

The role of social problem-solving in emerging adult healthcare transition

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ABSTRACT

Objective: Transitioning to independent self-management is an observed challenge for emerging adults with chronic medical conditions (CMCs). Strong healthcare management skills are linked with better health-related quality of life (HRQoL). Social problem-solving skills also contribute to HRQoL, but limited research exists on the role of these skills among emerging adults with CMCs. Therefore, the current study examines the potential mediating role of problem-solving abilities between healthcare management skills and HRQoL among emerging adults with CMCs.

Methods: Emerging adults (N = 279; Mean Age=19.37, SD=1.33; 84.9 % Female; 79.2 % White; 26.9 % first generation student) with a CMC completed online measures of demographics, transition readiness, social problem-solving, and HRQoL. A path analysis estimated the direct and indirect effects of transition readiness on HRQoL, with demographic and illness-related covariates (e.g., sex, illness controllability, COVID time).

Results: The overall path analysis was significant ($p < 0.001$) and accounted for 28.0 % of the variance in mental (M=-1.46, SD=1.12) and 20.5 % of the variance in physical HRQoL (M=-0.65, SD=0.96). Transition readiness had a significant indirect effect through dysfunctional problem-solving skills on mental ($\beta=0.07$, SE=0.03, $p = 0.02$) and physical HRQoL ($\beta=0.04$ SE=0.02, $p = 0.04$). Constructive problem-solving did not mediate the relationships ($ps>0.05$).

Conclusions: Findings indicate that dysfunctional problem-solving may impede emerging adults' ability to effectively apply healthcare management skills, and interventions that reduce dysfunctional problem-solving may be needed to improve HRQoL. College campuses may be a suitable environment for providing problem-solving training, and future research should explore opportunities to engage these communities in healthcare transition support.

1. Introduction

The distinct developmental period of emerging adulthood is characterized by change, instability, and varied trajectories of increased personal and academic challenges.^{1,2} Evidence suggests that emerging adults exhibit worse health behaviors such as poor diet, sedentary behavior, substance use, and higher levels of mental health difficulties compared to other age groups.³⁻⁵ Chronic medical conditions (CMCs) can contribute to heightened difficulties during this transitional period of increased independence.^{6,7} Emerging adults with CMCs must navigate the transition to adulthood, while also learning to independently manage their own healthcare demands, such as symptom monitoring, medication adherence, and appointment coordination.^{8,9} The literature

suggests that emerging adults with CMCs who are enrolled in college exhibit worse adjustment, academic disruptions, and poor mental health outcomes, compared to their peers without CMCs.¹⁰⁻¹⁴ Thus, there is a critical need to examine and address the needs of emerging adults with CMCs as they transition to adulthood and adult healthcare.

The social-ecological model for transition readiness (SMART Model) highlights that knowledge and skills for healthcare self-management are key modifiable components of "transition readiness," and are necessary for a successful transition from pediatric to adult healthcare.¹⁵ Although the primary outcome of the SMART Model is transfer to adult care, aspects of transition readiness have important relevance for the general transition to adulthood of emerging adults with CMCs.^{16,17} Critical skills for self-management include filling prescriptions, arranging medical

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appointments, following up on care tasks such as lab referrals, and managing health insurance.¹⁸ Research has shown that strong healthcare self-management skills are linked with greater health-related quality of life.^{14,19–21} However, some literature suggests that the relationship may not be consistent, with better healthcare management skills relating to lower HRQoL for some groups.^{16,22} For example, college students with CMCs who have high levels of healthcare utilization report strong self-management skills, yet poor HRQoL.¹⁶ Therefore, it is imperative to understand the complex mechanisms that might impact the relationship between transition readiness and HRQoL.

