



Validating enright forgiveness motivation inventory (EFMI)

Yan Li¹ · Jichan J. Kim² · Jacqueline Y. Song^{3,4} · Robert D. Enright^{1,4}

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Abstract

Forgiveness is a moral virtue practiced in the context of another's wrongdoing. As a moral virtue, it develops and flows out for the good of the offender. The literature suggests that there are varying motivations that prompt individuals to consider forgiveness. Nevertheless, while there are several measures of forgiveness that target the outcomes of forgiveness, few measures assess the specific motivations for people to offer forgiveness. The purpose of this study was to validate the Enright Forgiveness Motivation Inventory (EFMI) in the context of a specific hurt participants recalled. We developed the EFMI with 10 subscales situated under four types of forgiveness motivations and examined the validity and reliability of their scores. Also, we examined age differences in forgiveness motivations to see if the theorized developmental progression was supported by data. CFA (Confirmatory Factor Analysis) confirmed that EFMI has a good factor structure. EFMI subscales showed good internal consistency reliability and were associated with transgression-specific forgiveness as well as other forgiveness outcome variables. Further, we found a statistically significant difference between age groups regarding the motivation to forgive to be consistent with one's belief system. Those in late adulthood showed a higher level of motivation in this area compared to others. However, we did not find any clear age progression with other motivations. Additional findings are presented followed by the discussions of the main findings, limitations, future directions, and practical implications.

Keywords Forgiveness motivation · Scale development and validation · Age differences in forgiveness motivations

How can people become more forgiving? This important question has been addressed for decades and has made forgiveness a debated topic within psychology. Research has increased on the various benefits of forgiving as well as the ways through which one could be helped to forgive (Akhtar & Barlow, 2018; Wade et al., 2014). Forgiveness Therapy is considered an evidence-based approach to helping those struggling with mental health issues (Enright & Fitzgibbons, 2015). Also, in more recent years, Forgiveness Education has been utilized to help children and adolescents forgive (Rapp et al., 2022). Because forgiveness is a moral virtue,

forgivers not only experience changes in affect, behavior, and cognition but also need to foster the inner qualities of the motivation to be good to others along with the cognitive insight that others are worthy of that goodness (Enright & Fitzgibbons, 2015). The research here focuses on one dimension of forgiveness, namely, forgiving motivation. Although there is a robust literature on the psychology of forgiveness in general, the exploration of the motivation to forgive others is rare. More specifically, given the lack of adequate measures on forgiveness motivation that capture a variety of forgiveness motivations, we aimed to develop and validate a measure of forgiving motivations with multiple dimensions, derived from a firm theoretical foundation.

✉ Yan Li
sophialiyani1987@outlook.com

¹ Department of Educational Psychology, University of Wisconsin–Madison, Madison, WI, USA

² Department of Psychology, Liberty University, Lynchburg, VA, USA

³ Universidad Francisco de Vitoria, Madrid, Spain

⁴ International Forgiveness Institute, Inc, Madison, WI, USA

Forgiveness

Forgiveness involves the victim's making a deliberate choice to overcome resentment and to offer goodness to the person who has done wrong even though there is no moral obligation for the victim to offer such a moral gift (Enright,

2001, 2015). The forgiver takes on a new stance of mercy, which is giving more than the perpetrator's just deserts, and is possibly offering even compassion and love, toward the offender, even though the offender has no moral right to this mercy. The four properties of forgiveness are (1) being unjustly hurt, (2) overcoming resentment despite having a moral right to it, (3) developing a new positive response, including compassion and love, toward the offender, and (4) knowing that such a response occurs not as an obligation but as an expression of mercy (Subkoviak et al., 1995).

It is important to note that forgiveness is not the same as reconciliation. In other words, it is not necessarily recommended that a person reconcile with the offending person if that is not safe for the forgiver, physically or emotionally (Enright, 2001, 2015; Subkoviak et al., 1995). Forgiveness is also not forgetting as forgiveness does not result in moral amnesia. Furthermore, forgiveness is not condoning the other's actions or finding excuses for another person's wrongful behavior. Forgiveness is instead facing the injustice directly, reducing anger toward those who act unjustly, and mercifully offering compassion to them.

Forgiveness Therapy, wherein one works through the process of forgiving a wrongdoer with the guidance of a professional, is an effective therapeutic option for a person suffering from negative emotions connected to a significant and negative unjust event (Enright & Fitzgibbons, 2015). It has been suggested that forgiveness reduce anger and increase hope, which results in improved psychological health (Kim et al., 2022a). Forgiveness is related to many positive outcomes in multiple fields, including education, workplace relations, and medicine. For instance, Schulte et al. (2013) found that those who present more forgiving behaviors contribute less counteractive behaviors to organizational activities in the workplace. Furthermore, a forgiveness education study found that high school students enrolled in a school-based forgiveness education program significantly showed improvement on measures including attitude to school, attitude to teachers, relationships with parents, trait anger, academic grades at school, and school discipline, compared to students in the control group (Gambaro, 2002).

Having a measure of forgiveness motivations with reliable and valid scores accessible to researchers and practitioners would be indispensable as the field of forgiveness continues to flourish and impacts more diverse demographic populations as well as numerous fields within the helping professions. It is fortunate that such measures do exist, although not all of the scales have equally valid and reliable scores or sufficiently capture the essence of forgiveness (Freedman, 2023). Nonetheless, one notable area not captured through the current measures of forgiveness is the

varying motivations for forgiveness, which is the center of this study.

The earliest published research on victim-to-perpetrator forgiveness (Enright et al., 1989) indicated a statistically significant developmental pattern regarding how people consider forgiveness when evaluating hypothetical contexts in which one story character experienced injustice. Themes of self-interest (focusing on what one lost) emerged primarily since childhood, while the theme of treasuring the moral virtue of loving the other unconditionally despite the injustice they suffered emerged only among adults, and even then it was not frequently observed in the participants. This particular study is of interest as the themes that emerged reflected different motivations for forgiving.

Forgiveness motivation

According to Trainer (1981), there exist three different kinds of forgiveness motivations: expedient forgiveness (forgiveness means ending and avoiding being hurt again), role-expected forgiveness (forgiveness based on social, family, or religious expectations), and intrinsic forgiveness (forgiveness based on inner moral principles). Correspondingly, intrinsic forgiveness represents a high forgiveness level, role-expected forgiveness represents a moderate forgiveness level, and expedient forgiveness represents a low level of forgiveness. Therefore, the developmental implications of Trainer's theory would be as follows: People develop forgiveness from expedient forgiveness to role-expected forgiveness and to intrinsic forgiveness in the end.

