….I'm somebody that like when I take a decision, I stick to it and I am a very strong-minded person. So I think for me, you know, I just didn't want ... when I say pride, like when you do quit, I feel like ... I've seen other people quit as well because when I used to smoke, I used to see this a lot where people would as you for a cigarette because they're craving at that moment or you know, they don't have a pack on them because they're trying to quit but they'll have that one or two from you. I feel like I have too much pride to ask for that. And so, I think that's what it is. Like I'm just ... I have a lot of pride and I wouldn't go to the street and ask somebody random for an extra smoke or like my friends and stuff like that because that would make me look really weak.And I wouldn't want that…Yeah, so I do think it is part of character to go Cold-turkey.

> Participant ID 55I think it was definitely cool that it was also a competition. I have a little contest, not really a competition, but a contest. I think I'm definitely a little bit

competitive. So, that was kind of like, oh. I quit smoking and I have a chance to win something? That's pretty cool.

Participant ID 23 I'm a very, I guess, instant person. I'm not necessarily dependent on instant gratification, per se, but when I want to get something done, I want to get it done right away. If the dishes need to be taken out, when I realize they do, I'll take them out. When I need to clean the kitchen, when I realize that needs to be done, I do it right away, I don't like leaving things to be done later, or doing things slowly, or anything like that.

Participant ID 26...I can't ever stop anything cold turkey, so that doesn't really work for me. But seeing like it is slowly getting off of it, like the same way. [inaudible 00:07:34] or whatever, like in the same habit kind of thing and it's okay…You think, because people would be like, if you just put your mind to it you'd stop. I can't commit to anything like that, so I know that's not just gonna work…I've never stopped something just off right out of the bat. For example, if you want to stop talking to a friend or something. The, oh, I'm busy blah, blah, blah. Like, cancel plans a little bit here and there and then stop. But I can't just be like, nope, I don't ever want to see you again. I can't do that.

Participant ID 09 I think it just comes back to the way I think as a person. I just was practical on what actually makes logical sense for me. So I just thought, I know who I am and I know if I took it as I just cut it right in the beginning cold turkey, that wouldn't work. I just looked at alternatives very different from that, that I think would work better.. But, maybe the person I am, I needed to slow down or else I'll miss it too much and [inaudible 00:10:48] ...if I completely cut it out I would just completely miss it and go straight back to my old self.

By applying understanding of themselves to the decision-making process, emerging adults also evaluated effectiveness of approaches for them personally, rather than assuming general efficacy would suffice:

Participant ID 84 I know my body, so I know that I wouldn't be able to cut it out completely. I guess just knowing yourself more and knowing what's right for you. People can tell you, oh, switch to this, switch to this, and you know yourself and you could switch to something for a bit or, I guess, try a different kind of smoke or whatever it is, but usually you're going to go back to your same ways, so I had to look at myself. If someone was to tell me something, I would just think okay, is that something that I would do in the long term? Then if I knew no, that's not, then I just brushed that away.

Participant ID 40 I only want to say that if it helped me, that doesn't necessarily means that it's going to help other population or other population in my age group or with my

interest, with my hobbies. So go see a doctor. Go talk to people. Do different things. Experiment.

Interviewer: So you felt that it worked for you because of-

Participant: My general life, my basic like to its roots. Because as I mentioned at the start, I was always a guy would always put his health, his health and fitness as his priority. So that really motivated me. Second factor being my family, my friends. So yeah, these two were the key, crucial factors in me wanting to quit.

Interviewer: So you considered what would work for you personally. But you're saying you don't think it would necessarily work for other people.

Participant: Yes, because they have their own different life. I don't know how they're living, what job they're doing, what kind of things they eat, what kind of activities they do. So if it worked for me, that doesn't necessarily mean it's going to work for them.

Participant ID 09I don't think that that would be practical for everybody, you have to be a certain kind of personality and certain kind of mind or brain or whatever to make it work. Like anything, everything doesn't work for everyone kind of thing. Yeah.

Who I Want to Be. In addition to considering who they were, and what cessation approaches would fit with personality traits they considered themselves to have, emerging adults considered their future self, and who they wanted to be. They associated cessation approaches with traits they wanted to have, or were pursuing for themselves as part of their evolving identity.

Participant ID 28 It's [Landmark] a program that helps a lot of people transform and get results in their life that they're looking for and get through scenarios of their life that's important for them. Through their program, you create a new person for yourself. You start to see yourself as that person. I created a person who was committed, and so part of that commitment was to quit smoking. I started to see myself as that kind of person. That really I think helped me get through that and see myself as like, "No. I'm a committed person," and how my life could change because of that. I could see the impact and the benefits of it….I kind of see that as I what I want in my future and what I'm aiming to achieve as part of my identity and using the resources around me and seeing the value in the people and the resources around me is very important for sure. I do see that as part of my identity moving forward…

Participant ID 45Because, to be honest with you, people start smoking in general for different reasons. So I thought, okay, well if people start smoking for different reasons, people are gonna quit for different reasons and different ways. Because I know that the pill doesn't always work. The Nicorette gum doesn't always work. And I kind of like

> idolized and sort of admired people that quit cold turkey. Why? It was just when hearing someone say, yeah I quit cold turkey on this day, that's what I did. I was like, wow, that's pretty cool….Before I hated a challenge [crosstalk 00:20:10]. I hated it. But I knew that I needed to do that, for sure. So I guess now, as I'm getting older, I could say that I probably enjoy challenge more. But before, I hated it. I absolutely hated it.

> Participant ID 03 Not competitive or whatever, but it was more of a recreational ... when I have time, once a week or less, I join them, because it's not easy and it's a different type of stress relief but it was a way to challenge myself physically, too, because I never used to be physically active so it was like killing two birds with one stone. It was a pretty good choice for me to make by joining the running club. …I'm working towards, I'd like to work towards that too, gradually. But I'm not at that stage yet. But joining it is a good start to ... it's another goal to work towards and it's an accomplishment, too. So again, it's back to the ... I like to challenge myself. Once I'm not smoking anymore, letting go of that part of my life, I want to take up something new. So I thought, maybe running would be interesting. I want to just start slow first. So this is what I'm doing, just joining once a week and it's physically really tiring but mentally it's invigorating though.

What I Need. Identifying approaches that would meet their own idiosyncratic needs was a salient result of the self-reflection emerging adults engaged in. This thinking showed a vulnerability that participants were willing to exude in order to choose a best-fit cessation approach. This suggested that by focusing on their goal of being smoke-free, participants were able to rid themselves of potentially limiting notions of what they 'should do' or 'should use', or even 'would like to use', and instead select methods to meet their true needs. Admitting to what they needed, even when it was not their preference, indicated a certain maturity that may be a facet of emerging adults' developmental stage and reinforces the notion of a strong focus on their changing selves. The quotes below demonstrate this idea:

> Participant ID 34 I wanted somebody to really support me, and somebody I could talk to, because the first time I quit, the reason why it didn't work was emotionally, I was a mess. So, I didn't recognize myself. I mean, I'm usually a happy person, optimistic, and then I was just like, ugh, ready to bite off some heads, right? Just not myself. So I didn't like that. It was too much of a cost for me, to do that….So, when I started, I thought like, "Okay, I'm going to need some support," and that's why I reached out to my doctor,

saying, "I'm going to need somebody to talk to for that," so that's why they connected me with the Heart Institute, which is our nurse, especially for stopping smoking.

Participant ID 84 I know my body, so I know that I wouldn't be able to cut it out completely. I guess just knowing yourself more and knowing what's right for you. People can tell you, oh, switch to this, switch to this, and you know yourself and you could switch to something for a bit or, I guess, try a different kind of smoke or whatever it is, but usually you're going to go back to your same ways, so I had to look at myself. If someone was to tell me something, I would just think okay, is that something that I would do in the long term? Then if I knew no, that's not, then I just brushed that away.

Participant ID 26 Because it's not cold turkey, I can't ever stop anything cold turkey, so that doesn't really work for me. But seeing like it is slowly getting off of it, like the same way. [inaudible 00:07:34] or whatever, like in the same habit kind of thing and it's okay.

Participant ID 03So I decided, I'm going to do it slowly and I'm not going to get other peers to influence me because everyone's different….when I think deeply about why I chose those things, I realized I see value in them first. Number one, for personality, I mentioned a big one was challenging myself, so that's why I joined the running club, so that was the main one, even though I ... if no one mentioned it to me, if nobody ... I wouldn't have joined it. So it was happenstance. For choice, it's knowing what's best for me. Making a smart decision, I think that's what led me to meeting the counselor for the first time as an explorational experimentation, to see if it works for me. And I found other advantages of seeing the counselor too, to help me solve other related or unrelated problems in my life. Relationship problems or not doing so well in school, or sleep problems. It could have stemmed from smoking or it could have been other reasons….And yeah, preference wise ... maybe preference might be not so important in this case. I think my personality and my values and making decisions on what's better for me. If I had to choose, preference would be to do nothing and if there was some way I could quit smoking without making so much effort or making so many sacrifices.

Participant ID 33 I was really stubborn for a while to say that I was going to do it cold turkey, however, you know you read the stats, and maybe you say a very small percentage of people actually are successful with cold turkey. You know I figured at this point in my life, why stress myself out more trying to do it day to day, and it wasn't worth suffering at work or anything, so I figured at this point I'll just try almost anything, aside from Champix.

Evaluation of their personal needs could also be very practical and involve thinking about their smoking behaviours and routines. Emerging adults considered which approaches might be relevant to what they perceived would be missing when they quit smoking. They considered

what cessation approaches would be compatible with their reasons for smoking (i.e. be a reasonable substitute). They spoke about how they evaluated levels of nicotine in specific nicotine replacement products and thought about appropriate dosing for themselves. Overall, they considered how approaches would meet the needs of their personal smoking and daily living routines. Examples of this type of "needs" thinking are shown in the four quotes below.

> Participant ID 03 Mainly based on the fact that I had to kind of disrupt my routine, because everything that I was doing kind of involved cigarettes. Like, driving around I'd be smoking, you know, everything involving, like, being upright and awake involved smoking cigarettes at some point throughout the day, so essentially I had to kind of disrupt that pattern, and sleeping, and not really doing much at all was kind of the best sort of approach.

> Participant ID 30So the fact that they said there was something and they said it actually would help because I do have mental health issues….So they said it would actually help a little bit with that….So I figured maybe that might be it because to me, it was the chemical balance. It wasn't as much as the holding something in my hand or ... because I know a lot of people say that that's the big thing is the feeling of holding something or of the inhaling. For me, it was the chemical imbalance, I guess.

> Participant ID 85 I quit most successfully by using nicotine patches, for starter. Some people like different types of nicotine replacement therapy, like gum and stuff like that 'cause they can take it when they're having a craving, but I found that if I just put on the patch it's gonna reduce my cravings and it kind of lets me just forget about smoking….Yeah, and it's just more easier to not misuse it, I guess in steps. I mean, if the inhaler ... some people might just ... when they're not even craving them, I just puff on it. I've kind of had that experience and then use it ... use it all up and ... then in the end you're kind of like, "Wow, I should have just smoked." And then that's the thing, too, with those other nicotine replacement therapies, it's kind of like you're literally chewing gum or using an inhaler when you'd like to smoke, so I think eventually, depending on my state of mind, I might just be like, "This is ... this isn't anywhere near as good as smoking. I could really just use a smoke." Then I'd smoke, but with the patch I put it on and I ... and then I'm just kind of doing my own thing changing my, kind of habits. …But yeah, I was mostly thinking of that it's just gonna work for me. I don't think any smoker could just do exactly what I did in the way that I did it and it would work for them.

