SPIRITUAL PSYCHOLOGY AND COUNSELING
spiritualpc.net / 2024 Volume: 9 Number: 3

Research Article

Personal Assets and Gratification Delay among Youths: Eudaemonic Well-being as a Potential Mediator

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eISSN: 2458-9675

Received: 04.02.2024
Revision: 18.05.2024
Accepted: 27.05.2024

Abstract

This study investigated the relationship between personal developmental assets, eudemonic well-being, and gratification delay among youths. The participants of the study were 614 students selected from secondary schools. Specifically, this study examined the model's fit to the data, the direct effect of personal assets on eudaemonic well-being and gratification delay; the contribution of eudaemonic well-being to gratification delay, and the indirect effect of personal assets on gratification delay. Data were collected using selected factors and items from the gratification delay, Ryff psychological well-being, and developmental asset profile scales. Data were analysed with confirmatory factor analysis and structural equation modelling. The result revealed that the model fits the data well. The personal asset has a considerable direct effect on both eudemonic well-being and the ability to delay gratification. In addition, eudaemonic well-being has a significant effect on the ability to delay gratification. Furthermore, eudemonic well-being partially mediates the relationship between personal assets and the ability to delay gratification. Personal asset has a direct and indirect significant effect on the ability to delay gratification. It is concluded that intervention that improves the personal assets and eudaemonic well-being of youths contributes to enhance the ability to delay gratification.

Keywords:
Personal developmental asset • Gratification delay • Eudaemonic Well-being • Youth • Positive Development

Citation: Dejenie, M. A., Getahun, D. A., & Abebe, A. S. (2024). Personal asset and gratification delay among youths: Eudaemonic well-being as a potential mediator. *Spiritual Psychology and Counseling, 9*(3), 221–240. http://doi.org/10.37898/spiritualpc.1431434

Introduction

The conception of positive youth development, well-being and gratification delay of adolescents has been the focus of attention among researchers for the last three decades (Burns et al., 2020; Dawd, 2017; Fehlbaum, 2020; Kumar & Pareek, 2018). Adolescence is a very important and influential age which is characterized by the development of values, social affiliations, interests and perseverance for long-term goals (Carvalho & Veiga, 2020; Russo-Netzer & Shoshani, 2020). One of the challenges that the growing individuals experience during this period is a lack of controlling impulses, deprived self-regulation and delayed gratification(Herndon et al., 2015; Krueger et al., 1996).

Gratification Delay

Success in the academic arena and demonstrating other thriving behaviours demands dedication to a long-term goal. Literature suggests that successful individuals are competent enough to regulate their emotions and delay gratification (Flook et al., 2015; Kim et al., 2020). Gratification delay is considered as the ability to sacrifice immediate rewards and sustain goal-oriented behaviour for the sake of long-term better rewards (Dawd, 2017; Doebel et al., 2020; Oriol et al., 2017). The term, gratification delay has been interchangeably used with self-regulation, impulse control, self-control, reduction in substance use and violent behaviour (Cheng & Catling, 2015; Hoerger et al., 2011; Michaelson et al., 2013). A study conducted by Dawd (2017) disclosed that the ability to delay gratification is a predictor of important life outcomes, including academic achievement, good health, and success. On the other hand, deficits in gratification delay are associated with a broad range of public health problems, such as risky sexual behaviour, bullying, and substance misuse (Herndon et al., 2015). Furthermore, studies documented that the ability to delay gratification and sustain goal-oriented behaviour is determined by the personal and ecological developmental asset profiles of children and youths(Scales et al., 2000, 2006, 2011).

Developmental Asset Profile

Developmental assets are considered, as building blocks which are related to lowered risk behaviour patterns and increased patterns of thriving behaviour among youths. They refer to the positive values, relationships, skills, and experiences that help youths thrive. Studies publicized that developmental assets can be internal/ personal and external or ecological. (Lerner et al., 2011; Benson et al., 2011).

The personal/internal asset on which this paper is focused denotes the intrapersonal skills, competencies, and self-perceptions of youths. It includes commitment to learning, positive value, positive identity, and social competence. Commitment to

learning denotes the appreciation of the importance of continuous learning and their belief in their capabilities, including achievement motivation, school engagement, bonding to school and reading for pleasure (Scales, 1999; Scales et al., 2006, 2011). Positive value is about possessing guiding principles which help youths make healthy life decisions, including caring, equality, integrity, honesty, and responsibility. Social competence denotes the skills that young people need to establish effective interpersonal relationships and adapt to novel or challenging situations, including planning and decision-making, interpersonal competence, cultural competence, resistance skills and peaceful conflict resolution (Benson et al., 2011; Scales, 1999; Scales et al., 2006, 2011). Positive identity is about a sense of control and purpose and recognition of own strengths and potential, including personal power, self-esteem, a sense of purpose and a positive view of the personal future (Scales, 1999; Scales et al., 2006, 2011).