Similar to Trainer's theory described above, Enright et al. (1989) elaborated the following sequential levels of forgiveness, which also described the developmental progression of participants' thoughts on the reasons for their forgiving: (1) *Revengeful Forgiveness* (People forgive only if they can punish the original perpetrator to a similar degree to the victim's own pain.), (2) *Compensational Forgiveness* (People forgive when they can get back the same amount of what was taken away originally.), (3) *Expectational Forgiveness* (People forgive under the external pressure from other people.), (4) *Lawful Expectational Forgiveness* (People forgive for the demand of one's religion.), (5) *Forgiveness as Social Harmony* (People forgive for the sake of good social relationships among people.), and (6) *Forgiveness as Love* (People forgive because of the moral principle of loving others, for their sake, as an end in and of itself). Two empirical studies conducted to test these varying conceptualizations of forgiveness supported their theory of forgiveness and showed that forgiveness reasoning was linked to participants' age (Enright et al., 1989). Nevertheless, no studies

focused on the corresponding area of forgiveness motivation as people advanced in age.

Note that revengeful forgiveness does not appear to be an actual motivation involved in the context of forgiving because it is a misunderstanding of what forgiveness is. Therefore, we excluded revengeful forgiveness as a type of forgiveness and had the following four considerations of forgiveness motivations (that we attempted to measure through the EFMI): Compensational Forgiveness, Expectational Forgiveness, Forgiveness as Social Harmony, and Forgiveness as Love. Here “Lawful Expectational Forgiveness” was combined with the “Love” type of forgiveness motivation because both highlighted the property of spiritual pursuit in one’s forgiveness.

Empirical studies on forgiveness motivations are limited, but Takada and Ohbuchi (2004) conducted one of the earliest studies on the topic. They divided interpersonal forgiveness motivation into three categories: Egocentric motivation, altruistic motivation, and normative motivation. According to their categorization, egocentric motivation would prompt the victim to forgive whatever the level of relationship closeness is. Normative motivation would help achieve forgiveness more in non-close relationships than that in close relationships. Altruistic motivation, showing kindness and care for the perpetrator’s welfare, would foster forgiveness more in close relationships compared to non-close relationships. With 280 Japanese participants taking part in this research study, the authors reached the conclusion that the levels of altruistic, egocentric, and normative motivations to forgive were higher in close relationships than in non-close relationships, partially supporting their original assumptions. Nevertheless, with only Japanese participants involved in this study, the ecological validity is not high enough to help the conclusion applied to a more general population. Second, all the participants are students, rendering a lack of developmental concern for different age groups.

Based on the study mentioned above, Takada and Ohbuchi (2013) further validated a forgiveness motivation scale and categorized forgiveness motivation into two kinds, that is, true forgiveness and hollow forgiveness, based on which they created seven sub-categorizations and further extracted five factors. On the one hand, victims who were assumed to show true forgiveness cared more about relationships, preferred collaborative strategies, and were highly delighted with the true forgiving result. On the other hand, victims who were predicted to show hollow forgiveness were strongly self-oriented, preferred avoidance strategies, and were lowly satisfied with the final result of hollow forgiveness. In the end, both assumptions were confirmed based on two samples of Japanese university students. Again, given

the exclusive use of Japanese participants, generalizability is limited and such a division between true and hollow forgiveness might not be warranted based on careful philosophical considerations.

Similarly, Freedman and Chang (2010) distinguished authentic forgiveness and pseudo forgiveness (or “false forgiveness”, such as reconciliation). This is because the word “forgiveness” is too often applied to present different responses not necessarily rendering a genuine decrease in negative thoughts, feelings, or behaviors toward the offender. This characteristic distinguishes forgiveness from alternative ways of healing and moving beyond hurt after an injury.

More recently, Kim et al. (2022b) abstracted seven themes of people’s motivation to forgive by analyzing the written responses from the participants about their reasons for forgiving. Participants indicated that they would forgive for the following seven reasons: (1) for inner peace, (2) for relationships, (3) if certain conditions are met, (4) for the sake of love/concern for the other in the human community, (5) for moral or religious duty, (6) for the sake of others, and (7) for self-growth.

Based on these earlier discussions and empirical findings on forgiveness motivation, we developed the EFMI and organized 10 distinct motivations under four types of forgiveness motivations identified by Enright et al. (1989). Then, we situated each of the four types under either intrinsic or extrinsic motivation under the one concept of forgiveness motivation. See Fig. 1 for our forgiveness motivation conceptual foundation.

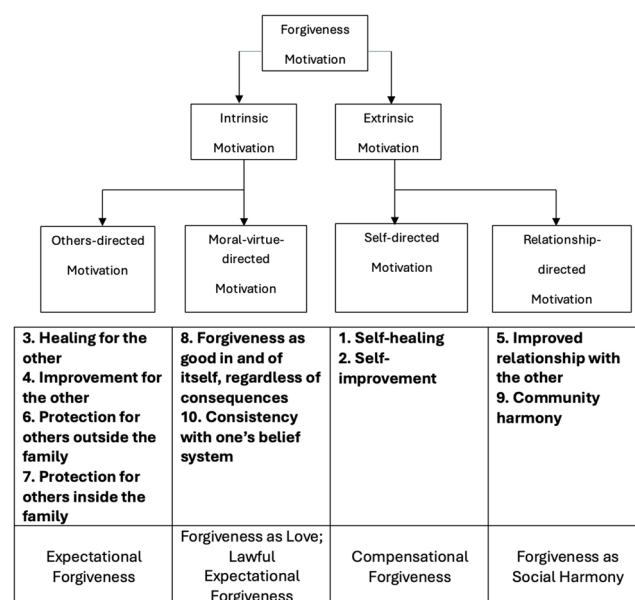


Fig. 1 One Concept, Two Dimensions, Four Types, and Ten Subscales of EFMI

Age differences in forgiveness

Individuals' tendency to forgive displays developmental changes. Overall, results from empirical research showed that one's level of forgiveness grows as one becomes older (see for instance, Toussaint et al., 2001; Kaleta & Mróz, 2018). As Kaleta and Mróz (2018) theorized, such age progression seems to correspond to the stages of psychosocial development proposed by Erikson (1994). As far as this theory is concerned, there are eight stages in total for people to develop, during which a person overcomes a particular challenge in each of the eight stages. Such a challenge is psychosocial in essence since a person's inner needs violate the requirements coming from the outer society. The developmental task may be completed or not among each stage, which consists of an overlap ratio between past experiences and present life situations. An effective strategy for each challenge yields a healthier self-identity and social interactions, leading to a better personality. Specifically, people in adulthood might experience greater life satisfaction by transitioning from self-centered motivations to other-centered motivations as indicated in Erikson's stage of generativity in adulthood (Erikson, 1994; Kaleta & Mróz, 2018).