> Participant ID 02 It's got my nicotine hit what I need when I'm quitting it…The end result, when I chew it and put it in back of my cheek, I feel nicotine buzz getting into my head. I feel like the same way I would be feeling it like if I smoke one or two cigarettes.

What I Believe. Some participants had strong beliefs or value driven interpretations about cessation approaches that either drew them to or turned them away from particular approaches. Whether these beliefs were based on sound, accumulated knowledge, as shown in the first quote, or personally developed, purely value-driven sentiments about various approaches, emerging adults used them to support their decision of a cessation approach.

> Participant ID 33 I had read a little bit about it that Wellbutrin was actually quite frequently used to quit smoking, given the fact that it was, I believe it's more for anxiety and like anti depressants, so I wasn't sure if that would've been something strong enough but I figured basically because it's used for those things, I'm sure it could help possibly with mood, or anger, and withdrawals so it was a little bit more positive than thinking of something like Champix

As shown below, when reflecting on their beliefs about smoking cessation and how to quit, emerging adults recounted personally-formulated beliefs that caused them to impetuously reject some smoking cessation approaches for themselves.

> Participant ID 09 I think the patch and chemicals and pills and whatever, I don't even fully research that part of it. It scares me. Anytime taking antibiotics and something that's not natural. I already have screwed up hormones. PCOS, I don't know if you know what that is….I'm like, every time I took something, it makes me gain 30 pounds. I'm like I'm not doing anything.

> Participant ID 54My sister quit a few years back. She ended up starting up again, but she used the vape thingies, the vape whatever they're called, and I honestly, I despise those things. I don't agree with them. It took them 60 odd years before they figured out all the harmful effects cigarettes and all the things in them if not more, so how long before these unregulated ... You know, you can make them in a buddy's basement next door kind of thing, and then sell hundreds of them. There's so many bad things. They blow up. I just, no. There's still a lot of ... You can't control the actual nicotine. There was a machine that made the patch, and they've been regulated by the people that regulate those things. Somebody's regulating it anyway. That was important. It was a lot safer than the vaporizer things.

Participant ID 23 Because when it comes to numbers you could just kind of makeup whatever you want. I'm sure that companies that sell nicotine replacement products absolutely totally do that, just kind of bend numbers, so I wanted something neutral, but semi reliable to kind of give me at least a general idea of what it might look like, not necessarily the exact.

Participant ID 40 What I mean by that is because in my mind, I thought it was tried and tested that if you reduce the intake…Again, this might be all placebo, who knows? So this was just something that got stuck in my mind and I really wanted to believe in this and I wanted to go along with it. As far as those nicotine gums were concerned, I thought they were a total gimmick. Maybe they helped a little population. It was maybe a placebo, a fake pill or a fake chewing gum that just gave them the thinking that this was going to help them. But I think my general grasp of analyzing or understanding situation is different from other people. So I thought this was just downright gimmick or just a fast move.

Emerging adults' personal beliefs and value-driven interpretations about cessation approaches also played a role in which approaches to smoking cessation they favoured and ultimately chose to use.

Participant ID 12 For the most recent time that I quit I definitely considered the effectiveness because for me the effectiveness rate of cold turkey was one to one.

Interviewer: Right, so you're saying you looked at the effectiveness for you specifically?

Participant: Yeah, for me specifically. I didn't look at it in an aspect of anyone else that I know of that's gone cold turkey because I don't know a lot of people that have gone cold turkey. I know for myself it was 100% success to go cold turkey. So after trying all the other different products and not having the success that I wanted - not that I didn't have any - because it was anywhere between three days to probably a couple of weeks with each of the smoking cessation products before I started up again. But to actually kick the habit, like right now I'm going on seven months without smoking again.

Participant ID 28 I think just the fact that it's there. I think I've heard people who've used it before who said that, "Yeah, I really enjoy what they have to say and how they're there for you, and how they listen." I don't know. I guess I just had ... I mean, it was made to help. I knew it was made to help people quit. Right? There had to be some method to the madness, and it's not just a hoax that people are going to try and call and be like, "Quit." They're there for actually supporting you.

Participant ID 30 But in any case, they said, "Try this pill." And I figured, well maybe if it's ... because it's a different alternative, right? It's something I haven't tried before and I'm a big believer about medications and their effects as opposed to something like

> maybe acupuncture or something like that. So I figured maybe that might be it because to me, it was the chemical balance. It wasn't as much as the holding something in my hand or ... because I know a lot of people say that that's the big thing is the feeling of holding something or of the inhaling. For me, it was the chemical imbalance, I guess.

Phase: Making a Choice

After moving through the Personal Reflection phase (whether exhaustively or more superficially) emerging adults enter the "Making a Choice" phase. At this point, there emerge two different expressions of choice making: committed or uncommitted.

Component: Committed

In some cases emerging adults implement the cessation method they have chosen in a satisfied and committed way. This expression is the outcome that might be expected based on the stereotype that decisions are made intentionally, through careful consideration. This position presupposes that a decisional balance review (i.e. a weighing pf pros and cons) leads to dedicated use of an approach. And that seemed to be the case for some emerging adults in this study. However an additional expression of commitment was also evident in these data. Some emerging adults implemented the method they chose, realized it might not be the best option after all, but remained fully committed to making it work for them. The following quotes show how emerging adults might not be entirely satisfied with the cessation approach they elected to use, but stick with it and make it work despite or while recognizing its flaws or limitations.

> Participant ID 19 I stuck with it because it worked really ... It just took about a week for it to start working, and when it did I noticed a difference. I was able to manage my, I guess, psychological cravings. I didn't have the same effects. I wasn't irritable. I was more calm. It was working. So, once it was working, I was like, "Okay. This actually kind of worked for me." That's why I continued the process.

> Participant ID 30 At the minimum, I was throwing up once or twice a week just due to not having enough food in my stomach usually was the cause or I'd feel very nauseous but in my mind, it was, "Stick to it, keep going, they say it's gonna work so it's gonna

work and if I deter from that, then that's just another failed attempt so I gotta keep going on it."

Participant ID 100 Yeah. I guess it's when I smoke, I like to have the kind of feel it go inside me. I like that rush the smoke gives me. When I take the Mist, it's not very flavorable thing. It's not the greatest thing tasting ever out there, but it gives enough of a burn, I guess, from the Nicorette that kinda counteracted that feeling. Literally in 30 seconds it was just craving gone. It gave me that extra feeling, I think, that I was really missing at that moment.

Component: Uncommitted

Some emerging adults implemented the method they chose, but without full commitment. This seemed to be a reflection of two different mentalities. In the first, emerging adults want to deliberately reflect on whether an approach is working for them and take remedial action (i.e. change to a better option) if necessary. As the quotes below show, the decision making phase could include a period of deliberate "in progress" assessment of the cessation approach selected, apparently with emerging adults remaining open to the option of switching to something else.

Participant ID 55So, I guess I thought about it a little more. But, it was still like will I be smoking either ... If I wasn't chewing this, I'd be smoking. So, it was kind of like, "Okay. As long as I'm actually weening myself down." But, it was difficult to stop at the eight weeks.

Participant ID 02 Before, my brother give me a couple samples from what he got, I don't know from whom he got. But before I fully commit to a gum, he give me a couple samples to try. They send them by mail here. I could try. Before that, one of my friends, he have couple boxes of expired one, but he says it still work. He give it to me because he quit smoking. He says try it. It still work for you, though it was six months past due date, expired date. [inaudible 00:15:38]. I said okay, I try. This how it happens here. If I would not have boxes or samples to try, I don't know if I would get the gum.

Participant ID 03Yeah, that was from one of the resources on the website. It says if you are really ... if you want more personal support go to the health clinic and ask for a counselor or somebody who can help you talk through it or just listen to your fears and worries about the process of quitting smoking. So I thought, I might as well try it. I think it would be good for me. So it was an experiment in the first time going there. I talked to

> them about things that led to me smoking as well, so I found it very helpful in supporting my other aspects of my academic life, too.

> Participant ID 54 I guess it came down to how much pleasure I could still get, through my day-to-day activities. How much of that nicotine buzz I could maintain. So the vape allowed me to maintain close to 100% of what I had when I was using cigarettes, so it wasn't much of a change. Then with the patch and the gum, there was a significant drop-off in how much pleasure I would receive from the nicotine dose, but it was enough to keep me off of vaping or smoking. It pretty much had to do with how good the dose of the nicotine made me feel. And with the patch and the occasional piece of gum, it was enough to stick with it.

Unlike their peers who deliberately reflected on whether an approach was working for them, other emerging adults simply were not fully committed to their selection of an approach. Instead, they are open to switching to something else if the method they have selected does not work fast, effectively, easily etc. The following quotes illustrate that emerging adults were not always fully committed to their decision about which method to use to quit, and were apparently willing to spontaneously switch to another method if the current one seemed inferior.

> Participant ID 33Yeah, and I didn't struggle through any major side effects. I didn't feel bad, so I found once again, don't mess with it if it's working and not making me feel crappy.

> Participant ID 26 It's just working. I haven't wanted to go back. Even the smell of the smoke on others, it's just repulsing now. So, I hope it's working.

Alternate Path: Method Doesn't Matter

A subset of the emerging adults interviewed engaged in a very spontaneous decision-making process when choosing a cessation approach. These emerging adults appeared to make a decision that was nearly void of the considerations outlined within the Personal Reflection phase shown in the centre of this theory diagram. Instead, these participants demonstrated a decision-making process that mainly encompassed awareness of approaches and a shallow decision-

making process that jumped to a choice that seemed uncommitted. Dialogue from these participants conveyed the notion that for them, the method didn't really matter; the choice of an approach was minimally relevant and quite secondary to the decision to simply quit smoking. This seemed to convey the notion that if they had simply come into contact with another approach, it could have been selected just as easily.

The "Method Doesn't Matter" path could be the variability in brain and cognitive development of the emerging adulthood at play. Less thought out, more impulsive decisions represented in this path could be a result of normal and expected differences in neuropsychological development and environmental learning. Alternatively it might be that some individuals were unable to reflect back on their decision-making process or lacked an awareness of engaging in such a process in a way that would allow them to communicate or articulate their thinking process. In either case, the following quotes offer evidence of this element of the theory.

> Participant ID 64 in my mind it's just the end result of quitting. And however you do it, high-five, you did it, kind of deal.
>
> I wasn't left with anything else. I mean, I didn't really do much research into it, because I'm sure there's a bunch of other options. Like that nicotine spray, or any of those things. I didn't really look into it. It came up. It made sense to me at the time. I'm like, "Oh, [inaudible 00:11:07], cool." And started [inaudible 00:11:08] all that stuff.

> Participant ID 09 I got the plan basically pretty fast I would say. I just thought of what ways and then those were the kind of the first 3 things that popped in my and I just said okay, I'll try that.