The developmental asset profile-based model assumes that the greater the amount of positive experience the youths have, the greater the likelihood of controlling their emotion, self-regulation and delaying gratification (Leffert et al., 1998; Scales, 1999; Scales et al., 2006). Similarly, an experimental study conducted by Funder & Block (1989) documented that participants who exhibited the ability to delay gratification tended to be responsible, productive, ethically consistent, interested in intellectual matters, and overly controlled. However, those who are not able to delay gratification tend to be rebellious, unpredictable, self-indulgent, or hostile. Literature suggests that the ability to delay gratification is associated with the nature and extent of well-being youths exhibit (Guerra-Bustamante et al., 2019; Poon et al., 2021)clarity, and repair.

Eudaemonic Well-being

Eudaemonic well-being is conceived as the personal experiences associated with living a life of virtue in pursuit of human excellence. Correspondingly, eudaemonic well-being signifies the issues of meaning-making and being functional. In addition, unlike the hedonic orientation which involves seeking happiness, life satisfaction, positive affect, and reduced negative affect; the eudaemonia orientation embraces seeking authenticity, meaning, excellence, and personal growth (Huppert et al., 2013; Kesebir, 2018). In this paper, eudaemonic orientation is framed considering the psychological well-being model. Accordingly, three adapted constructs namely, environmental mastery (the ability to choose and create fitting environments for growth by utilizing one's ability to control both internal and external factors); purpose in life (overall meaningful direction for life); and self-acceptance (knowing, liking, and thus ultimately accepting, oneself) were considered (Van et al., 2008; Gao & McLellan, 2018; Thin, 2016)previous studies reported inconsistent findings of the reliability and validity of Ryff's Scales of Psychological Well-being (SPWB.

Studies documented that eudaemonic well-being is one of the factors that determine the ability of youths to delay gratification(Guerra-Bustamante et al., 2019; Kumar & Pareek, 2018). This implies that eudaemonic well-being might mediate the relationships between personal asset profile and the ability to delay gratification.

Personal Assets, Gratification Delay and Eudemonic Well-being

A series of studies revealed that the ability to delay gratification depends on the exposure of youths to the developmental asset profile. For example, a study conducted by Twito et al. (2019) indicated that adequate exposure to personal asset profile including possessing commitment to learning, positive identity and positive value is related positively to self-regulation and achievement which is a manifestation of gratification delay. Similarly, studies further demonstrated that promoting mastery of social and emotional core competencies plays a paramount role in positive youth development and preventing adolescents' engagement in risky behaviour (Valois, 2014). On the other hand, studies have shown that low self-control and poor gratification delay are risk factors for aggression and delinquency(Cheng & Catling, 2015; Erikson & Roberts, 1971). Likewise, youths who can delay immediate gratification were presented as ego-controlled, ego-resilient, conscientious, open to experience, and agreeable which signifies the characteristics of eudemonic well-being (Krueger et al., 1996).

Studies also publicised that gratification delay is associated with well-being. For example, a study conducted by Poon et al(2021)life flourishing, and lack of depressive symptoms. We collected four waves of data from 111 Hong Kong youths (75.7% male, mean age = 17.7 showed that delayed gratification was associated with well-being indicators. Similarly, Soares et al(2019) suggested that the cumulative effects of the total personal as well as each personal asset independently are positively correlated with eudaemonic well-being. As explicitly mentioned elsewhere, eudaemonic well-being is associated with both exposure to personal assets and the ability to delay gratification. Furthermore, since individuals with better well-being can manage themselves, well-being might mediate the relationships between personal assets and gratification delay (Dejenie et al., 2023).

Context of the Present Study

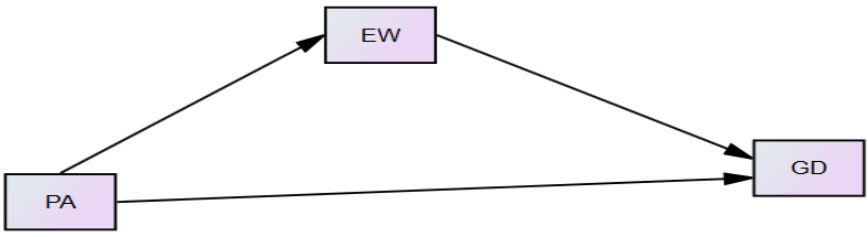
Regardless of the above evidence, scant empirical studies existed on the strength-based perspective of youth development in Africa. In addition, given that exposure to developmental asset profile, the manifestation of well-being and the ability to delay gratification of youths might be culture bounded. Thus, research findings based on the Western, Educated, Industrialized, Rich, and Democratic (WEIRD) societies might not be applicable in the African context (Dejenie et al., 2023, 2024).