While people's forgiving level grows as they become older, the developments in different respects of forgiveness do not have the same pace. Take a Polish study as an example: Charzyńska and Heszen (2013) found a positive relationship between aging and people's ability to forgive. Results showed significant associations between aging and forgiving, especially forgiveness of others, the feeling of being forgiven by God, and a general willingness to forgive; however, such relationships were not found regarding self-forgiveness. Ghaemmaghami et al. (2011) evaluated real-life forgiveness across different adult age groups and found some age group differences. For instance, they found that those in middle adulthood showed greater avoidance compared to younger adults, while younger adults (especially men) showed greater motivations to seek revenge compared to older groups. There was no such trend concerning the benevolent aspect of forgiveness.

One particular aspect of age differences in forgiveness that could benefit from further studies is changes in forgiveness motivations across the lifespan. As was shown in Enright et al. (1989), would forgiveness motivations go from more self-centered to more other-oriented as individuals' age increases beyond the adolescent years? We attempted to answer this question by evaluating the EFMI across different age groups.

The present study

Developing measures of forgiveness with valid and reliable scores is crucial in advancing the science of forgiveness. In the past, most measures focused on measuring forgiveness outcomes. Therefore, we deemed it necessary to develop a theoretically sound forgiveness motivation measure, which can be used in both research and clinical practice. Being able to assess individuals' varying motivations for forgiveness would allow researchers and clinicians to get deeper into the mental world of those who would or would not consider forgiveness, providing insights into better helping them from where they are. Therefore, we generated items that represent 10 motivations for forgiveness (four items under each motivation) based on theoretically justifiable types of forgiveness motivations, which we called the Enright Forgiveness Motivation Inventory (EFMI). We administered various measures, including the initial EFMI items, to participants from three age groups (early, middle, and late adulthood). Then, based on the results of EFAs as well as other indicators, we came up with the best 30-item EFMI (three items per subscale). Then, based on our conceptual framework, we examined and reported factor structures of EFMI. More specifically, we examined the factor structure of two-factor (intrinsic vs. extrinsic), four-factor (four forgiveness motivation types), and ten-factor models (ten different motivations). Then, we compared our final subscales with other psychological measures including a measure of forgiveness to check the construct validity (evidence for validity in relation to other variables and consequences) of the EFMI.

Furthermore, we wanted to see if the findings from Enright et al. (1989) that reported the developmental sequence of varying motivations across different age groups would be replicated using EFMI, which is a more objective measure of forgiveness motivations. Therefore, we compared varying motivations between three age groups (early adulthood, middle adulthood, and late adulthood). We predicted that for those older, there would be higher levels of forgiveness motivations especially in the types that are more intrinsic such as seeing forgiveness as love as opposed to compensational forgiveness, which belongs to extrinsic ones.

Methods

Participants and procedure

We used Prolific, a crowdsourcing marketplace that makes it easier for individuals and businesses to outsource individual tasks, to collect data. After signing the informed

consent form online, participants were asked to fill out various scales including EFMI. All scales were randomly presented to minimize the order effect. The compensation for participation in this research study was £3 for each participant (which is equivalent to about 3.09 USD). The time frame for this data collection process was from June 19th to June 22nd, 2022.

The original EFMI had 40 items; therefore, we attempted to recruit 400 participants (10 times the number of items). There was a total of 494 responses collected in Qualtrics (an online survey platform used via Prolific) originally. Sixty responses were removed from the original pool due to revoked consent. Four replies were also treated as outliers by the Prolific system due to being timed out. Therefore, we originally had 430 participants. Both too much and too little responding time could indicate non-attendance. Therefore, with careful observation, we further eliminated seven participants with responding time below 60 s or above 3,600 s, leaving the data pool with 423 participants. Without considering the outliers, the remaining response time (measured in seconds) had a Mean of 1125.20 and an SD of 574.58. Therefore, one SD lower than 550.63 could represent the cutoff for careful/uncareful replies. However, with a previous calculation result, we prefer setting a more flexible limitation as 480 s (8 min). This exclusive operation made the subjects' pool filled with 411 individuals, and three more were further excluded because they left many values blank, including EFMI, leaving the final sample size as 408, which happens to be just above our expectation of 400 participants.

All 408 participants in the subject pool were US residents, and 51% of them were females ($n=208$) while 49% of them were males ($n=200$). The participants' ages ranged from 20 to 93 with a mean of 46.07 ($SD=15.89$). A majority of the participants were white Caucasians (about 76%), while the rest were racial and ethnic minorities.

Measures

Enright forgiveness motivation inventory (EFMI)

The Enright Forgiveness Motivation Inventory (EFMI) is designed to examine various motivations for forgiving another person. The scale primes the participants by asking them to recall and answer questions regarding a situation in which someone deeply hurt them. To be more specific, we invited participants with the following prompt:

We are sometimes unfairly hurt by other people, whether in family, friendship, school, work, or other situations. We ask you now to think of the most severe experience of someone being very unfair to you. For a few moments, visualize

in your mind the events of that interaction. Try to see the person and try to experience what happened.

Then, we asked them the following event-related questions: (1) How deeply were you hurt when the incident occurred?; (2) Who hurt you?; (3) Is the person living?; (4) How long ago was the offense?; (5) Please briefly describe what happened when this person hurt you. After these five questions, we further requested their current-attitude-related questions with the following guiding words: "Now, please answer a series of questions about your current attitude toward this person. We do not want your rating of past attitudes, but your ratings of attitudes right now. All responses are confidential, so please answer honestly." Lastly, we asked a set of questions regarding participants' motivation for forgiving the other: "If you already have forgiven, what was your motivation to forgive? If you have not yet forgiven, or are in the process of forgiving, what is your motivation to go ahead with this forgiveness?"