> Participant ID 30Honestly, I didn't even think about any of that. I just thought like, "This is a pill that could help me quit smoking," like that's bare bones.

> Participant ID 63In terms of choosing which methods, it was just, "I hope something will work," and I just went with what had been the most effective in the past.
>
> It was always just shot in the dark, pretty much. It was random.

Context: Reason for Quitting

An important finding that emerged in this work was that the choice of what cessation approach to use was most often embedded within the context of the powerful or perhaps more valued reasons emerging adults had for quitting smoking. While discussing their cessation approach decision-making process, emerging adults often seemed unable to separate it from their reasons for quitting smoking. This was true even when interview questions and prompts explicitly directed participants' attention to the process of selecting a cessation approach. As might be expected, the reasons emerging adults expressed for quitting varied largely but were thoughtfully considered. Many participants who struggled to articulate their thought process about choosing a cessation approach spoke fervently about their reasons for quitting, demonstrating that the choice of an approach was secondary to their strong desire to quit smoking. Often, the reason for choosing a cessation approach was that it would allow them to successfully quit. The strong desire to be successful prompted the examination and consideration of cessation methods.

While reasons for quitting and selection of a cessation approach are separate considerations, it is notable that at times the reason for *quitting* smoking related in some way to emerging adults' decision making process about a *cessation approach*, as shown in the following quotes. One participant who quit due to cost of smoking reflected on the cost of cessation methods and how those two ideas of reason for quitting and reason for selecting a cost-free cessation approach were entwined:

> Participant ID 23 Exactly, because my primary motivation, most of my quitting experiences has been smoking is just totally unaffordable. I'm in my early 20s, and I don't have, I think I was spending a good $200.00 a month on cigarettes, and that's a lot of money in terms of the income of somebody whose fresh out of school. I just realized it wasn't maintainable….I think a lot of it was cost, honestly, I think I just wanted to not

> have to budget for nicotine any more, because whether it's vapor, patch, or gum, or anything it's still something that you have to think about spending money on, and I don't know, it's not necessarily that I was always strapped because of it, but I just wanted to never have to worry about it again.

For another participant, efficiency in achieving their reason-for-quitting goal influenced their decision making process about the approach they would use.

> Participant ID 16
>
> **Interviewer**: And so, thinking just about the decision to go with Cold-turkey, what do you think were the most important factors that made you decide to use that approach?
>
> **Participant**: That I would be healthier quicker.
>
> **Interviewer:** Okay, so that speed is what you're saying?
>
> **Participant**: Mm-hmm (affirmative).

Illness

It was demonstrated that the circumstance of being ill, and quitting smoking as a result of that, can lead to a unique situation where a quit attempt is void of the decision-making process of choosing a cessation approach. As falling ill is not a controllable factor; quitting by being sick can not be a premeditated decision of an approach to use. Rather, becoming ill and being unable to smoke leads to a quit attempt being foisted on the smoker. In these cases the individual uniquely entered the decision-making model directly into uncommitted, in-progress evaluation and evaluated the 'approach' making the choice to stick with it, only after it was already 'selected' for them.

> Participant ID 11And then in January ... Actually, end of December, I got, like, really sick, and I couldn't smoke for, you know, two weeks or whatever, and I thought, well, okay, I haven't had a cigarette in two weeks, I might as well take this as an opportunity to quit cold turkey, which I did.

Chapter V: Discussion

Despite being a fundamental component of the quitting process smokers undertake, the real-world decision-making process emerging-adult smokers engage in when choosing a cessation approach has largely been unexplored in the cessation literature. Further, the process of choosing a cessation approach represents a potentially modifiable and enhance-able exercise that smokers themselves could benefit from understanding fully, and cessation proponents could focus on in order to offer optimal cessation support for emerging adults during critical years in their smoking trajectory. While preferences and attitudes about cessation approaches have been explored, what previous research lacked was a deep understanding of the actual experience of the decision-making process smokers undertook when choosing their approach to quitting. Consequently, this current study sought to investigate emerging adults' real-world experiences of choosing their approach to quitting in an attempt to identify the steps that occurred in the process, the salient factors that influenced their decision making experience, and the ways in which this decision making process did or did not correspond with the defining features of the theory of emerging adulthood. Moreover, through the application of grounded theory methods, this study aimed to go beyond simple description and instead sought to develop a theory of the decision-making process *successful* quitters engage in when choosing their cessation approach. The selection of the grounded theory method, and the desire to develop a theory that accurately reflected the real-world experience of emerging adult quitters, required the collection and analysis of rich, in-depth data collected from interviews with participants who had recently quit smoking and therefore experienced the process of choosing a cessation method newly.

The theory that emerged from this grounded theory study, the Choosing How to Quit (CHQ) Framework, revealed three phases in emerging adults' decision about the cessation

approach they use to quit smoking: Awareness of Approaches, Personal Reflection and Making a Choice. At the most fundamental level, emerging adults become aware of cessation approaches and, at least rudimentarily, undertake some personal reflection to consider whether the approach "fits" with their life and/or perceptions of themselves. Indeed, for some emerging adults, the process seems to be as simple as this. Generally, though, the process is more complex and, as the theory shows, includes several multi-faceted components that interact and inform one another creating a dynamic decision-making process. In the first phase, Awareness of Approaches, these components are Becoming Aware, Sourcing or Seeking Information and Observing and Learning from Other Quitters. In the second phase, Personal Reflection, the highly-interrelated components are Learning from Past Experiences, Envisioning Approach in Life and Reflecting on Self. In the final phase, Making a Choice, different expressions of choice emerged.

While the CHQ Framework shows distinguishable phases, the way emerging adults moved through this process was not necessarily linear and the time frame that each phase occurred in varied widely for emerging adults. Some described a decision-making process that drew on information collected over many years, whereas others explained a decision-making process that was far more finite in the time that it included. While there is a linear nature to the theory, emerging adults often moved back and forth through the phases and components as the information gleaned and decisions made along the way led to further thought and reflection. To this point, it is interesting to note that as they move through the components, some emerging adults focus on what approaches they do ***not*** want, resulting in a decision making process that works by elimination, while others focus on what they ***do*** want, identifying approaches that meet their requirements.

Lastly, for a select few of the emerging adults in this study, the decision-making process about an approach was actually made *after* the approach was being used. These were cases where illness demanded a smoke-free period, and emerging adults chose to stick with the approach (and quit) when the decision was theirs to make again.

Evidence of Arnett's Defining Features

Arnett's (2000a; 2015) theory of Emerging Adulthood includes five defining-features: 1) identity exploration 2) instability 3) self-focused 4) feeling in-between and 5) possibilities/optimism. Several features of Arnett's theory were embodied within constructs that emerged in the CHQ Framework, though some of the features were more evident than others. Specifically, Arnett's *identity exploration* and having a *self-focused* mentality were clearly manifested within the CHQ Framework. *Instability, feeling in-between* and *possibilities/optimism,* were less obvious, though still present.

Quitting smoking is a significant identity-related change and most emerging adults in this study spoke feverently about their decision and desire to become a person who no longer smoked. They saw their choice of a cessation approach as a component of their path to their new identity. In examining their process of choosing a cessation approach, identity exploration most evidently manifested within the CHQ Framework in the component of 'Reflecting on Self', and was in a slightly more minimal way connected to the component 'Learning from Past Experiences'. When choosing an approach to quitting smoking, emerging adults in this study considered their unique personality traits, individual characteristics, and deeply ingrained personal values and beliefs. They spent time thinking about 'who I am' and spoke about making honest evaluations of themselves, including acknowledging personal limitations. Their introspective thinking explored their thoughts, beliefs, feelings, values and behaviours and

seemed to allow participants to glean unique, thoughtful, and highly pertinent information about themselves that they constructively applied to their decision about a cessation approach. Emerging adults engaged in the ongoing evolution of identity consolidation spoke about ways quitting smoking and the process of choosing a cessation approach offered another avenue for them to explore their identity, make choices and take actions that were reflective of, or would boost, their blossoming sense of self or the self they were aiming to become. Seemingly, by having a deep and realistic understanding of their evolving-selves, including specific aspects of their personality, needs, values and beliefs, emerging adults were able to identify quitting approaches, or aspects of quitting approaches, that they deemed as congruous to their self-evaluation.

Emerging adults also at times spoke about their desires for their *future*-selves. Thinking about the concept of 'who I want to be', they considered personality traits or personas that they admired and wanted to exude. They overlaid this future thinking with their choice of a cessation approach and considered or evaluated approaches that they believed signified or appropriately reflected these personal goals.

Finally, in relation to identity exploration, emerging adults spoke about 'learning from past experiences' (both quitting smoking and changing other behaviours) and examined what these real-world experiences taught them about themselves and their unique needs. This led them to consider how they needed to, and wanted to, approach a quit attempt and the cessation approach that would meet this personally-derived criteria.

Arnett (2000, 2006) notes that emerging adults are engaged in the process of exploring, testing and working to solidify their identity during this formative stage of development. The CHQ Framework seems to show that identity exploration is in fact also embedded within their

decision making process when choosing a cessation approach. What is of course not evident based on this study is whether identity exploration is simply a feature of emerging adulthood that, due to its significance during this life stage, becomes a part of other decisions, or whether separately the decision about a cessation approach (that leads to successful quitting) requires some personal, identify-related exploration. Regardless of the reason, considering their identity and knowing themselves deeply seems to play a role in emerging adults' decision making about a cessation approach. Ultimately their process and choice seems to reflect their learning and understanding of themselves. Kishuk et al. (2004) similarly speculates that emerging adults indicate a preference for cessation programs that are 'coherent with their identity'. Interestingly, according to the CHQ Framework, this appears to be a consideration that emerging adults take into account when faced with the decision-making process of choosing an approach as well. This suggests that when considering the important distinction between preferences (which may be considered a hypothetical choice) and actual choice of a method, consideration of identity remains salient.

Arnett's notion of emerging adults being self-focused was also embodied within the CHQ Framework's components of Reflecting on Self, Learning From Past Experiences, and Envisioning Approach In Life. Arnett notes that emerging adults generally have the freedom for self-exploration as it is a time when they are not beholden to parents and are also likely not entirely entrenched in the adult world that requires they be accountable to spouses and bosses. Indeed, emerging adults in this study spoke about a decision-making process that predominantly focused on themselves and their very personal reasons for choosing cessation approaches. *Their* needs, *their* experiences, *their* personality traits, beliefs and values were front and centre to the decision. They evaluated approaches based on their 'personal compatibility', largely excluding

consideration of the others (significant others, colleagues, friends) that orbited within their lives. Furthermore, even though observations of others was a way some emerging adults became aware of approaches, most indicated that they then considered and evaluated the approaches for themselves with many noting that they understood what did or didn't work for someone else would not necessarily be the same for them. Primarily, their own personal process of elimination or acceptance of methods, based on their views of how the method would work for them, took precedence in their decision-making process over any evaluation or recommendations of others. When they did listen to others they seemed to have a strong sense of who would know them best and this most often meant family members were the ones whose opinions they considered. Furthermore emerging adults in this study did not seem particularly concerned with letting anyone else down if an approach didn't work. They were quitting for their own personal reasons and thus their choice of an approach was based only on their view of how an approach would be successful for them and hardly ever based on evidence-informed effectiveness or efficacy. There was also little to no concern about the way approaches that were used might affect others (side effects, costs to a family, controlling withdrawal symptoms etc.) as these emerging adults seemed to be operating in worlds that centred around themselves.