The SMART Model describes additional modifiable transition variables that have been shown to impact quality of life in adolescents and young adults with CMCs.¹⁵ For instance, more transition knowledge,²³ increased developmental maturity,¹⁷ greater self-efficacy,²⁴ and positive patient-provider relationships²⁵ have been associated with better transition readiness and HRQoL. However, the role of underlying abilities necessary for the implementation of self-management knowledge and skills, such as coping skills and executive functions, are not well understood.¹⁵ Indeed, the use of negative coping strategies, such as avoidance coping, have been linked with lower transition readiness and worse outcomes.^{26,27} Research also shows that adolescents and emerging adults with greater cognitive problems demonstrate reduced transition readiness²⁸ and HRQoL,²⁹ whereas those with greater executive functions report higher HRQoL.^{30,31} Additional evidence suggests that executive functioning skills, such as problem-solving, may play a role in self-management and HRQoL.^{28–31} Yet, the indirect effect of healthcare self-management skills on HRQoL through these potential mechanisms has not been studied among emerging adults with CMCs.

Social problem-solving is one potential factor that has received limited attention as a targeted modifiable skill. Defined as the cognitive-affective-behavioral process of identifying and enacting effective solutions in real-world social environments, social problem-solving is not only applicable to interpersonal social challenges but also plays a role in managing all everyday problems.³² Social problem-solving encompasses the underlying executive functions and coping responses that may be instrumental for emerging adults' ability to effectively implement their healthcare self-management skills. Two primary dimensions, namely constructive problem-solving (e.g., positive problem orientation, rational thinking) and dysfunctional problem-solving (e.g., negative problem orientation, avoidant or impulsive thinking), appear to have differential effects on psychosocial outcomes.^{33,34} Overall, more constructive social problem-solving and less dysfunctional problem-solving has been linked with a variety of positive psychosocial outcomes, such as reduced psychological distress (e.g., anxiety, depression) and enhanced HRQoL.³³

Given the complexity of navigating self-management of a CMC during the transitional period of emerging adulthood, it is possible that social problem-solving skills may have an important role in this context.⁸ For example, for emerging adults with CMCs, the skills for refilling a prescription may best be implemented by those who proactively resolve issues and persist through challenges, despite healthcare access issues, such as changing pharmacies or connecting with new providers, which in turn may improve health outcomes. Although disease-specific problem-solving interventions have been shown to improve self-management and psychosocial outcomes (e.g., among youth and adults with diabetes), much less is known about the broader impact of these skills among emerging adults with CMCs.^{35,36}

Thus, the present study aimed to examine the potential mediating role of social problem-solving skills in the relationship between healthcare self-management skills and HRQoL among emerging adults with CMCs. It was hypothesized that greater self-management skills would be directly linked with higher self-reported HRQoL, and that there would also be an indirect effect through social problem-solving skills. Given the literature on the differential impacts of constructive and dysfunctional problem-solving, both dimensions were examined as distinct potential mediators in the current study.^{33,37,38} As such, it was

anticipated that greater constructive problem-solving and lower dysfunctional problem-solving would account for the positive relationship between self-management skills and HRQoL.

2. Methods

2.1. Participants and procedures

This study was conducted as part of a larger examination of health behaviors, resilience skills, and mental health among college students with and without a CMC. Participants were eligible if they were 18–23 years old and enrolled as a college undergraduate student. For this study, only a subset of participants reporting at least one chronic medical condition were included. Participants were recruited via an online recruitment system of students participating in undergraduate courses. Individuals interested in participation accessed a link to an anonymous online survey via Qualtrics. Electronic informed consent was obtained by clicking a box instead of obtaining a signature in order to maintain anonymity. After providing informed consent, students completed a battery of online questionnaires that took approximately 60–90 minutes to complete. Participants received course credit for their participation. All study procedures were approved by the university Institutional Review Board. Data were collected between August 2017 and December 2023. Data available on request.

2.2. Measures

2.2.1. Demographic and Medical Information

Demographic information was collected through a series of single item questions designed by the study team, including age, sex assigned at birth, gender identity, race, ethnicity (Hispanic/Latine, Not Hispanic/Latine), sexual orientation, highest level of education fully completed, first generation college student status, and caregivers' highest level of education. Participants were provided a definition of chronic illness and were asked whether they have a chronic illness (Yes/No). Specific chronic illness(es) were obtained by asking participants to select all their diagnoses from a list (e.g., asthma, sickle cell disease, cancer, mental health condition, option for "Other medical condition" and to specify). Respondents provided a rating of severity (Mild to Very Severe) and controllability (Entirely Uncontrollable to Entirely Controllable) of their chronic illness. Additional details on healthcare utilization and medical condition management (e.g., medications) were also collected.