The forty items of forgiveness motivations have been developed first by one researcher and one professor, who spent about 20 hours generating items. Then the face and content validity of the items were judged and discussed within the Forgiveness Group Meeting, of approximately five people, lasting two sessions of about 45 min each at a mid-Western university in the United States during the spring of 2021. Most of the members in the Forgiveness Group Meeting were doctoral students studying forgiveness in their own sub-expertise-field; one professor with over three decades of experience with forgiveness research led the meetings. Based on the two dimensions of the classical motivation theory and the 10 subscales we created, we divided intrinsic forgiveness motivation into others-directed motivation and moral-virtue-directed motivation, both of which are internal motivations for a person to forgive. Meanwhile, we divided extrinsic forgiveness motivation into self-directed forgiveness motivation and relationship-directed motivation, both of which are external drives for a person to forgive (also see Fig. 1).

Ten categories of forgiveness motivations are measured: Self-Healing; Self-Improvement; Healing for the Other; Improvement for the Other; Improved Relationship with the Other; Protection for Others Outside the Family; Protection for Others Inside the Family; Forgiveness as Good in and of Itself, regardless of Consequences; Community Harmony; Consistency with One's Belief System.

We began with 40 items (four items for each subscale) with a goal of developing a 30-item scale with three items for each of the 10 subscales. Following the convention used in other forgiveness measures such as the EFI (to be described below), we chose the Likert-type response ratings that ranged from 1 = strongly disagree to 6 = strongly

agree. For the final 30-item EFMI, the range of scores within each subscale would range from 3 to 18, with a higher score representing a higher motivation to forgive for that subscale, while the total EFMI scores would range from 30 to 180, again with the higher score implying higher forgiving motivations.

Both a total score and scores within the 10 subscales are important to use in research. Regarding the use of a total score, it may be the case that the more developmentally mature forgivers have more than one motivation to forgive. After all, the motivations to be other-directed, moral-virtue-directed, and relationship-directed are all indications of exercising the goodness of forgiveness for others. Even the self-directed motivation is good in that it is an indication of self-care. Therefore, a high total score may indicate higher level forgivers relative to other participants. As will be seen below, the correlations between the total score for the EFMI and the other scales in this research suggest that this is the case.

In addition, the EFMI contains eight options designed to measure participants' understanding of forgiveness (e.g., "When people forgive, they deliberately get rid of resentment and offer, as best they can, love to the other for the other's sake."). The final part of the EFMI was a one-item forgiveness question asking to what extent participants had forgiven the person who hurt them, which was measured on a 5-point Likert-type scale. All these additional parts were carefully designed for the purpose of further and deeper explorations on forgiveness motivations for future research studies.

Enright forgiveness inventory short form (EFI-30)

As a shorter version of the Enright Forgiveness Inventory (EFI; Subkoviak et al., 1995), the EFI-30, is designed to measure one's degree of forgiving another person who has deeply hurt the victim with 30 items (Enright et al., 2022). There is evidence for both internal consistency reliability and construct validity as well as cross-cultural validity (Song et al., 2024). Before their response to other questions, participants are requested to recall and reply to the questions centered on a person who was deeply unjust to the participants. Cognition, emotion, and behavior are measured as three sub-dimensions of forgiveness, and each of the three subscales includes 10 Likert-type items. For each Likert-type item, participants choose from 1 to 6, with 1 meaning "strongly disagree" and 6 meaning "strongly agree." In addition, EFI-30 has five items for the sake of measuring pseudo-forgiveness, such as, "There really was no problem now that I think about it." In the last part of the scale, the EFI-30 has a one-item question on forgiveness, which works as the validity check for the EFI-30. Because the

word "forgiveness" was introduced into the scale only in the final section, it is believed that this will not impact participants' other responses within the scale. This final item uses a 5-point Likert scale (Enright et al., 2022). The final score of the EFI-30 ranges from 30 to 180, with the higher score indicating a higher degree of forgiveness. In this study, the Cronbach's alpha for EFI-30 was 0.99, and alphas for subscales were EFI-Affect = 0.98, EFI-Behavior = 0.97, and EFI-Cognition = 0.98).

Herth hope index (HHI)

The Herth Hope Index (HHI; Herth, 1991, 1992) measures individuals' hope with a 4-point Likert rating scale across 12 items. HHI is often used in clinical settings but has been validated with other populations as well. For instance, Herth (1991) validated the initial items with a mix of cancer patients and adults who are well. A systematic review of the studies with this scale showed good construct validity (Nayeri et al., 2020), including studies with clinical and non-clinical samples.

Sample items include "I have a positive outlook toward life." and "I feel my life has value and worth." The score of 4 indicates that the item totally applies to the setting, while the score of 1 indicates that the item does not apply to the individual. The total score ranges from 12 to 48, with a higher score representing more hope. As for the sequence of all the items, no two successive items come from a single subscale. The subscales involve: (1) temporality and future, (2) positive readiness and expectancy, and (3) interconnectedness. Among all the 12 items, items 3 and 6 are reverse-coded. According to Herth (1992), the Cronbach coefficient alpha of HHI was 0.97, indicating strong internal consistency. The test-retest correlation was 0.91, and this value indicates the stability of HHI across time. In this study, the Cronbach's alpha was 0.89. For the three subscales, alphas were as follows: 0.73 for Inner Sense of Temporality and Future, 0.77 for Inner Positive Readiness and Expectancy, and 0.65 for Interconnectedness with Self and Others. In our analysis, we used the total scores only.

PROMIS-anxiety

Cella and colleagues (2010) validated the Anxiety Scale from the Patient-Reported Outcome Measurement Information System (PROMIS). Among the item pool, all the individual items show a high enough reliability (above .89) across the majority of the score distribution, while a strong association with legacy measures ($r=.80$ with Mood and Anxiety Symptom Questionnaire; $r=.75$ with the Center for Epidemiological Studies-Depression Scale) presents good convergent validity. Based on this foundational validation,

PROMIS scales of anxiety will be used to validate the EFMI. The PROMIS Anxiety Scale has seven items, and participants are requested to answer each of the items related to their feelings over the past seven days. Each of the items is rated on a 5-point Likert Scale, with 1 indicating “never”, 3 meaning “sometimes”, and 5 indicating “always”. A sample item is: “In the past 7 days, I felt tense.” The total score can range from 7 to 35, with a higher score indicating more symptoms and a higher level of anxiety. In this sample, the Cronbach’s alpha was .96.