The defining feature of optimism/possibility identified in Arnett's theory was not identified in the CHQ Framework. Emerging adults engaged in a decision-making process that while self-focused, did not appear to be biased by unrealistic optimism. In fact, this decision-making process seemed to reflect the reality of quitting and relied on honest interpretations of personality traits, past experiences and the ways cessation approaches would function within a real-life setting in order to choose an approach to quitting. It is of course possible that the apparent absence of optimism/possibility in emerging adults' decision-making is an artifact of

speaking only to successful quitters whose experience of actually quitting coloured their reflection with more realistic views. Alternatively this CHQ Framework may demonstrate that putting aside optimism - which might be a fundamental aspect of other areas of an emerging adult's life - might be necessary in order to choose a cessation approach that will lead to successful quitting.

According to Arnett, instability is a defining feature of emerging adulthood. In their decision-making process, emerging adults in this study identify a cessation approach that fits with their current life circumstances and evaluation of themselves and their needs. Reflecting the defining feature of "instability", participants noted how different circumstances such as being in school, being out of work, gaining new employment or making new life decisions affected both their awareness and their evaluation of the accessibility and convenience of approaches. With the potential for instability in their lives, these emerging adults focused on a decision-making process that concentrated on the 'here and now', identifying the approach that would work best for their current life circumstance. This finding is analogous to that noted by Kishuk et al. (2004). Emerging adults in their study shared the importance of a cessation approach or strategy fitting into their demanding daily lives or schedules. Peers played a minimal role in this decision-making process, while family members at times remained more influential to awareness of approaches.

Overall, defining features of emerging adulthood are apparent in the CHQ Framework. As Arnett makes clear in his theory, however, in addition to commonalities, emerging adulthood is marked with incredible diversity. This heterogeneity was clearly evident in this sample of emerging adults as well as they spoke about different life circumstances and experiences that impacted their decision-making process. While attention could have been paid to the many

differences present among this study sample, instead the purpose was to elevate the constructs to the point that commonalities emerged in order to present a theory about the decision-making process among these successful quitters that was reflective of a broader population.

According to Arnett, emerging adults themselves indicate that making independent decisions, accepting responsibility for self, and becoming financially independent are the three criteria they have for reaching adulthood. When considering these criteria it is evident that the CHQ Framework demonstrates the importance emerging adults place on making independent decisions. The theory shows a decision-making process that highlights the internal factors that emerging adults consider, with little focus on external forces. Similarly, the emerging adults in this study seemed to consider this decision making process a decision for themselves - accepting the responsibility of choosing as one that they had to do on their own, rather than relying on using simply what others thought was best. Quitting was a personal responsibility and so was choosing the approach. Any advice from peers or family was paired with deeper self-reflection before a decision was made.

External and Internal Factors Related to Decision-Making

Factors commonly considered to influence preferences for cessation approaches include cost, convenience, accessibility, perceived efficacy, and awareness (Bader, et al., 2007; Curry, Sporer, Pugach, Campbell, & Emery, 2006; Hines, 1996; Silla, Beard, & Shahab, 2014; Staten & Ridner, 2007). Traditionally, these aspects of cessation methods are manipulated by policy makers, tobacco control advocates, and healthcare providers to make a particular approach more appealing and encourage its uptake. The CHQ Framework makes it apparent that although emerging adults may consider many of these factors, they play a more limited role in the decision-making process than might be anticipated. Instead, individual's own internal

assessment- both of these factors and other considerations- appeared more salient in emerging adults' decision-making process. Learning from past experiences, envisioning the approach in their life, and reflecting on self were prominent considerations. External factors such as cost or empirically-document efficacy of the cessation approach had some influence, but were generally intertwined with, or viewed through an internal, self-reflective lens.

For example, it is commonly suggested that the high cost of approaches is prohibitive to wider use of products that could potentially increase success rates among quitters. Consistent with this widespread perception, participants in this study noted that the less expensive cessation approaches were preferable, and free was best. However, as the theory makes clear, cost was just one factor within a constellation of factors that were considered by emerging adults, and the importance that emerging adults placed on cost varied from person to person. For some emerging adults cost was viewed as a significant leading factor in their decision as their ability to purchase various approaches was limited by their available funds. Others mentioned the availability of a free product as a driving force in their decision about what approach they chose. Still others mentioned cost as just one consideration that was combined with other factors leading them to their final choice, with the importance placed on cost varying. In other words, while 'free' was expectedly universally preferable for emerging adults, other factors related to the cessation approach remained under consideration and even at times trumped cost. This suggests that even with wide availability of free products, emerging adults may still choose other approaches based on their own interpretations of other features of the cessation method, as well as qualities represented by theoretical constructs (such as how the method will work in their own life, and whether it "fits" with who they are).

The CHQ Framework revealed other ways in which emerging adults' decisions about a cessation approach are subject to an interplay of both external influences and internal thought processes. Despite research suggesting peers can be a influential in adolescents' and emerging adults' smoking status (Roberts, Nargiso, Gaitonde, Stanton, & Colby, 2015; Windle, Haardörfer, Lloyd, Foster & Berg, 2017; Wetter et al., 2004) and other substance use behaviours (Keyzers, Lee, & Dworkin, 2020), friends' influence in this cessation choice decision-making process was minimal. Observing peers who made quit attempts was one way emerging adults became aware of cessation approaches, however emerging adults did not seem to vigorously seek out or be influenced by peers' opinions when making their own decision about a cessation approach. The same principles applied to directives from health professionals and media. While these external factors played a role in raising awareness of approaches, their influence on the final decision was limited. For this sample of emerging adults, family members played a slightly more prominent role in the decision-making process than peers. Family members contributed to emerging adults' awareness of approaches, either through their own quitting experiences or, through intentional offering of information. Emerging adults viewed parents or siblings as trusted sources who knew them in a close, special way that could be helpful to them when engaging in their Personal Reflection process. In other words, although emerging adults relied on familial sources to contribute meaningful input about what might work best, the more salient process was one of reflecting on themselves.

Below, implications for practice based on the findings presented in the CHQ Framework, are discussed. These implications address additional external and internal factors that emerged as relevant to the decision-making process for this group of emerging adults. Ways to leverage

internal factors are presented offering an alternative to exclusively modifying external factors when working to support or influence choice of an approach.

Implications for Practice and Policy

How to Generate Awareness of Cessation Methods

The CHQ Framework suggests that the process of deciding on a cessation approach begins with the emerging adult becoming aware of cessation approaches. As awareness arises, preliminary consideration and evaluation of approaches occurs. This awareness is gained through observations of and discussion with family, friends, acquaintances and other quitters, as well as through media and health professionals. It includes deliberate seeking of information, and passive reception of information. The variety of sources of information that emerging adults in this study engaged with seems in line with other research. In their study examining health information seeking beahviours (HSIB) among Canadian young adults, Gagné, Ghenadenik, Abel and Frolich (2016) found that 71% of respondents sought out family, 57% a health professional, 56% the internet, 43% a friend and 4% didn't seek out anyone when they had a question about their health. Furthermore 69% of young adults sought out two or more sources.

Researchers have suggested that different sources of health information serve different functions, offering particular information (Dutta-Berghman, 2004) or appeal (ex. tailorability or anonymity) (Ruppel & Rains, 2012) to those seeking the knowledge. In this study, traditional, fact-heavy information sources were not frequently referenced by emerging adults. Rather, they talked about their observations of and dialogues with others, (both quitters and non-smokers; family, friends and others in their social circle). Media and user-created online content also seemed to be more influential and significant than traditional sources for this emerging-adult

population. Perhaps emerging adults feel that these observations and stories more accurately convey the reality of using various approaches.

It may be surprising to discover that emerging adults are attending to the experiences of others. Bandura's Social Cognitive Theory (SCT) suggests that new behaviours are gained from observational learning- especially when the model of the behaviour is perceived as similar to oneself (McAlister et al., 2008). Indeed cessation programs based on the SCT have been noted as effective for young adult populations (Villanti et al. 2020; Abroms & Somins-Morton, 2008). In this study, it was interesting to see that emerging adults did not limit their attention only to desirable or appealing behaviours which they simply adopted themselves. They also used their observations as a motivation to try something else.

While cessation proponents can't directly influence the personal conversations and interactions emerging adult smokers are having in their daily lives, they might consider whether 'story-telling' could be utilized effectively in both clinical settings and in population and policy level approaches. Conveying stories and showing behaviours of real people might be a more enticing and effective to deliver information about cessation approaches to emerging adult smokers. For example, physicians, nurses and counsellors could ask questions and offer simple messaging to patients. These would be aimed to create awareness of cessation approaches by framing discussions in a way that casually explores how *others* have quit; both those the smoker knows themselves as well as others the health professional can share. Similarly, population and policy level approaches could utilize narratives about quitting approaches, sharing these stories through a variety of media sources that are most relevant to emerging-adult smokers. Indeed narrative communication, or story-telling, has been proposed as an exciting and useful tool for

health promotion messaging (Hinyard & Kreuter, 2007; Werle, 2004; Johnson, 2019) and a way for health researchers to improve health equity understanding (Banks, 2011)

When to Offer Information About Cessation Methods. The CHQ Framework suggests that the time frame of gaining awareness of approaches varies significantly among emerging adults, spanning years to much more limited periods of time. This suggests that efforts to discuss, promote, or convey messages about cessation approaches should not be directed solely at those emerging adults who are preparing to quit imminently. This contradicts advice deriving from the Transtheoretical Model of Change (TMC). Introduced by Prochaska, DiClemente & Norocross, 1992) the TMC suggests a stepped approach to behaviour change.

Despite the TMC not speaking specifically to selecting a quitting approach, it is often interpreted that only those individuals in the contemplation or preparation stages of smoking cessation would be open to information related to quitting (Health Canada, 2009), including about cessation approaches. Updated recommendations for general practitioner counselling on smoking cessation also suggest that it is vital for help to be offered in the form of referrals and medication advice "*when a smoker indicates they he or she is ready to stop*…" (West, McNeill & Raw, 2000, p. 994) Canadian guidelines similarly suggest that talking about cessation methods, cold turkey or otherwise, only comes after a patient has indicated >5 (on 10 point scale) on desire to quit and/or confidence to quit (Selby, 2017).

The CHQ Framework posits that in the realm of cessation methods, there might not be a wrong time to talk about, discuss, or explore choices with emerging adults. Similarly to the way we deliver steady cues and implement environmental policies and support aimed to trigger quitting among smokers, the CHQ Framework suggests that we should concurrently be drawing emerging adult smokers' attention to quitting methods and delivering this information broadly to

the population, regardless of individual level differences in readiness to quit. In fact, the data collected from this population of emerging adult smokers suggest that even if they are reluctant to quit, emerging adults may still be engaging in learning about cessation approaches. They may be giving at least minimal consideration of cessation approaches, and banking information that is then retrieved and further evaluated at a later time when the decision to quit has been made. This extended period of observation, learning and evaluation suggests that, in the realm of population level health promotion and policy, the whole population of emerging adult smokers should be the focus of *cessation approach* promotion and messaging. It may be counterproductive to focus efforts exclusively on those emerging adults who are actively seeking the information or making the decision about an approach. Furthermore, in general clinical settings, clinicians should consider the possibility that emerging adult patients may be interested and willing to hear about approaches to quitting regardless of their identified readiness to quit, and perhaps even despite it.