For analyses, race was dichotomized into White and Black, Indigenous, and people of color (BIPOC). Individuals who identified with more than one race were categorized into the BIPOC group. Participation pre- or post-COVID-19 pandemic was dichotomized at March 14, 2020. Educational level was dichotomized into underclassmen (i.e., currently enrolled as sophomores or below) or upperclassmen (i.e., currently enrolled as juniors or above).

2.2.2. Transition Readiness Assessment Questionnaire (TRAQ)

This study utilized the second version of the TRAQ, which is a 20-item measure designed for adolescents and young adults to self-report health care self-management skills in a variety of areas important for transitioning to adult health care.³⁹ Respondents rate their skill level on each item on a 5-point Likert-type scale from 1 ("No, I do not know how") to 5 ("Yes, I always do this when I need to" with intermediate anchors. The TRAQ contains five subscales: Managing Medications (e.g., "Do you take medications correctly and on your own?"), Appointment Keeping (e.g., "Do you call the doctor's office to make an appointment?"), Tracking Health Issues (e.g., "Do you make a list of questions before the doctor's visit?"), Talking with Providers (e.g., "Do you tell the doctor or nurse what you are feeling?"), and Managing Daily Activities (e.g., "Do you help plan or prepare meals/food?"). A mean score for all items is calculated for an overall TRAQ score, with higher scores indicating better self-management skills that are relevant for transition to

adult medical care. Wood and colleagues (2014) found that the TRAQ has high internal reliability (Cronbach's $\alpha = .94$) and criterion validity. In the present study, the TRAQ had very good internal consistency ($\alpha = .89$). The TRAQ has been validated and utilized in multiple studies of emerging adults.^{17,40}

2.2.3. Social Problem-Solving Inventory-Revised (SPSI-R)

The SPSI-R is a 25-item self-report measure of ability to solve problems in everyday life.³² Respondents report how well each item describes them on a 5-point Likert-type scale from 0 (Not at all true of me) to 4 (Extremely true of me). The SPSI-R contains five domains that correspond to two subscales: Constructive Problem-Solving (Positive Problem Orientation and Rational Problem-Solving) and Dysfunctional Problem-Solving (Negative Problem Orientation, Impulsivity/Careless Style, and Avoidance Style). High scores on the Constructive dimensions indicate better problem-solving, and high scores on the Dysfunctional dimensions indicate poorer problem-solving skills. Previous research has demonstrated that the SPSI-R has good reliability and internal consistency.³⁷ For the current study, Cronbach's alphas were very good, ranging from 0.81 to 0.85 for the subscales.

2.2.4. Rand 36-Item Health Survey (Rand SF-36) v1

The Rand 36-Item Health Survey 1.0 (SF-36) is a 36-item self-report measure of health-related quality of life.⁴¹ Respondents report on their functioning in the past four weeks and current functioning via Likert scales (2–5- or 6-point). The SF-36 contains eight domains: Physical Function, Role Limitations due to Physical Health, Role Limitations due to Emotional Problems, Energy/Fatigue, Emotional Well-Being, Social Functioning, Bodily Pain, and General Health. The eight domains are combined to generate mental health composite (MHC) and physical health composite (PHC) total scores. Higher scores on each of the two subscales indicates better quality of life. Previous studies have demonstrated that the SF-36 has good internal consistency and validity.⁴² The SF-36 has been used previously in studies of college students.¹⁴ Internal consistency was very good for the MHC ($\alpha = 0.89$) and excellent for the PHC ($\alpha = 0.91$) in the current study.