PROMIS-anger

The Anger Scale from the Patient-Reported Outcome Measurement Information System (PROMIS) was also validated by Cella and colleagues (2010). Among the item pool, all the individual items show a high enough reliability (above 0.93) across most of the score distributions, while the convergent validity is well displayed by the correlation of 0.51 between anger bank scores with the Aggression Questionnaire. PROMIS Scale of Anger will also be applied to validate the EFMI. The PROMIS Anger Scale has five items, and participants are requested to answer each of the items on the anger dimension over the past seven days. Each item is rated on a 5-point Likert Scale from 1 (never) to 5 (always). A sample item is: “In the past 7 days, I was irritated more than people knew.” The total score can range from 5 to 25, with a higher score indicating a higher level of anger. In this sample, the Cronbach’s alpha was .92.

Rosenberg self-esteem scale (RSES)

Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) is a widely used measure of self-esteem. The scale can give participants a better picture of their state in relation to other people. The scale consists of ten items, and each item is rated on a 4-point Likert Scale, with 1 indicating “strongly agree” and 4 indicating “strongly disagree”. A sample item is this: “On the whole, I am satisfied with myself.” The total score of the scale ranges from 10 to 40, with a higher score indicating a higher level of self-esteem. In this sample, the Cronbach’s alpha was .93.

Human flourishing scale

The Human Flourishing Scale, also named as Psychological Well-Being Scale (PWB), which was validated by Diener and colleagues (2010), is an 8-item measure of self-perceived success in the important areas of relationships, self-esteem, purpose, and optimism. Each item is rated on a scale of 1 to 7 where higher ratings indicate that such items more strongly apply to the special situation participants

experienced. The total score ranges from 8 to 56, and a higher score indicates an individual’s richer psychological state with regard to psychological resources and strengths.

The Human Flourishing Scale has high internal consistency with the Cronbach’s alpha coefficient of 0.86 and high convergent validity, associating strongly with other psychological well-being scales, namely, Ryff Scales and Basic Need Satisfaction Scale (Diener et al., 2010). In this study, the Cronbach’s alpha was .92.

Marlowe-crowne social desirability scale (MC-SDS)

The Marlowe-Crowne Social Desirability Scale (MC-SDS) is designed to measure respondents’ tendency to comply with social expectations (Crowne & Marlowe, 1960). The scale asks participants to answer *True* or *False* on 33 items. For instance, one item is: “No matter who I’m talking to, I’m always a good listener.” Items marked *True* are scored as 1 point; items marked *False* are scored as 0, making the total scores range from 0 to 33, with the higher scores representing a greater tendency to comply with social expectations, which can lead to socially desirable responding. In fact, the scale assesses what we call “faking good” or appearing better than one is.

According to Crowne and Marlowe (1960), the Cronbach’s alpha coefficient was 0.88, showing strong internal consistency reliability, and the test-retest reliability over the course of one month was reported to be adequate with an *r* coefficient of 0.89. As for the validity, higher convergent validity between the Minnesota Multiphasic Personality Inventory (MMPI) and the Marlowe-Crowne Social Desirability Scale (MC-SDS), in comparison with the Edwards Social Desirability Scale (ESDS), indicates better representation of MC-SDS for individuals to comply with the socially approved manners. In this study, the Cronbach’s alpha was .85.

Data analysis

We took the following analytic approaches. First, we conducted an exploratory factor analysis (EFA) for each of the 10 proposed subscales to determine the best items for each latent factor. We chose the best three items with the highest factor loadings, as done by Kim et al. (2022c), and the lowest correlations with social desirability, as done by Subkoviak et al. (1995). Second, we ran confirmatory factor analyses (CFA) with the 30-item EFMI with 10 subscales, determined through the first phase. We ran three CFA’s examining the factor structures of two dimensions, four types, and 10 subscales of the EFMI to see if there is evidence for the proposed structures in the EFMI (see Fig. 1). Also, we wanted to determine if the EFMI would be best presented as a two-factor, four-factor, or 10-factor instrument. Finally, to establish

construct validity specifically in relation to other variables and consequences, we explored relationships between the EFMI and the EFI, a measure of transgression-specific forgiveness, as well as other psychological outcomes.

Results

Exploratory factor analysis for item reductions

For the EFMI in Phase 1, using the principal axis factoring with direct oblimin (non-orthogonal rotation), we ran an EFA for each of the 10 subscales (with four items each with content validity). Our goal was to choose the best three items that contribute to one latent factor within each factor, but because we wanted to examine and minimize cross loadings with another latent factor, we used direct oblimin to allow cross loadings across different factors. All 10 EFAs resulted in one factor; thus, rotations were not performed. For each subscale, the lowest factor loading item was the candidate for removal. If factor loadings for removal candidates were similar, we removed the one with a stronger correlation with social desirability determined by the Marlowe-Crowne Social Desirability Scale (MC-SDS; Crowne & Marlowe, 1960) scores. The goal was to ensure that participants' forgiveness motivations were not a function of their social desirability. See Table 1 for item factor loadings and correlation coefficients with social desirability.

For the final items, coefficients with social desirability ranged from 0.01 to 0.25. Factor loadings within each subscale ranged from 0.74 to 0.93. Internal consistency reliability for each subscale was adequate ranging from 0.86 to 0.95 with the alpha of 0.97 for the total EFMI suggesting adequate internal reliability for the scores of EFMI and its subscales. The total EFMI was weakly yet positively associated with social desirability with an r of .22, $p < .001$.

Confirmatory factor analyses for an examination of factor structures

Based on the theoretical foundations shared in Fig. 1, we examined the model fit of 2-factor, 4-factor, and 10-factor first-order solutions. We used MPLUS (Muthén & Muthén, 2018) to run all confirmatory factor analyses and used the maximum likelihood estimation with Sattorra-Bentler adjustment (MLM) for estimates more robust to non-normality. Cutoff criteria for fit indices were suggested as follows: > 0.95 for CFI and TLI, < 0.08 for SRMR, and < 0.05 for RMSEA (Hu & Bentler, 1999).