This notion could seem counterintuitive to those in the cessation community who are concerned that clinician initiated discussions about cessation approaches with smokers who are not yet ready to quit would be 'putting the cart before the horse' and could rouse resistance. However, it is pertinent to note that the data from this study population and the subsequent CHQ Framework suggests that in at least some cases, casual discussion about approaches, regardless of a smokers' quitting stage (per the TMC), could be a discussion point emerging adults are willing and interested in engaging in. Conceivably these discussions could both promote future discussions about quitting and, on their own, support emerging adult smokers by creating a greater awareness of approaches to consider during their decision-making process when it does come to fruition.

How to Leverage Emerging Adults' Decision-Making Process

Throughout the interviews for this research, emerging adults described a decision-making process in which they determined a cessation approach that would work best ***for them***. In addition to awareness, this decision-making process also included a phase of self-reflection that further allowed emerging adults to consider approaches and eliminate or select them based on their evaluation of past experiences, their unique personality traits and needs, and a practical examination of how an approach would work within their life, specifically. Ultimately, each phase in this proposed theory contains multiple constructs that represent powerful ideas that could be leveraged in cessation promotion and discussion with emerging adult smokers and quitters.

Avoid Paternalism and Purporting a Single "Truth". Importantly, the theory developed here suggests that offering directives (especially paternalistic ones) about "best" approaches will likely not resonate with emerging adults, and could perhaps be detrimental. Simply put, these directives do not account for the many facets and complexity of the internal decision-making process emerging adults (who successfully quit) engaged in when choosing a cessation approach. Giving advice about "most effective" (efficacious) interventions likely won't have the impact we might hope for. Empirical efficacy information was rarely a consideration for these emerging adults. In actual fact, it appears that many emerging adults hold somewhat intrangient beliefs about the effectiveness of certain approaches based on personal judgements, observations and intrinsic value systems. This is contradictory to what Staten & Ridner (2007) found in their study with college students. Those participants, which included former smokers, struggling to quit smokers, and smokers not interested in quitting, indicated that a smoking cessation program aimed at college students should include information about the success of

different cessation methods in order to support educated decision-making about an approach. In another study that examined younger adults' preferences for text-based smoking cessation messages, facts about smoking were seen as a desirable inclusion in the program, though facts about cessation *methods* were not specifically noted (Bock, Heron, Jennings, Magee & Morrow, 2012). However it is important to note that these studies provided information about preferences, which are hypothetical. Data from participants in this study suggest that preferences for efficacy data may not match the factors that are actually considered when the decision-making process is occurring in real life.

Intriguingly, emerging adults often spoke about experiences and observations that were effectively the 'same', but brought them to opposing conclusions about the cessation approaches they would or would not use. In other words, the same pieces of 'information' or observations were interpreted differently by individuals and ultimately led to different outcomes based on the personal and self-reflective evaluation that the emerging adults engaged in. Ultimately, heeding advice for healthcare professionals to tailor NRT or pharmacotherapy to patient preferences or needs (West, 2000; Selby 2017) seems most relevant to emerging adults, and the CHQ Framework suggests that this recommendation could extend beyond pharmacotherapy to cessation methods in general (including cold turkey). How this might be explored with emerging adults is discussed below.

Allow For Self-Exploration and Personal Evaluation. Generally, we try to change notions emerging adults may have about cessation approaches by offering simple, formulaic or what are believed to be widely supported descriptions or 'truths' of cessation approaches. The CHQ Framework suggests that efforts should be made to encourage and support emerging adults to engage in self-exploration and a personally-centred evaluation of approaches, regardless of

empirical backing or traditional evaluations of the methods. Certainly, some truths are accepted. For example, weighing the cost of an approach was fairly consistently interpreted by emerging adults (Ex. they agree to truths such as the patch costs more than cold-turkey). On the other hand, the constructs in the theory illuminated the understanding that many ideas and views about cessation approaches that are considered when choosing a cessation approach are personally construed. Interpretations, meanings and the value of characteristics of approaches (such as the pros and cons of an approach or whether an approach will be convenient, socially-acceptable, personally-desirable etc.) are simply not as universally accepted as we may believe or expect them to be, and are in fact more subjective. Given this understanding, supporting emerging adult quitters to simply explore their own evaluations and interpretations of approaches may be the more productive approach.

The constructs that emerged in both the awareness and personal-reflection phases of the CHQ Framework include observations, learning from past experiences, envisioning the approach in life and reflecting on self. These constructs cover both practical and abstract thinking as well as emotional and subjective aspects of the decision-making process. Our current medical or cessation specific support for quitters does not seem to sufficiently exploit these constructs. This oversight is perhaps important to rectify given individuals appeared to engage in all these processes- even if they did so minimally, in a different order and with different intensity. At both the clinical and population level, practitioners and cessation supporters need to move away from directives and find ways to describe approaches without imposing evaluations on them. Simultaneously, they must find a way to create attractive ways to engage emerging adult smokers in this personal reflection. It will also be critical to encourage emerging adults to draw upon and consider their previous observations and experiences in relevant and meaningful ways

that can inform and support their decision making process. This can be done by encouraging reflection on past quits. Importantly, emerging adults might also be supported to consider other relevant personal experiences beyond previous quitting attempts.

Encourage Application of Other Behaviour Change Experiences. The importance of learning from past quit attempt mistakes, and applying this learning to new quit attempts, was a key finding in Wolburg's (2009) study of college students who had successfully quit smoking. The CHQ Framework shows congruence with this idea in relation to smoking cessation-method choice. In the Personal Reflection phase, the component Learning From Past Experiences includes consideration of previous quitting experiences leading to a more realistic understanding of self that can be applied to the cessation method decision-making process. This may be interpreted as a need for emerging adults to experience "trial and error" with cessation methods in order to ultimately achieve success. However, the CHQ Framework suggests that experiences similar to quitting smoking (e.g. changing diet) can also uniquely offer quitters pertinent information that they can use to inform their decision-making process. This notion is particularly noteworthy for cessation purporters attempting to assist first-time quitters, or for emerging adults themselves aiming to make their first quit attempt one that 'sticks'. Prompting this 'other experience' thinking may be thought of as similar to motivational interviewing techniques that encourage practitioners to discuss past experiences and successes in order to bolster self-efficacy for behaviour change (Hall, Gibbie, & Lubman, 2012).

Counselling Questions Supported by This Study. The CHQ Framework suggests cessation supporters and practitioners should work towards becoming a co-solution finder with an emerging adult who is attempting to determine the best cessation approach for them. This requires cessation supporters and practitioners to determine the right questions to prompt for and support each emerging adult's personal decision-making process. They need to assist emerging adults in identifying the connections between their past quitting experiences, how a method might fit into their life, what it means for them, who they are and who they want to be. A myriad of questions could be used, and research and exploration into which questions are best would need to occur. However, for the time being, some suggestions based on this study are presented here.

- ask about observations they have had and stories they have heard from others
- ask not only about past quitting experiences but more generally about other experiences they have had with behaviour change
- encourage specificity about what worked and didn't work with approaches used in the past, what they believe they need this time, and what their concerns are for this particular quit
- ask them to describe themselves, their personality, beliefs and values and help them make attempts to link this to cessation approach characteristics
- engage in a visual exercise that plots out daily or weekly routines so that envisioning an approach in their life can be as accurate as possible
- Prompt for future thinking, what they want for themselves, who they want to be, and how that would relate to their approach to quitting.

The CHQ Framework indicates that, just as gaining awareness of approaches can occur for some emerging adults over a lengthy period of time, the self-reflection stage of this decision making process can also be protracted. Therefore, cessation counselling that supports reflective thinking and aims to deepen smoker's personal understanding of past experiences, relevant personal characteristics and ways an approach would fit into their life, should likely be encouraged and pursued on numerous occasions in a smokers' trajectory toward quitting. This is inline with Canadian clinical practice guidelines which strongly support multiple cessation counselling sessions for general patient populations in order to support prolonged abstinence (CAN-ADAPTT, 2011; Lancaster & Stead, 2017). Multiple discussions about cessation methods have the potential to support emerging adults to engage in this decision-making process more fully when the time arises.

How to Support Access to Cessation-Methods

The CHQ Framework shows uniquely individual interpretations of cessation approaches, a highly personalized decision making process. In this way, it supports the "no wrong door" strategy to smoking cessation promotion whereby policies and models of service provision allow any smoker the opportunity to access *any* intervention they desire based on their own interpretation of what's convenient, cost-effective, socially-acceptable, personally-desirable, etc. In addition to being supportive to smokers, the "no wrong door" approach is generally considered to be a fiscally responsible funding model. It allows individual smokers to access an approach they find acceptable, and thus are more likely to use as directed, increasing the odds of quitting. The CHQ Framework suggests that successful "no wrong door" approach can conceivably be achieved, and be fiscally optimized, by supporting emerging adults to think more carefully about what approach they want to use by employing decision-making strategies

suggested in this theory aimed to consider personal "fit", while simultaneously pointing them toward cessation approaches that other empirical research strongly supports.

Taking Into Account the Context of the Decision-Making Process

Lastly, this theory adds weight to the value of cessation support that brings reasons for quitting to the forefront of discussion. The practical communication method of Motivational Interviewing, which works to enhance motivation to change by eliciting pro-change talk (Miller & Rollnick, 2009) may support this. Emerging adults in this study had powerful reasons for quitting that at times influenced their decision-making process about a cessation approach (e.g., expediency, cost of smoking). It was sometimes difficult (for the emerging adult and the researcher) to separate their reason for quitting from the decision about which approach to use. In other words, the decision *to* quit, and the decision about *how to quit,* were intertwined as two important, simultaneous, thinking processes emerging adults were engaging with during the time of preparing to quit. It may be important for practitioners to acknowledge that the decision about a quitting approach is deeply embedded within the reason to quit. For example, choosing an approach based on speed was important to an emerging adult who was quitting due to a family member's health diagnosis. Ultimately, the CHQ Framework shows emerging adults' decision-making process could lead them to favour methods that they feel align with their reasons for quitting, regardless of features a practitioner may see as more or less desirable.

Taking Into Account Brain and Cognitive Developmental

The CHQ Framework includes the alternate pathway "Method Doesn't Matter" which represents a more superficial decision-making process some emerging adults engaged in. The reason for this variation remains unclear. It could be that some individuals are unable to reflect on their decision-making process in a way that allows them to communicate their cognitions.

They simply lack the ability to clearly articulate their thinking. Alternatively, this pathway could represent expected and normal differences in brain and cognitive development that exist in this age demographic (King & Kitchener, 2015; Taber-Thomas & Pérez-Edgar, 2014). This could be further influenced by sex (male/female) given research that suggests that males have a slower neurocognitive maturation rate than females (Brenhouse & Anderson, 2011). Emerging adults who experienced this less-considered or indeterminate thought process to choosing a cessation method could lack the neuropsychological capacity to make more reasoned decisions. Fewer experiences or opportunities for environmental learning that could support their decision-making may also play a role in their ability to make more reasoned decisions.