2.3. Statistical analysis

Descriptive statistics were utilized to describe the sample characteristics and bivariate correlations were conducted to assess relationships between primary variables. Potential covariates were examined, and those that were significantly correlated with the outcomes of interest were included in the model. Primary variables satisfied the assumptions of linearity and multivariate normality. Next, to examine the potential mediating effects of constructive and dysfunctional problem-solving, we tested the multiple mediator pathways simultaneously using structural equation modeling. Mplus version 8.1 was utilized to test the models with bias-corrected bootstrapping and full information maximum likelihood to accommodate missing data at the scale level.⁴³ A path analysis was conducted to estimate the direct and indirect effects of healthcare self-management skills on HRQoL (MHC and PHC), with demographic and illness-related covariates (e.g., sex, illness controllability). Both constructive problem-solving and dysfunctional problem-solving dimensions were included in the model as mediators.

3. Results

The study sample consisted of 279 college students with a CMC ($M_{\text{age}} = 19.37$, $SD = 1.33$), with 56.3 % of participants completing questionnaires post-COVID. Participants were representative of the university's demographics and were primarily female (84.9 %), White (79.2 %), underclassmen (79.2 %). About one-quarter (26.9 %) of participants were first generation college students and 42.0 % of participants reported maternal education below a Bachelor's Degree (See Table 1). The most commonly reported CMCs included asthma (33.7 %), allergies

Table 1

Sociodemographic and Medical Characteristics of the Participants (N = 279).

Sample Characteristics	n/M	%/SD
Sex	42	15.1
Male	237	84.9
Female		
Age (years)	19.37	1.33
Race	221	79.2
White	9	3.2
Black	27	9.7
Native American	17	6.1
Multi-Racial	2	0.7
Other		
Ethnicity	30	10.8
Hispanic/Latine	243	87.1
Not Hispanic/Latine		
Education Status	221	79.2
Underclassmen	58	20.8
Upperclassmen		
First generation college student	75	27
Mother's highest education attained	36	12.9
Some High School	54	19.4
Some College	27	9.7
Associate's Degree	93	33.3
Bachelor's Degree	69	24.7
At least Some Graduate School		
Commonly reported CMCs ^a	94	33.7
Asthma	72	25.8
Allergies	50	17.9
Chronic Migraine	38	13.6
Irritable Bowel Syndrome	30	10.8
Thyroid Disease		

^a Percentages do not add up to 100 % because participants could indicate more than one chronic medical condition diagnosis and the presented listed is not exhaustive.

(25.8 %), chronic migraine (17.9 %), and irritable bowel syndrome (13.6 %). On average, participants estimated missing 15.86 % ($SD = 17.38$) of school days due to illness-related events (e.g., symptoms, appointments), and only 44.1 % of participants have transitioned to an adult provider. Students also reported that their medical condition is moderately severe ($M = 4.34$, $SD = 2.08$) and somewhat uncontrollable ($M = 3.95$, $SD = 1.33$). See Table 1 for additional demographic and illness-related details.

On average, students with CMCs reported low standardized mental ($M = -1.46$, $SD = 1.12$) and physical ($M = -0.65$, $SD = 0.96$) HRQoL. Participants reported an average rating of healthcare management skills that are below expectations ($M = 3.86$, $SD = 0.69$). Students engaged in both constructive problem-solving ($M = 22.10$, $SD = 6.80$) and dysfunctional problem-solving ($M = 23.71$, $SD = 10.39$). See Table 2 for descriptives.

The overall path analysis significantly outperformed the baseline model ($\chi^2 = 247.36$, $df = 30$, $p < 0.001$), predicting 28.0 % of mental HRQoL and 20.5 % of physical HRQoL, when controlling for age, sex, education level, controllability, and COVID time period. In the final model, controllability and sex were the only significant covariates ($ps < 0.001$), with less controllability and females at greater risk for worse mental and physical HRQoL. COVID time period was significantly related to both constructive and dysfunctional problem-solving ($ps <$

Table 2

Descriptive Statistics for Path Analysis Variables.