Table 1 Item Factor Loadings, Correlations with Social Desirability, and Cronbach's α for Final Items

Subscales 1–5	Factor Loadings	Coefficient r	Subscales 6–10	Factor Loadings	Coefficient r
1. Self healing			6. Protection for others outside the family		
Item 7	0.84	0.01	Item 15	0.84	0.12*
Item 9	0.85	0.10	Item 24	0.80	0.16**
Item 37	0.77	0.04	Item 26	0.82	0.11**
Item 12	0.75	0.04	Item 17	0.83	0.20**
Cronbach's α	0.86		Cronbach's α	0.86	
2. Self improvement			7. Protection for others inside the family		
Item 10	0.87	0.01	Item 3	0.74	0.17**
Item 16	0.92	0.14**	Item 14	0.87	0.11**
Item 18	0.90	0.09	Item 29	0.87	0.14**
Item 21	0.81	0.17**	Item 20	0.76	0.18**
Cronbach's α	0.92		Cronbach's α	0.87	
3. Healing for the other			8. Forgiveness as good in and of itself		
Item 6	0.86	0.16**	Item 4	0.81	0.20**
Item 13	0.91	0.19**	Item 33	0.75	0.19**
Item 39	0.92	0.19**	Item 38	0.87	0.20**
Item 34	0.86	0.20**	Item 2	0.74	0.15**
Cronbach's α	0.92		Cronbach's α	0.85	
4. Improvement for the other			9. Community harmony		
Item 23	0.90	0.12*	Item 8	0.84	0.18**
Item 36	0.91	0.15**	Item 11	0.87	0.12*
Item 40	0.88	0.15**	Item 27	0.90	0.19**
Item 22	0.81	0.13*	Item 1	0.65	0.15**
Cronbach's α	0.93		Cronbach's α	0.90	
5. Improved relationship with the other			10. Consistency with one's belief system		
Item 19	0.93	0.12*	Item 5	0.82	0.22**
Item 31	0.93	0.15**	Item 28	0.89	0.25**
Item 32	0.93	0.15**	Item 30	0.89	0.21**
Item 25	0.87	0.13*	Item 35	0.83	0.21**
Cronbach's α	0.95		Cronbach's α	0.90	

Bolded items are retained in the final EFMI. * $p < .05$. ** $p < .01$

As can be seen in Table 2, two-factor and four-factor solutions yielded a poor fit while the ten-factor solution showed an adequate fit meeting all cutoff criteria.

Construct validity in relation to forgiveness and psychological outcomes

Higher forgiveness motivations should be associated with a higher level of transgression-specific forgiveness which in turn is associated with psychological outcomes. We predicted positive relationships between the EFMI and hope, self-esteem, and human flourishing and negative relationships between the EFMI and anger and anxiety. As expected, the EFI that measures transgression-specific forgiveness was associated with both EFMI total and the 10 subscales at the p -value of less than 0.001, and the Pearson r coefficients ranged from 0.20 to 0.71 (see Table 3).

The EFI and EFMI had an r coefficient of 0.51, showing that forgiveness motivation as a whole adequately predicts forgiving one particular offender for a specific offense. Among the EFMI subscales, Subscale 9-Community harmony had the weakest association with transgression-specific forgiveness with the r of 0.20, while Subscale 5-Improved relationship with the other had the strongest association with the r of 0.71, which was interesting as both were categorized under relationship-directed motivation (see Fig. 1).

The EMFI had positive associations with Hope, $r = .31$, $p < .001$, Self-Esteem, $r = .13$, $p = .011$, and Human Flourishing, $r = .29$, $p < .001$. However, the EMFI was not associated with anger and anxiety. Note that both the EFMI and EFI were not associated with anger and anxiety in this sample despite their positive association with each other (see Table 4).

An analysis of age differences

We conducted a series of ANOVAs to see differences in forgiveness motivations across early (up to 39 years of age; $n = 161$), middle (up to 59 years of age; $n = 151$), and late (60 and above; $n = 96$) adulthood groups. Early adulthood had a mean EFMI of 122.35 ($SD = 31.33$), middle adulthood had a mean EFMI of 121.17 ($SD = 32.21$), and late adulthood had a

Table 2 Model Fit Indices: Two Dimensions, Four Types, and 10 Subscales of the 30-Item EFMI

Model	Chi-Square Test (df)	CFI	TLI	RMSEA (90% CI)	SRMR
Two-Factor Solution	3538.03 (404)	0.64	0.61	0.14 (0.13, 0.14)	0.12
Four-Factor Solution	2700.18 (399)	0.73	0.71	0.12 (0.12, 0.12)	0.15
Ten-Factor Solution	659.28 (360)	0.97	0.96	0.05 (0.04, 0.05)	0.04

Table 3 Correlations Between EFMI, 10 Subscales, and EFI

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. EFMI	--											
2. EFI	0.51	--										
3. Sub 1	0.64	0.25	--									
4. Sub 2	0.79	0.26	0.71	--								
5. Sub 3	0.81	0.64	0.35	0.48	--							
6. Sub 4	0.83	0.54	0.36	0.51	0.81	--						
7. Sub 5	0.72	0.71	0.31	0.40	0.75	0.74	--					
8. Sub 6	0.82	0.22	0.56	0.70	0.51	0.54	0.41	--				
9. Sub 7	0.76	0.26	0.50	0.56	0.50	0.51	0.42	0.74	--			
10. Sub 8	0.87	0.52	0.57	0.70	0.71	0.73	0.62	0.65	0.57	--		
11. Sub 9	0.79	0.20	0.49	0.62	0.52	0.55	0.39	0.79	0.66	0.60	--	
12. Sub 10	0.76	0.23	0.45	0.66	0.51	0.57	0.41	0.58	0.53	0.68	0.60	--

All coefficients were significant at the p -value of below 0.001. EFMI = Enright Forgiveness Motivation Inventory; EFI = Enright Forgiveness Inventory; Sub 1 = Subscale 1-Self-healing; Sub 2 = Subscale 2-Self-improvement; Sub 3 = Subscale 3-Healing for the other; Sub 4 = Subscale 4-Improvement for the other; Sub 5 = Subscale 5-Improved relationship with the other; Sub 6 = Subscale 6-Protection for others outside the family; Sub 7 = Subscale 7 - Protection for others inside the family; Sub 8 = Subscale 8- Forgiveness as good in and of itself; Sub 9 = Subscale 9-Community harmony; Sub 10 = subscale 10-Consistency with one's belief system

Table 4 Correlations Between EFMI and Psychological Outcomes

Variables	1	2	3	4	5	7	7
1. EFMI	--						
2. EFI	0.51**	--					
3. Hope	0.31**	0.09	--				
4. SE	0.13*	0.04	0.70**	--			
5. HF	0.28**	0.10*	0.82**	0.70**	--		
6. Anger	-0.02	-0.06	-0.49**	-0.50**	-0.47**	--	
7. Anxiety	-0.03	-0.08	-0.49**	-0.54**	-0.44**	0.70**	--

EFMI = Enright Forgiveness Motivation Inventory; EFI = Enright Forgiveness Inventory; SF = Self-esteem; HF = Human flourishing

* $p < .05$. ** $p < .01$

mean EFMI of 125.67 ($SD = 35.93$). One-way ANOVA comparing total EFMI scores across three age groups revealed no statistically significant difference in EFMI across the three age groups, $F(2, 405) = 0.57, p = .567$.