Importantly though, emerging adults in this sample had successfully quit smoking. This suggests that even 'shallow' involvement in decision-making can lead to selection of a method for successful quitting. With this in mind, health practitioners and cessation counsellors would be wise to acknowledge variations in brain and cognitive development within the emerging adult population while accepting that both well-considered and less-considered decision-making processes may be precursors to successful quitting. Supporting emerging adults who make more impulsive decisions may not only lead to success, but may also preserve a positive patient-clinician relationship. This may be important for future interactions if support in making the more reasoned selection of an approach as outlined in the CHQ Framework, becomes needed or desired.

Implications for Research

This study is a first foray into the topic of the decision-making process that emerging adults engage in when choosing a cessation approach. It offers a preliminary theory that describes this process and highlights the internal and external factors that influence emerging

adults' decision-making regarding a cessation approach. Future research, with both the general and sub-populations of emerging adults, could provide further depth and breadth to the many constructs proposed in this theory and determine the replicability of the results. Considering and testing whether specific constructs are more strongly supported than others, or associated with successful, long-term quitting, would allow health professionals or emerging adults themselves to have a more focused approach when communicating about or making the decision about a cessation approach.

Further research could also be conducted to test the generalizability of the theory to the general emerging adult population, as well as the applicability of the theory to other sub-groups of emerging adults, particularly those with high smoking prevalence (e.g., workers in manufacturing and utilities or individuals who identify as Indigenous) (PHO, 2019). This research would be important given the greater burden of disease these populations might experience, as well as the limited funding that is a reality of the cessation support system. If it is found that the decision-making process is somehow different for these high-risk groups, research knowledge could be used to modify programs or information targeting these priority populations to provide optimal care.

Research that pays particular attention to developmental stages of emerging adulthood (as defined by Arnett) and the connections that developmental stage has with the constructs in the CHQ Framework theory would likely be warranted and beneficial. Sampling emerging adults at different ages or stages within the developmental period (i.e. closer to adolescence; closer to young adulthood) may reveal nuances in the constructs comprising the CHQ Framework. This research may offer insight into how to fine-tune support offered to easily accessible, large

populations of emerging adults, such as those exiting high-school and entering post-secondary institutions.

Research exploration into whether the decision-making process represented in the CHQ Framework leads to long-term quitting success is justified. Health decisions made in the period of emerging adulthood can have long term implications for physical and emotional functioning later in life. Research shows that chronic health conditions experienced in emerging adulthood can impede successful transition to adult roles in work, success in school and independent living (Wood, et.al., 2018). Understanding emerging adults decision-making process around a health issue as serious as tobacco use contributes to broader understanding of health in emerging adulthood.

Finally, specific examination of whether smokers who follow the "Method Doesn't Matter" pathway are equally likely to experience long-term success would lend insight into the need for more pointed and directive instruction to potential quitters making a decision about what cessation approach to use.

Study Limitations

Grounded theory research is dependent on rich and detailed information elicited from participants who have experienced the phenomena or process under investigation. This means that robust theory construction that accurately depicts the process (in this case, how emerging adults choose a cessation approach), is reliant on the participants' ability to articulate their decision-making process to the researcher. Furthermore, qualitative research uses the human researcher as both the data collection and analysis tool. Because of this, the development of a theory that accurately reflects the real-world experiences of participants requires the researcher to effectively, appropriately, and rigorously, draw information from the participants, and

subsequently analyze and present the data. With this research process in mind, a few limitations exist in this particular study.

Through one-on-one interviews with the researcher, participants in this study were asked to reflect on and share their decision-making process when choosing a cessation approach. Because the research sought to explore this process from successful quitters perspective, only those emerging adults who had been smoke-free for a minimum of 30 days were eligible to participate. This stipulation meant that all participants were tasked with recalling their decision-making process from a minimum of one month prior.

In an attempt to address the potential for recall error and support participants in retelling their decision-making process with more accuracy and detail, a 6-month post quit limit was set as counter-balancing inclusion criteria for this study. For the topic under investigation, there is no 'best practice' set for the time participants can or should be able to accurately recall their decision-making process. Six months was decided on as a reasonable timeframe, deemed as not too long from when the decision-making process occurred. Furthermore, the semi-structured interview format used detail oriented questions intended to support accurate recall, while also offering the researcher the freedom to use individually tailored prompts and questions as necessary to support participants in their recollection of the decision-making process. This provided an avenue for the researcher to draw out information that may not otherwise have been captured in traditional quantitative questionnaires, or exclusively structured interviews.

While the strategies noted above were used to support accurate recall, it became evident that participants varied not only in their ability to recall information, but also in their ability to articulate their experience of choosing a cessation approach. It was noted that while some participants were able to speak eloquently about their process of choosing a cessation approach,

others appeared less articulate. In a few cases, participants seemed unable to explain exactly how they came to use particular cessation approaches, despite the pointed questions and prompts. Data from these interviews may be considered 'thin'. However, in this study the decision to retain 'thinner' cases was made based on several rationales.

The first was that I believed that any emerging adult who had experienced the phenomena of choosing a quitting approach and successfully quitting smoking, would have valuable experience to share. While ultimately it would have been easier to rely on rich cases/data, the purpose of this study was to examine a general population of emerging adults. It seemed inevitable that not all of the participants who chose to enroll in the study would offer equally rich explanations of their decision-making process. Some might lack experience with metacognition or self-reflection about the topic; others might have limited ability to articulate their thinking process. I decided to allow the data to reflect this.

The second rationale is that rather than being viewed as 'thin', an alternative explanation might suggest that these participants simply offered a different perspective on the decision-making process of choosing a cessation approach. Charmaz (2006, p 19) notes that rich and sufficient data offer "multiple views of the participants' range of actions." Retaining these cases allowed for additional constructs to be offered based on the assumption that when participants expressed a limited decision-making process, it was not necessarily due to inarticulateness or recall error, but instead was their actual process. Ultimately, the decision to retain all cases led to a theory that includes a decision-making path which suggests that some emerging adults may become very superficially aware of a cessation approach and engage in virtually no self-reflection or contemplation prior to selecting or implementing the approach. Acknowledging the

possibility that this path is in some part an artifact of inarticulateness, further exploration through future research, of this particular decision-making pathway is advised.

Researcher inexperience may be viewed as a limitation in any research but in qualitative research this might be amplified given that the researcher acts as both the data collection and analysis tool. Interviewing participants is a skill that improves with experience, as other well-respected qualitative researchers have noted (Corbin & Strauss, 2008, p. 26-27). Data analysis skills also likely become more refined as a researcher gains more experience. Given that this research study presented new data collection and analysis procedures for me as a researcher, this limitation must be considered. However, while my limited experience can not be disregarded, at the same time it must be acknowledged that the grounded theory study presented here had the advantage of using research methods that allowed for refinement of both the interview and analysis process as the research progressed. For example, by using a semi-structured interview and interviewing participants over an extended period of time, I was able to develop and implement new interview skills. Listening more attentively, adding pauses to provide participants with time to fill in their thoughts, and adding simple prompts to further explore ideas that participants mentioned were some of the strategies employed as interviews progressed. Adding in new questions to further understanding of developing categories was also a luxury provided by the semi-structured interview format that wouldn't have been afforded had a structured interview been used. For example, a question about sticking with cessation methods was added in order to further explore what was deemed as a possible emerging construct.

Furthermore the cyclical nature of the analysis process provided opportunity for review, reexamination, and consultation while allowing necessary changes to be made throughout the

process. Ultimately the theory that is presented here is carefully constructed using proven qualitative research techniques with increasingly greater skills.

Research has noted that there are both advantages and disadvantages to using Skype for qualitative research (Mirick & Wladkowski, 2019; Lo Iacono, 2016; Krouwel, Jolly & Greenfield, 2019). Interviews for this study were exclusively conducted through Skype which meant that a device and reliable internet connection were a requirement of participating. While 94% of Canadians have household internet (Statistics Canada, 2021), this requirement still may have prevented participation for some interested emerging adults, such as those living in communities with unreliable internet service, or those who did not have in-home internet or personal devices due to financial or other constraints. While internet (including wireless) and computer access is widely available in public settings such as libraries; concerns related to convenience, transportation, and privacy in a public place may have prevented emerging adults from using these available options. However, the alternative should also be considered in relation to access. By allowing emerging adults to participate in interviews online, this study opened up participation to any emerging adult in the province of Ontario, not just those within a restricted geographical distance to the researcher. Furthermore, it offered what may be considered by many to be an easy, flexible, and convenient way to participate in research.

For those who did enroll in the study, using only video calls rather than in-person interviews may have limited the rapport I was able to build with participants. Rapport is critical in qualitative research as it helps build comfort between participant and researcher, which can in turn support and encourage sharing of the personal experience being explored for the study. While I was able to see participants through video, and they were able to see me, it is not the same as being together in a room. Some participants might have felt more comfortable being in a

setting of their choice for the interview, supporting them in sharing their stories. However for others, using unfamiliar technology, speaking through video-call, or dealing with technological issues which occurred during some interviews, may have made them less comfortable, which might have limited what they shared, or the time they were willing to commit to the interview.

Finally, it is important to recognize that this CHQ Framework purportedly shows the decision-making process that successful quitters engaged in. To support this purpose, quitting was defined as being smoke-free for 30-days, a standard measure in smoking cessation literature (Ontario Tobacco Research Unit (OTRU), 2018). However, it is possible that the data used for theory creation includes interviews from quitters who at a later date returned to smoking. In considering this, it is acknowledged that the cessation method decision-making process could be different than what is presented here for those who quit and remain smoke-free for longer or indefinitely.

Study Strengths

Using the grounded theory method and principles for data collection and analysis, this study proposes a theory that offers an in-depth explanation of the decision-making process emerging adults engage in when choosing a smoking cessation approach. The CHQ Framework shows critical constructs that emerged, as well as the connections between the constructs, as has been explained and explored throughout this thesis document. This newly proposed theory fills a genuine gap in our understanding of how emerging adult smokers, who successfully quit, select a quitting approach. Furthermore, the CHQ Framework is notedly derived from (i.e. grounded in) participants' actual experiences of the decision-making process, a great strength of this study.

The grounded theory method requires the researcher to rely on the detailed evidence gathered from participants' observations of an experience in order to build a theory, rather than

testing researcher derived hypotheses or presuppositions. This, in conjunction with the constant comparative method of data analysis and theory creation, allowed for the building and refining of the CHQ Framework as research progressed. In this particular study that meant that the grounded theory approach offered the opportunity for the researcher to explore an important topic in tobacco cessation research that, to this point, had seemingly eluded other research approaches. While previous studies had explored preferences of cessation approaches, documented research demonstrated that intentions did not always align with actual choice of cessation approach made in the 'real world' setting (Hughes et al., 2009). Furthermore it was previously noted that cessation experts' thoughts about what characteristics, situations or driving forces would lead quitters to certain cessation approaches, including cost, availability, or awareness of approaches, did not seem to be accurate in predicting use (Hughes et al., 2009). The grounded theory approach allowed for the building of a theory that shed light on some of the differences between preferences and actual choice in relation to how emerging adults choose a cessation approach, specifically one that led to a successful quit attempt. It also allowed for a more nuanced and exploratory look into the decision making process that emerging adults engaged in. In doing so it brought to light not only patterns and common constructs among participants, but also contradictions that exist among emerging adults in the real world setting. These common themes as well as contradictions among participants provide a rich and detailed exploration of the decision-making process and provide a number of constructs that could be used to assist both cessation practitioners, and smokers themselves, when discussing or considering the decision about which cessation approach to use.