Variable	N	Range	M	SD
Constructive Problem-Solving	267	0–40	22.10	6.80
Dysfunctional Problem-Solving	266	0–58	23.71	10.39
TRAQ	272	1–5	3.86	0.69
MHC	273	−4.26–1.24	−1.46	1.12
PHC	273	−3.16–1.17	−0.65	0.96

Note. TRAQ= Transition Readiness Assessment Questionnaire, MHC=Mental Health Composite, PHC=Physical Health Composite.

0.001), with those who completed questionnaires post-COVID reporting lower constructive and higher dysfunctional problem-solving. Fig. 1 presents the direct effects of the path analysis, whereas Table 3 presents the indirect effects.

There was a significant direct effect of TRAQ on constructive ($\beta = 0.36$, $SE = 0.06$, $p < 0.001$) and dysfunctional problem-solving ($\beta = -0.18$, $SE = 0.07$, $p = 0.01$). Dysfunctional problem-solving had a significant direct effect on MHC ($\beta = -0.38$, $SE = 0.05$, $p < 0.001$) and PHC ($\beta = -0.22$, $SE = 0.06$, $p < 0.001$). Constructive problem-solving only had a direct effect on PHC ($\beta = -0.12$, $SE = 0.06$, $p = 0.04$). There was a significant indirect effect of TRAQ on MHC through dysfunctional problem-solving ($\beta = 0.07$, $SE = 0.03$, $p = 0.024$). There was a significant indirect effect of TRAQ on PHC through dysfunctional problem-solving ($\beta = 0.04$, $SE = 0.02$, $p = 0.047$). The indirect effects of TRAQ on MHC and PHC through constructive problem-solving were not significant ($p = 0.05$).

4. Discussion

The current investigation identified social problem-solving as a potentially important mechanism in the relationship between the healthcare self-management skills that are critical for transition readiness and HRQoL among emerging adults with CMCs. In our sample, healthcare self-management skills were directly linked to both dysfunctional and constructive problem-solving, which is consistent with previous literature.^{28–31} Notably, our current findings demonstrated that in this population, dysfunctional problem-solving mediates the relationship between healthcare self-management skills and both mental and physical HRQoL, while controlling for demographic and illness-related factors. This suggests that dysfunctional problem-solving skills, such as a negative problem orientation or avoidance of problems, may impede emerging adults' ability to effectively apply healthcare management knowledge in a manner that would enhance their quality of life. Inconsistent with our hypothesis, constructive problem-solving did not mediate the relationship between healthcare self-management skills and HRQoL. Additionally, constructive problem-solving only had a direct effect on physical health and was unrelated to mental health in our model.

4.1. Research implications

Research suggests that constructive and dysfunctional problem-solving are distinct, yet related constructs composed of two elements, namely problem orientation and problem-solving style.³⁴ The attitudes,

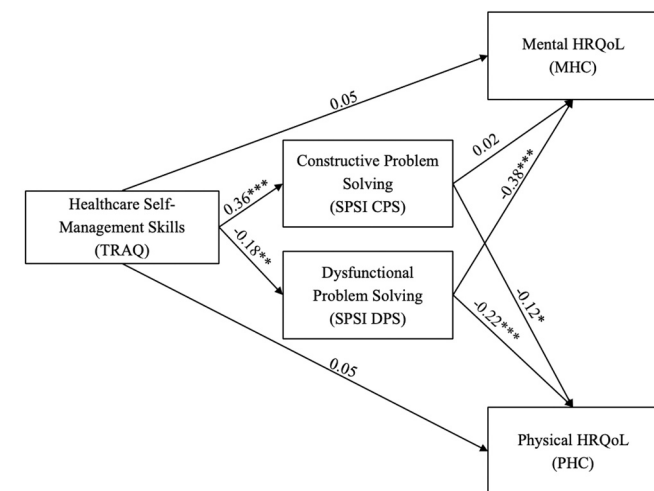


Fig. 1. Path analysis direct effects. Note: Estimates are standardized betas. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 3

Path analysis indirect effects.