To compare age group differences across 10 subscales, we conducted a one-way MANOVA. We found statistical significance in the overall model, $F(20, 792) = 3.63, p < .001$, Wilks' Lambda (Λ) = 0.84, $\eta^2_p = 0.08$. Upon further analysis, we found that age differences were found only in Subscale 10- Consistency with one's belief system, $F(2, 405) = 7.17, p < .001, \eta^2_p = 0.03$. Tukey's HSD revealed that the statistically significant age group difference was between early adulthood and late adulthood in which those in late adulthood on average scored 2.16 points higher, with the mean of 13.76, compared to those in early adulthood with the mean of 11.60, $p < .001$. Those in late adulthood scored 1.41 points higher compared to those in middle adulthood with a mean of 12.35 as well, which was statistically significant, $p = .041$. The statistically significant difference for Subscale 10 was not found between early and middle adulthood groups. There were no other statistically significant differences between different age groups across other subscales. These findings are comparable to Pearson correlations between age and EFMI. Age and EFMI total scores were not statistically significantly associated ($r = .02, p = .633$), and out of the 10 subscales, only Subscale 10-Consistency with one's belief had a small positive association with age ($r = .17, p < .001$).

Additional analyses

Degrees of hurt

We analyzed the effect of degrees of hurt on both overall EFMI scores and Factor 8: Forgiveness as Good in and of itself (philosophically, the highest motivation). 41.4% of the participants ($n = 169$) indicated that the injustice they recalled caused a great deal of hurt (a score of 5) and 35.8% ($n = 146$) indicated much hurt (a score of 4). 13.2% indicated some hurt (a score of 3), 8.6% indicated a little hurt (a score of 2), and 1% indicated no hurt (a score of 1). A

one-way ANOVA resulted in no significant differences in Factor 8, $F(4, 403) = 1.25, p = .289$ and EFMI total scores, $F(4, 403) = 1.98, p = .098$ across different hurt levels.

Relationship with offenders

There were seven categories on who hurt (the relationship with the offender): Child, Spouse, Relative, Friend of same gender, Friend of the opposite gender, employer, and other. We combined the first three categories as family and the rest as non-family and performed a t-test to compare the effect of the relationship with the offender (family versus non-family) on EFMI total scores and Factor 8: Forgiveness as Good in and of itself. 45.8% of the participants ($n = 187$) chose the first three categories combined (family offender) while 54.2% ($n = 221$) chose the rest of the categories (non-family offender). Those who chose family categories had a higher level of forgiveness motivation indicated by both Factor 8 subscale scores (*Mean differences* = 1.17) and EFMI total scores (*Mean difference* = 9.76), and such differences were statistically significant with a $t(406) = 3.10, p = .002$ for Factor 8 subscale scores and a $t(406) = 3.03, p = .003$ for EFMI total scores.

Understanding of forgiveness

Participants were asked to choose from the eight options their definition of forgiveness, and the following two were philosophically capturing an accurate definition of forgiveness: "7. When people forgive, they try to reduce resentment and offer love to the other for the other's sake" and "8. When people forgive, they can let go of what happened to them and so it no longer bothers those who forgive." We assigned "1" to those who chose these two accurate definitions and assigned "2" to the rest and compared their motivation scores. First, 45.1% ($n = 188$) chose these two options (and so we assigned "1" to them) and the rest (53.9%, $n = 220$) chose other definitions. There were no statistically significant differences in both EFMI total scores, $t(406) = -0.33, p = .739$, and Factor 8 subscale scores, $t(406) = -0.23, p = .818$.

Discussion

This research study aimed to validate the EFMI with various forgiveness-related scales in the context of transgression-specific hurt. It also tried to explore the developmental pattern behind the scenes. First, we selected the best three items with the highest factor loadings among four items within each subscale. Second, we excluded the two-factor and four-factor solutions because of their poor fit while the ten-factor solution was ultimately chosen because it showed an adequate fit which met all cutoff criteria. Third, the EFMI scores presented evidence for sufficient internal consistency reliability, based on the adequate level of Cronbach's α of each subscale, and strong construct validity when related to the EFI and other psychological outcomes.

Concerning evidence for the relationships between EFMI and other related factors, all subscales were correlated with each other and the total EFMI was associated with forgiveness (EFI-30), hope, self-esteem, and human flourishing. The EFMI was not associated with anger and anxiety.

We identified that community harmony had the weakest association with actual forgiveness, and improved relationships had the strongest association with actual forgiveness. However, as Sandage and colleagues (2019) noted, forgiveness is often chosen for the sake of individualistic intrapsychic peace in the United States, where a Western individualistic culture prevails. In contrast, in collective cultures, people may seek more external forgiveness motivations, such as maintaining social harmony and restoring relationships. For residents in the United States, participants might be expected to prioritize inner peace and emotional well-being. Yet, it was surprising that they cared more about improved relationships. For those in Asia, community harmony is important, but not necessarily for many in the United States (culturally speaking). Therefore, further exploration is recommended on the concrete mechanisms by which forgiveness and culture interact in general, and specifically, why a United States sample here prioritized improved relationships.

In all, correlational findings suggest that various forgiveness motivations are associated with the actual practice of forgiveness, but forgiveness motivations have different associations with various forgiveness outcomes.