The research design used for this study purposefully drew from a sample of emerging adults with varied demographic characteristics in an attempt to capture the broad spectrum of

emerging adulthood. The heterogeneity of the participants' characteristics including their age, life experiences, smoking histories, and the diversity of cessation methods chosen, offered a wide scope of decision-making processes to be examined and gave the data the richness needed to explore the factors and processes emerging adults engaged in. The CHQ Framework presented here is a refinement of those processes, showing common themes and constructs that were found, ultimately presenting a "big picture" theory of how this diverse emerging adult population chooses a cessation approach. While there is value in understanding subgroups of populations in order to tailor health strategies, population health initiatives can also benefit from and utilize knowledge of the commonalities population members share. Given this, the broad sample population used here might prove to be useful to practitioners and smokers who may be more likely to 'see' their clinical population or themselves reflected in this sample.

Conclusion

This study used a grounded-theory approach to examine the decision-making process emerging-adults engaged in when choosing a smoking-cessation approach. A new preliminary theory, the Choosing How to Quit Framework, has been presented. It provides a conceptualization of three phases found in this decision-making process: Awareness of Approaches, Personal Reflection and Making a Choice. The CHQ Framework explains how successful emerging-adult quitters choose a quitting approach by drawing on a variety of sources for information and exploring important personal facets including their past experiences, real-life daily-living considerations and an understanding of their present and future-selves. Finally the CHQ Framework shows how choice of an approach can vary and be expressed in a committed or uncommitted fashion.

Decades long, multifaceted tobacco control strategies have markedly reduced the rates of cigarette smoking, but emerging adults continue to be the cohort with the highest rate of tobacco use. The CHQ Framework is offered in this context, recognizing that emerging-adulthood is a unique developmental phase with distinctive characteristics that deserve consideration. Aligned with some key postulates of Arnett's theory of emerging adulthood, the CHQ Framework reveals that emerging adults' decisions are shaped by their self-focus, identity exploration, and feelings or experiences of instability. Ultimately the CHQ Framework draws attention to the importance emerging adults place on making an independent and personally-reflective decision making.

The CHQ Framework provides an important view of an aspect of the quitting process that has, to date, not been thoroughly investigated. This new understanding of emerging-adults decision-making process offers ideas for cessation proponents and health professionals. Data that arose from these interviews with emerging adults suggest that awareness of approaches comes from multiple sources and consists of 'data' collected over varied time-frames, including lengthy periods. This result leads to the recommendation that information about cessation approaches should not be narrowly publicized and targeted to only those smokers intent on quitting imminently, but instead should encompass multiple avenues and points of time and contact that emerging adults have. Furthermore, providing narratives about cessation approaches may be an appealing way to reach this demographic.

Traditional notions about cessation approach uptake suggest a focus on wide promotion and dissemination of free or cost conscious, efficacious cessation approaches. While ease of access, cost and efficacy convenience were found to be pertinent, these aspects of cessation methods were evaluated in a more personal rather than generalized way that was highly-interconnected with other personal examinations including relevance to identity, values, and

future-self thinking. This suggests that discussions around cessation methods should prompt or allow for a self-focused approach to decision-making. Recognizing that methods will not be universally viewed in any particular way and instead will be, or should be, considered and examined with a much more personal lens is an important finding presented in this CHQ Framework that deserves consideration from cessation practitioners.

Lastly the CHQ Framework notes that impulsive or shallow decision-making can lead to success in quitting. While promoting detailed inward, self-focused thinking is one recommendation that can come from this theory, accepting and supporting less thought out, perhaps developmentally appropriate, decision-making about cessation approach choice may be another. In other words, it may be important to accept developmental limitations that can play a role in decision-making in the emerging adult population, rather than attempting to modify them. As a preliminary theory, the CHQ Framework requires further investigation, including into which components may be most essential to the decision-making process.

The CHQ Framework provides a first glimpse at a largely unexplored avenue of the smoking cessation process for a demographic of smokers who should remain a focus for cessation experts. As a whole the theory offers emerging-adult smokers themselves, as well as those supporting them with their cessation efforts, new realistic avenues to consider or explore when making the decision about a cessation approach, potentially leading to a greater likelihood of success.

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Appendix A

Recruitment Email

Email Subject: Research Volunteers Needed: Recently quit smoking? We want to hear about it!

There are lots of ways to quit smoking (ex. cold-turkey, the patch, gum, cutting back, support from a friend, stop-smoking meds…whatever!) If you've recently quit, researchers from Brock University want to know how you picked *your* quitting approach.

What do you have to do? Complete a screening form and 2 min online questionnaire right now, and a 30-60 min Skype interview on your own schedule

What do you get? Eligible participants will receive a $50 gift card for participation in this study

If you're an 18-29 year-old Ontario resident who recently quit smoking, click here to learn more about the study and to see if you're eligible to participate. We want to hear your story!

CLICK HERE

If you have any questions or concerns about the study you can contact the researchers Dr. Kelli-an Lawrance [905-688-5550 x4288, klawrance@brocku.ca] or Meagan Barkans [mbarkans@brocku.ca]. This study has been reviewed by and received clearance from Brock University Research Ethics Board (REB #17-333). If you have questions related to your rights as a research participant you can contact the Brock University Research Ethics Officer [905-688-5550 x. 3035]

Principal Investigator:
Dr. Kelli-an Lawrance
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Department of Health Sciences
Brock University
905-688-5550 (x4288)
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Student Investigator:
Meagan Barkans
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On first email only:

***Please note**: You will receive a single reminder email about this study in 5 days. If you do not wish to receive this reminder email, please send an email to mbarkans@brocku.ca asking to be removed from the mailing list.*

Appendix B

Landing Page and Consent Form

We want to hear about how you decided what approach to take when you quit smoking!

There are lots of ways to quit smoking (ex. cold-turkey, the patch, gum, cutting back, support from a friend, stop-smoking meds…whatever!) If you've recently quit, you're invited to participate in a study exploring how young adults choose their quitting approach.

If you meet eligibility requirements (shown on the next screen), fill in a 2 min online questionnaire, and participate in a 30-60 min Skype interview, you will receive a $50 gift card as our thanks for your participation.

Scroll down to read the information about the research study, then click <AGREE> if you want to take part. The eligibility questions will automatically appear. If you are eligible, you can then complete the 2 min online questionnaire and schedule your Skype interview.

Information about the Study

Participation in this study is voluntary. Refusal to participate will involve no penalty or loss of benefits to which you are entitled.

Step 1: complete the online screening form right now

If your answers to the screening form show you are not eligible to participate in the study, you will still have a chance to receive a $50 gift card to a retailer of your choice. Simply provide your name and email address when prompted to do so, and you'll be entered into a draw. (Information below explains how your privacy will be protected).

If your answers to the online screening form show you are eligible to participate, the study will continue as described below. You can leave the study at any time, for any reason, with no negative impact of any sort. If you complete the study, you will automatically receive a $50 gift card to a retailer of your choice (Amazon, Best Buy or Ultimate Dining).

Step 2: Join the study

As an eligible participant, you'll be asked to do 3 things:
(1) answer a 2 min online questionnaire about yourself right now
(2) provide your name and email address (so the researcher can contact you to schedule an interview, provide your gift card, follow-up after the interview if necessary and send you study results)
(3) complete a 30-60 min, audio-recorded, Skype video interview at a time convenient to you

About the gift card. Please note: it is possible that not everyone who signs up for an interview will be scheduled for one (It all depends on how many people sign up for the study, the diversity of the sample, and what areas need to be explored further). Individuals who are not scheduled to complete the interview will still be entered into a draw for a $50 gift card. Individuals who are selected for an interview, but choose to skip or withdraw from it, are also entered into the draw. Individuals who complete their scheduled interview automatically receive the $50 gift card to a retailer of their choice.

About your privacy. Both during and after the study, your name and email address will be kept totally confidential. Your name and contact information will never be used for anything except this research.

About the 2 min questionnaire and 30-60 min Skype interview. You can complete the 2 min online questionnaire right after you do the screening form. Simply click <AGREE>, then follow the instructions.

After submitting your completed questionnaire, fill in the request for your name and email address. The researcher will use that to contact you to set up a time for the Skype interview. You can expect to be contacted within 2 weeks of submitting your questionnaire.

The Skype interview will take 30-60 min and can take place wherever you want, as long as it's favourable to an online, video Skype call. To start the interview you will click a link to a personal Skype conversation sent to your email by the researcher. You have two options for doing so:

1. Using a computer/laptop with an Internet connection and camera: Open the conversation link directly in your web browser. Participate in the video call right from the browser without downloading Skype or anything else to your computer.

   OR

2. Using the Skype app on your phone (with an internet connection and camera): Before the interview, download the Skype app to your phone. To begin the interview, open the conversation link sent to your email by the researcher. Follow to open the link through your app. Begin the call once you are connected to the conversation.

Step 3: Claim your gift card

At the end of the interview, the researcher will take steps to ensure you receive the $50 gift card of your choice.

Other stuff you need to know

Data collection and storage. The screening form and online questionnaire are built on a digital platform called Qualtrics. ~~Qualtrics is housed on a US server and is subject to Homeland Security or the Patriot Act in the United States~~. After being downloaded from Qualtrics to the researchers, your data will be purged from the Qualtrics servers and your answers will be saved to the researcher's password protected computer and an external hard drive that will be stored in a locked cabinet. The data will be securely maintained for up to 10 years following the publication of the study.

The video Skype interview will be audio recorded by the researcher using a portable audio recording device. Video will not be record. Immediately following the interview the audio recording will be transferred to the researcher's password protected computer and an external hard drive that will be stored in a locked cabinet. The recording on the portable device will be purged. Interviews will be transcribed into written documents. These written documents will also be stored on the researcher's password protected computer and an external hard drive which will be stored in a locked cabinet for up to 10 years following the publication of the study.

Security and privacy. During online data collection and transmission, all databases are encrypted and protected with numerous security features. Once they arrive at the researcher's computer they will be securely maintained for up to 10 years following the publication of the study, under strict password protection.

By using Skype, you are agreeing to Microsoft's privacy statement.[1] Because the Skype interviews will include video, and will be audio-recorded by the researcher, they will not be anonymous. Audio-recordings will be held confidentially on the researcher's password-protected computer and a password protected USB drive in the possession of the researcher. Access to the data will be restricted to members of the research team. Transcribers are bound by a confidentiality agreement and never retain the data in any form. A pseudonym (not your name) will be used in reporting of data so your confidentiality is maintained.

Benefits or risks of participating. Participating in the study lets you to talk about your quitting journey and your successful quit. Sharing this information might help remind you about your reasons for staying smoke-free and make you feel good about your success so far. The information that you provide will also give researchers and health professionals important feedback about how young adults make decisions about quitting approaches. This

[1] Note to reviewers: https://privacy.microsoft.com/en-ca/privacystatement
https://support.skype.com/en/faq/FA31/does-skype-use-encryption?q=are+calls+encrypted%3F

information may be used to help other young adults who are trying to decide how to quit smoking. You will be emailed your own summary of the results.