Indirect Effects	Estimate	S.E.	p-value
MHC			
TRAQ→CPS→MHC	0.006	0.023	0.784
TRAQ→DPS→MHC	0.068	0.030	0.024
PHC			
TRAQ→CPS→PHC	-0.042	0.021	0.051
TRAQ→DPS→PHC	0.040	0.020	0.047

Note. Age, Sex, year in college, study completion before or during the COVID-19 pandemic, and CMC controllability were included as covariates in the model. Estimates are standardized. TRAQ= Transition Readiness Assessment Questionnaire, MHC=Mental Health Composite, PHC=Physical Health Composite, CPS = Constructive Problem-Solving, DPS = Dysfunctional Problem-Solving.

behaviors, and skills that make up problem orientation and problem-solving style are not necessarily mutually exclusive, allowing for an individual to maintain both constructive and dysfunctional problem-solving beliefs or abilities. Factor analyses have found that specific components, including positive and negative problem orientation, are discrete factors rather than opposite ends of the same dimension.⁴⁵ For example, an individual could endorse that they feel both “threatened and afraid when faced with an important problem” and “believe that it can be solved,” which would suggest they experience some aspects of both a negative and positive problem orientation.³² Thus, it is logical that our study found a differential effect of constructive and dysfunctional problem-solving skills on the implementation of transition skills in relation to HRQoL. Indeed, our finding that dysfunctional problem-solving appears to have a more significant impact on health outcomes has been previously documented among samples of caregivers of youth with medical conditions.^{37,38} Participants in our sample also reported greater variability in dysfunctional problem-solving compared to constructive problem-solving, which could further contribute to these differential effects. Qualitative research investigating constructive and dysfunctional problem-solving may be needed to better understand emerging adult perspectives on the role of different skills and cognitions on their ability to solve problems in relation to self-management of their CMCs.

Given our findings that dysfunctional problem-solving accounts for more of the challenges of implementing healthcare self-management skills, it is important to consider what aspect of dysfunctional problem-solving may be driving this effect. A recent study of a clinical sample of adult women found that individuals may have strengths in rational problem-solving skills that they are unable to utilize, due to the presence of a strong negative problem orientation.⁴⁶ This study also found that comorbid psychopathology may contribute to differences in problem-solving skills. Another study similarly found an interaction between stress and negative problem orientation, which could make it difficult to implement positive problem-solving abilities when stress is heightened and problems are viewed as unsolvable.⁴⁷ Although the clinical picture of these two samples differs greatly from our population of emerging adults with CMCs, it is possible that negative problem orientation is also a driver in the mediating relationship in our study. For instance, it could be that the stress or unpredictability of managing a CMC could interact with a negative problem orientation and increase difficulties with solving problems that require effective use of healthcare self-management skills, even in the context of robust rational problem-solving abilities. Future research should explore the specific problem-solving mechanisms that might be at play in this relationship.

4.2. Clinical implications

Importantly, problem-solving therapy has been highly researched and proven to be efficacious in a variety of settings for improving problem-solving skills and mental health outcomes.^{48,49} In relation to chronic medical populations, meta-analytic evidence has shown that

problem-solving skills training targeting caregivers of youth with medical conditions has positive effects on both parent and child outcomes.⁵⁰ Preliminary results also suggest that among pediatric medical populations, such as youth with inflammatory bowel disease or brain tumors, problem-solving skills training can improve adherence and HRQoL.^{51,52} This therapy model is based on a cognitive-behavioral approach and delivery has been tested in a variety of formats, including individually, in groups, virtually, or in-person.⁵⁰ Overall, problem-solving therapy aims to reduce dysfunctional problem-solving and promote constructive skills. Given our findings and research in other populations, problem-solving therapy could be an appropriate intervention to support emerging adults with CMCs. Consistent with the present findings and previous literature, mitigating the effects of dysfunctional problem-solving cognitions and behaviors is likely to be a critical component of an effective intervention.⁵³ College campuses may be a suitable environment for providing problem-solving training, and future research could explore opportunities to engage these communities in the transition support and self-management interventions that often begin in pediatric medical specialty settings.^{35,36}