Concerning our exploration of age differences across different age groups, a one-way MANOVA did not show any clear age progression through various motivations, but we found a statistically significant difference for both early and middle adult groups when compared with the late adult group in the motivation for consistency with one's belief system, which indicates that those in late adulthood might care more about their desire to forgive to be consistent with their belief

system or important values in life. Neither Trainer (1981) nor Takada and Ohbuchi (2004) provided developmental patterns in forgiveness motivations; Enright et al. (1989) was the only study showing age progressions through various forgiveness motivations. However, in Enright et al. (1989), the sample did not include older adult groups, and forgiveness motivations were not measured using any validated scales. Compared to Takada and Ohbuchi (2013), who presented the most psychometrically adequate forgiveness motivation scale we had located, the EFMI seems to be a stronger choice for research as it is derived from a more logical and systematic origin with a stronger theoretical background as well as its evidence for content validity, internal structure, and relations with other variables and related consequences. Furthermore, given that religion often influences one's core beliefs and values, which includes one's desire to forgive (McCullough & Worthington, 1999), using the EFMI, we may further magnify the specific influence of religious factors on forgiveness motivations.

Concerning additional analyses performed, as reported, there was no interaction between the total EFMI and Factor 8: Forgiveness as Good in and of itself and different hurt levels. Hurt levels and forgiveness are expected to be associated as the deeper the wound, the harder it is to forgive. However, when it comes to the highest forgiveness motivation attempted to be measured through Factor 8, hurt levels might be overcome by the desire to forgiveness as good in and of itself. It should be noted that most participants indicated high levels of hurt, making the variability minimal across the sample. Thus, the non-significant results could be due to the lack of variability.

Concerning participants' relationships with offenders, participants showed a higher level of forgiveness motivations toward offenders who were family members (child, spouse, and relative) compared to non-family members in terms of both total EFMI scores and Factor 8 that indicates the highest or noblest forgiveness motivation, which is forgiving because it is good in and of itself. The forgiveness process often is facilitated by a considerable knowledgeable of the offender (Enright, 2015), and forgiveness tends to be higher within close relationships (Strelan et al., 2016). Forgiveness is mediated by empathy and compassion toward the offender (Enright, 2001; McCullough et al., 1997). Also, empathy is facilitated by apology which is more likely within a close relationship (McCullough et al., 1998; Strelan et al., 2016). These findings suggest that forgiveness motivations are likely to be higher toward family members about whom forgivers have more intimate knowledge and from whom they are more likely to have opportunities to receive apologies and restore trust, both of which may facilitate the development of empathy and compassion.

Finally, participants' understanding of forgiveness did not make a difference in their levels of forgiveness motivations though one's misunderstanding of forgiveness can prevent one from considering forgiveness (for instance, thinking of reconciliation as forgiveness). The moral virtue theory of forgiveness suggests that forgivers may start the process of forgiving with an imperfect knowledge of forgiveness (Enright & Fitzgibbons, 2015). To achieve the highest level of forgiveness, a correct understanding of forgiveness is crucial; however, forgivers may develop forgiveness motivations for various reasons that are not strictly tied to specific forgiveness definitions.

Limitations and future directions

There are at least two limitations to this study. First, the study was correlational in nature. We did not manipulate any variables in the study, so we could not establish causal relationships between the variables. Longitudinal or experimental studies could establish the temporal order between forgiveness motivations and forgiveness levels and ascertain whether or not the different forgiveness outcomes are truly influenced by different forgiveness motivations.

Second, we should bear in mind that all participants in the present study were native English speakers in a Western society. We might find differences in the relationship among the variables studied here when different cultures are considered.

Other future directions are as follows: First, forgivers' relationships with offenders seem to play a role, which has to be taken into consideration in both research and practice. Our findings suggest that those hurt within family contexts are more motivated to forgive and are more motivated to forgive as a moral good in and of itself relative to those participants hurt in a non-family context. Future research should examine if being hurt in family contexts presents opportunities to grow more deeply in forgiving. Even though family injustices might be more challenging because family members are supposed to be cooperative and loving, a paradox within the family context may be a more developmentally mature approach to forgiveness by becoming more motivated to forgive and growing in higher motivations to forgive.

One puzzling issue is that even when participants misunderstood the definition of forgiveness, they did not differ in their motivations to forgive. This requires more research. As one speculation, the context of the moral injury (for example, being hurt by family members or non-family individuals) may have greater influence on one's motivation to forgive than having an accurate or inaccurate understanding of forgiveness.

Conclusion

This research successfully validated the 30-item Enright Forgiveness Motivation Inventory (EFMI) with a good model fit for the 10-factor solution following the same strategies used in Kim et al. (2022c) that successfully validated the Enright Self-Forgiveness Inventory (ESFI). The EFMI subscales showed good internal consistency reliability up to 0.97 and were associated with transgression-specific forgiveness as well as other forgiveness outcome variables. The analysis of age differences did not show clear age progression through various motivations, though the forgivers' desire to be consistent with their belief system seems to matter more for those in late adulthood when compared with those in early adulthood. Furthermore, we found that the nature of the relationship with offenders seems to matter, while one's definition of forgiveness as well as the hurt level might not when it comes to what is prompting individuals to practice forgiveness. Further research on these factors in relation to forgiveness motivations and the actual practice of forgiveness is warranted.

In light of the evidence and discussions we provided above, we recommend the use of this newly developed measure of forgiveness motivation (EFMI) for future research and practice. Though more research to examine the clinical utility of EFMI is necessary, the knowledge of client motivations can be helpful in guiding them through the process of forgiveness. Also, through further research, researchers may expand our findings to uncover other interesting interactions between forgiveness motivations and forgiveness as well as other factors that facilitate or hinder the practice of forgiveness. Finally, one of the most widely used forgiveness measures, the Enright Forgiveness Inventory (EFI), does not measure forgiveness motivations, despite the fact that forgiveness motivations are essential to the concept of forgiveness. Now with the addition of EFMI, the EFI-30 and EFMI together may help researchers and clinicians measure forgivers' changes in affect, behavior, and cognition toward the offender as well as their various motivations to forgive.

Authors' contributions Robert Enright and Jacqueline Song created the initial Enright Forgiveness Motivation Inventory (EFMI); Yan Li conceived of the presented idea, created the conceptual framework as shown in Fig. 1, and collected data; Jichan Kim performed the main analyses and wrote a part of the introduction and the result section; Yan Li wrote the other parts of the manuscript with support from Robert Enright and Jichan Kim; Especially Robert Enright helped a lot as Yan Li's academic advisor; All authors read, discussed, and contributed to the final manuscript.

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Data availability The data used in this study are available upon reasonable request from the corresponding author.

Declarations

Exemption application approved This study has been determined to be exempt by IRB (2022-0416).

COI statement On behalf of all authors, the corresponding author states that there is no conflict of interest.

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