If you struggled to quit (or are still struggling), or experienced difficult situations when deciding how to quit, it is possible that talking about your experience may cause you some discomfort. If this happens you can let the researcher know. Talking to a health professional or calling Smokers' Helpline [1-877-513-5333] can help you feel better. You can also check out www.leavethepackbehind.org for quitting support specifically for young adults. There are no physical risks associated with participation in this research.

Release of results. The researcher team (including faculty members and students they directly mentor) will analyze participants' answers to the online questionnaire and interview questions. They will summarize the data and report results in academic documents, professional and scholarly journals, and conferences. Direct quotes may be used in reporting but your name will never be associated with the quotes.

Leaving the study. You can stop being in the study for any reason with no penalty. To withdraw now, click <DECLINE>. To withdraw from the study after the questionnaire, send an email to the researcher mbarkans@brocku.ca stating your name and your desire to withdraw. Your questionnaire data will be deleted from the database and the researchers will permanently erase your email request. During the interview you can skip any question or stop the interview at any time by letting the researcher know. After the interview has taken place you have 24 hours to withdraw your data. This timeframe is in place because this type of research requires the researcher to begin data analysis right away in order to make decisions about future interviews and inform participant selection. When data analysis begins immediately after your interview, your data right away become inextricably embedded in results. To withdraw after the interview send an email to the researcher mbarkans@brocku.ca stating your name and your desire to withdraw. Your audio recording and transcript will be destroyed as well as your questionnaire data. Your email will be permanently erased.

Study oversight. The researchers leading this study are Dr. Kelli-an Lawrance (Brock University) and Meagan Barkans (Brock University). The study has been reviewed by and received clearance from the Brock University Research Ethics Board (REF #17-333).

If you have any questions or concerns about the study you can contact the researchers Dr. Kelli-an Lawrance [905-688-5550 x4288, klawrance@brocku.ca] or Meagan Barkans [mbarkans@brocku.ca]. This study has been reviewed by and received clearance from Brock University Research Ethics Board (REB #17-333). If you have questions related to your rights as a research participant you can contact the Brock University Research Ethics Officer [905-688-5550 x. 3035]

Statement of Consent

I AGREE to participate in the study.	I DECLINE to participate in the study.

NOTE: A print-friendly copy of all this information will appear on the screen when you submit your online questionnaire.

Appendix C

Interview Questions

Hello [NAME]. I'm Meagan! Thank you for joining me today!

To begin the interview the researcher will thank the participant and engage in small talk that will include asking the participant if they are comfortable and if the audio/visual is working satisfactorily. This small talk may include other casual conversation to ensure the participant feels comfortable. From there, the following statements and questions will be expressed:

- I wanted to remind you that this interview is not anonymous and will be audio recorded. I am not recording the video but I am recording our discussion. When results are reported a pseudonym will be used. Is it ok for me to start recording now?

- The interview is expected to take 30-60 min to complete. I will be asking you a number of questions in order to try to understand how you picked *your* approach to quitting. You can choose not to answer any question and you can stop the interview at any time. Are you ok to move forward with the interview?

- Do you have any questions for me at this time? Are you ok to begin?

1. Congratulations on quitting! It's hard to do! To start, can you tell me about your smoking history/experience with smoking and quitting in the past (if applicable)…

2. Tell me about how you quit smoking (most recently)…

3. You chose to quit using [XXX]. Can you tell me about your experience of choosing that quitting approach? How did you make the decision to use that particular quitting approach?

4. What led you to choose that particular quitting approach?

Prompts:

- What were you thinking about?
- What were you feeling?
- What was going on in your life?
- What was different about this decision compared to previous times you have quit *(if applicable)*?
- Were there any people who influenced your choice? Tell me how they influenced you…
- Were there any circumstances, outside influences or personal events that influenced your choice in cessation method? Tell me about how they influenced you…
- What other factors contributed to your choice?
- Did you consider whether the approach fit with your identity/who you are now or who you want to be in the future?
- Did you consider the effectiveness of the approach when making your decision?

5. Why did you decide to stick with this particular approach [question added through theoretical sampling]

6. What do you think were the most important factors related to your decision to choose [X] approach?

Prompt:

- What was most helpful to you when you were trying to decide?

Thank you [NAME]! That is the last of my questions. If I need to clarify something we discussed today I will send you an email, and you can choose whether or not to respond. Other than that, I won't contact you again except to send a summary of the results of the study.

Please keep in mind that you that you have 24 hours to change your mind about being in the study. If you decide you don't want to take part, just email me within the next 24 hours and I will erase the recording of this interview and purge the answers you gave to the online questionnaires. Does that make sense to you?

Finally, before we end the interview, let's wrap up the details for your $X gift card. [The researcher will offer the retailer choices, determine the participant's preference, and ensure the gift card can be emailed to the address on file.]

Appendix D

Example of initial line-by-line coding

Speaker/Memos	Transcript	Line-by-Line Coding
Participant:	But like I said, it was my friend who joined in the first place. It was my ... one of my good friends who I really look up to who joined it and managed to quit smoking based on that. And I said, oh, that seems to be really powerful. And they have a goal, they train towards running a 10K marathon, not a full marathon. But a 10K, which is still ...	Having friend who joined Considering what good friend/someone look up to did; Considering effectiveness of approach for friend Thinking approach was powerful (effective?)
Interviewer:	*A lot.*	

Participant:	I'm working towards, I'd like to work towards that too, gradually. But I'm not at that stage yet. But joining it is a good start to ... it's another goal to work towards and it's an accomplishment, too. So again, it's back to the ... I like to challenge myself. Once I'm not smoking anymore, letting go of that part of my life, I want to take up something new. So I thought, maybe running would be interesting. I want to just start slow first. So this is what I'm doing, just joining once a week and it's physically really tiring but mentally it's invigorating though.	Having a goal to work towards Seeking an accomplishment Challenging self; Thinking about self preferences? Letting go of something/ Replacing with someone new Thinking approach was interesting Wanting to be able to start slow Starting slowly Finding approach tiring; Finding approach mentally invigorating

	Continued	
Participant:	I feel that mental improvement after running for an hour is really helpful to me, and that community, too. Because I've met a few people who joined because of ... either the campaign or they wanted to quit smoking, or other substances. Like some of them were because of alcohol or other drugs. So I found that pretty interesting and supportive community there through the running club.	Feeling mental improvement Finding approach helpful Becoming part of community Meeting new people; Meeting others going through similar experiences Finding it interesting; Feeling supported by community

Interviewer:	*Okay. I think ... we've already talked about the cutting down. So I guess I just have a couple other questions, keeping in mind all of those ways that you quit smoking. Using the counselor and running and support from friends and family and cutting down and the actual contest.* ***Was there anything else that you were thinking about when you chose those particular approaches to quitting?***	
Participant:	I think ... just happenstance or it just so happened that I knew somebody, like a friend, colleague, or my counselor just suggested to me and I took consideration of those suggestions. And	Happenstance; Being exposed to approach (not seeking out); Being told about the approach from friend; Being told about approach from trusted? Source/personal relationship? Considering approaches mentioned by

	keeping in mind my preferences or my ... what's more feasible to me based on my schedule and my interests, my personality.	others Thinking about preferences Considering whether approach is feasible in schedule Considering personal interests Considering personality
Interviewer:	*Can we talk about ... you mentioned your preferences, your interests, and your personality. Can you tell me a little bit more about that?*	

Participant:	Sure. So interests, when I think deeply about why I chose those things, I realized I see value in them first. Number one, for personality, I mentioned a big one was challenging myself, so that's why I joined the running club, so that was the main one, even though I ... if no one mentioned it to me, if nobody ... I wouldn't have joined it. So it was happenstance. For choice, it's knowing what's best for me. Making a smart decision, I think that's what led me to meeting the counselor for the first time as an explorational experimentation, to see if it works for me. And I found	Seeing value in approach Considering personality; Wanting to challenge self Hearing about approach; Accepting recommendation; happenstance Having choices; Knowing self best Making smart decision Exploring approach; experimenting with approach; Seeing if approach works; Finding other advantages to approach (beyond smoking cessation); Solving other problems in life; Solving other problems stemming from smoking

other advantages of seeing the counselor too, to help me solve other related or unrelated problems in my life. Relationship problems or not doing so well in school, or sleep problems. It could have stemmed from smoking or it could have been other reasons.

Appendix E

Initial Focused Codes

Reflecting on Self
Future Self
Who I am
Trusting what is known
Envisioning approach in life
Convenience
Effort Required
Daily Living
Cost
Learning from past experiences
Previous quitting experiences
Changing other behaviours

Observing others
Seeing what works
Seeing what doesn't work
Within the context of future goals
Considering access
Worth a shot
Trusted relationships
Sticking with it
Knowing what you don't want
Becoming aware
Within the context of reasons for quitting

Appendix F

Ethical Clearance

Brock University
Research Ethics Office
Tel: 905-688-5550 ext. 3035
Email: reb@brocku.ca

Social Science Research Ethics Board

Certificate of Ethics Clearance for Human Participant Research

DATE: 3/28/2018

PRINCIPAL INVESTIGATOR: LAWRANCE, Kelli-an - Health Sciences

FILE: 17-333 - LAWRANCE

TYPE: Ph. D. STUDENT: Meagan Barkans
SUPERVISOR: Kelli-an Lawrance

TITLE: Understanding Emerging Adults' Decision-Making Process When Selecting a Smoking Cessation Approach: A Grounded Theory Study

ETHICS CLEARANCE GRANTED

Type of Clearance: NEW Expiry Date: 3/1/2019

The Brock University Social Science Research Ethics Board has reviewed the above named research proposal and considers the procedures, as described by the applicant, to conform to the University's ethical standards and the Tri-Council Policy Statement. Clearance granted from 3/28/2018 to 3/1/2019.

The Tri-Council Policy Statement requires that ongoing research be monitored by, at a minimum, an annual report. Should your project extend beyond the expiry date, you are required to submit a Renewal form before 3/1/2019. Continued clearance is contingent on timely submission of reports.

To comply with the Tri-Council Policy Statement, you must also submit a final report upon completion of your project. All report forms can be found on the Research Ethics web page at http://www.brocku.ca/research/policies-and-forms/research-forms.

In addition, throughout your research, you must report promptly to the REB:

a) Changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
b) All adverse and/or unanticipated experiences or events that may have real or potential unfavourable implications for participants;
c) New information that may adversely affect the safety of the participants or the conduct of the study;
d) Any changes in your source of funding or new funding to a previously unfunded project.

We wish you success with your research.

Approved:

Ann-Marie DiBiase, Chair
Social Science Research Ethics Board

Note: Brock University is accountable for the research carried out in its own jurisdiction or under its auspices and may refuse certain research even though the REB has found it ethically acceptable.

If research participants are in the care of a health facility, at a school, or other institution or community organization, it is the responsibility of the Principal Investigator to ensure that the ethical guidelines and clearance of those facilities or institutions are obtained and filed with the REB prior to the initiation of research at that site.