4.3. Limitations

The findings of the present study should be considered in light of several limitations. First, the cross-sectional research design prevented the researchers from being able to examine how healthcare management skills, problem-solving skills, and HRQoL change over time. Although the use of path analysis valuably enables the estimation of direct and indirect effects within a specified hypothesized model, cross-sectional data cannot establish causality and we must acknowledge alternative causal models. For instance, it is possible that poor HRQoL contributes to reduced constructive problem-solving and increased dysfunctional problem-solving. If this causal relationship more accurately represented the data, then interventions would need to address possible targets that could improve HRQoL.

Emerging adults with CMCs may also have varying trajectories for these skills throughout the process of transitioning to independence and adult medical care. Because this study collected data at a single point in time, future research is needed to examine those potential changes or draw conclusions regarding temporal relationships. Date of participation, such as immediately following spring break, was not controlled for in this study and may also impact participant report of HRQoL. Longitudinal research is even more important, given the significant effect of participation timing in relation to the COVID-19 pandemic (e.g., participants post-COVID reported worse problem-solving). Greater understanding of the trajectories and directionality of relationships may be necessary for the development of interventions that are adaptable to changing environments. Even so, this study was the first to examine relationships among healthcare self-management skills, problem-solving skills, and HRQoL in a large sample of emerging adults with CMCs.

Second, data were only collected through self-report questionnaires. Self-report data could be vulnerable to respondent bias, such as social desirability, acquiescence, and tendency to give extreme responses. The researchers collected all data within the same survey, used the same response method for all measures (i.e., Qualtrics), and did not use methods of data collection beyond self-report measures to examine the constructs of interest. There is a possibility that this design resulted in shared-method variance and introduced measurement error that is not accounted for in path analysis. Future studies should consider using latent variable modeling to address this limitation. Further, our model did not account for self-report of other factors that may influence the relationship between self-management skills and HRQoL, such as other diagnoses including Attention-Deficit/Hyperactivity Disorder or Autism Spectrum Disorder. The lack of diversity in the study sample on a number of demographic characteristics also limits the ability to generalize findings to the US college student population. Although this

majority White, female, higher SES sample was representative of the student population from which the researchers recruited their sample, it is important to acknowledge that psychological research historically created barriers and reduced facilitators to recruiting diverse samples of research participants, which remains a challenge to this day.⁵⁴ Future research should assess healthcare self-management skills, social problem-solving, and HRQoL among more diverse emerging adult populations and efforts to recruit diverse samples should follow published guidelines and focus on a broad spectrum of characteristics.⁵⁴

4.4. Conclusions

In conclusion, the present investigation highlights the important role of social problem-solving skills as a mechanism in the relationship between healthcare self-management and quality of life among emerging adults with CMCs. Our findings suggest that dysfunctional problem-solving could be a key factor in emerging adults' utilization of self-management skills that are critical for navigating the transition to adult healthcare and adulthood. Future research is warranted to explore the specific affective, behavioral, or cognitive components of problem-solving underlying this relationship, and could ultimately provide pathways to intervention for positive self-management and quality of life outcomes for this population.

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Ethical statement

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CRediT authorship contribution statement

Sharkey Christina M: Writing – review & editing, Writing – original draft, Supervision, Formal analysis, Data curation, Conceptualization. **Mullins Larry L.:** Writing – review & editing, Supervision, Resources, Project administration, Methodology, Investigation, Funding acquisition, Conceptualization. **DeLone Alexandra M.:** Writing – review & editing, Project administration, Methodology, Investigation, Data curation. **Dattilo Taylor M.:** Writing – review & editing, Investigation, Formal analysis, Data curation, Conceptualization. **Cooke Frances:** Writing – review & editing, Writing – original draft, Formal analysis, Conceptualization.

Declaration of Competing Interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Larry Mullins reports financial support was provided by Vaughn Vennerberg II Endowment. If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Data availability

Data will be made available on request.

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