In Ethiopia, given the existing inter-group conflict, war, poverty, unemployment and underemployment, youths might have been deprived of exposure to a personal asset profile. A study conducted by Oshri et al.(2019) suggested that exposure to socioeconomic hardship is associated with greater delayed reward discounting, a form of impulsive decision-making that reflects a reduced capacity to delay gratification and a significant correlation between various risky behaviours. Contradicting the above finding, another study revealed that engaging in risky behaviour provides experience that leads to greater patience for long-term rewards (Romer et al., 2010) such as sensation seeking, that increase during adolescence. Using a discounting of delayed reward paradigm, this research examines the ability to delay gratification as a potential source of control over risk-taking tendencies that increase during adolescence. In addition, it explores the role of experience resulting from risk taking as well as future time perspective as contributors to the development of this ability. In a nationally representative sample (n=900. In addition, studies also publicised that individuals who have been in harsh environments develop 'hidden talents' which enhance their social and cognitive abilities for solving problems (Ellis et al., 2022; Frankenhuis et al., 2020). The above contradictory findings implied that inconsistent presumptions exist on the relationships among experience with asset profiles, well-being, and gratification delay.

Despite the existence of the above-mentioned theoretical and empirical evidence in the area, little empirical study has been conducted in Africa. As far as the researchers' knowledge, a scant empirical study has been documented regarding the relationships between personal developmental assets, gratification delay, and eudaemonic well-being. Therefore, recognizing how personal asset construct is interrelated with the ability to delay gratification and eudaemonic well-being might be compulsory for designing interventions targeting youths.

Hence, based on the discussions made so far about Personal Assets (PA), Eudemonic Well-being (EW), and Gratification Delay (GD) as well as the relationships among these latent variables, we synthesized a new model which is indicated in Figure 1. The proposed model considers PA as an independent variable that affects both GD and EW. EW is presented as a mediator variable in the relationship between PA and GD. GD is considered as a dependent variable which is affected by PA directly and indirectly.

Figure 1:
Proposed Model



The variables indicated in the above model are latent or synthetic constructs in nature and thus require applying rigorous statistical models like structural equation modelling (SEM). Furthermore, while reviewing the existing literature, we have identified a lack of empirical evidence, scant literature in the African context and methodological gaps in the area. In addition, a study indicating how personal developmental assets are associated with the capability of delaying gratification and eudaemonic well-being is lacking. Hence, this study was conducted to examine how personal developmental assets, gratification delay and eudaemonic well-being constructs are intertwined.

This study was therefore intended to address the following hypothesis:

H1. Personal assets are positively and significantly correlated with eudaemonic well-being.

H2. Personal assets are positively and not significantly correlated with gratification delay.

H3. Eudaemonic well-being is positively and significantly correlated with gratification delay.

H4. Eudaemonic well-being fully mediates the relationship between personal assets and gratification delay.

Methods

Participants

In this study, grade ten, eleven, and twelve students of Bahir Dar City (urban) and nearby schools located in the rural setting have participated. In Bahir Dar City, participants were drawn both from private and public schools, while the participants from the rural settings were solely from public schools. 682 participants were selected from 12 schools, four from each group. In selecting the target participants from each group, school, grade level and section multistage sampling technique was used.

Measures

The construct gratification delay was measured using a scale validated by Espada et al (2019)psychological well-being, and social relationships. Although individual differences in delay of gratification begin to emerge in adolescence, few studies have tried to evaluate this construct in adolescents, especially in Spanish. The goal of this study was to validate the Delaying Gratification Inventory and to analyse its psychometric properties in Spanish adolescents. Method: Using a sample of 695 adolescents (M =

15.18, SD = 1.22 in a Spanish context and piloted in the context of the current study. The original scale consists of 35 items with five factors (food, physical, social, money and achievement) (Dawd, 2017; Hoerger et al., 2011)such as obesity, risky sexual behavior, and substance abuse. However, 6 decades of research on the construct has progressed less quickly than might be hoped, largely because of measurement issues. Although past research has implicated 5 domains of delay behavior, involving food, physical pleasures, social interactions, money, and achievement, no published measure to date has tapped all 5 components of the content domain. Existing measures have been criticized for limitations related to efficiency, reliability, and construct validity. Using an innovative Internet-mediated approach to survey construction, we developed the 35-item 5-factor Delaying Gratification Inventory (DGI. However, considering the socio-cultural differences of the study area relative to the country context on which the original instrument was validated, adapting this tool was required. Therefore, using pilot data collected from 258 participants, 35 items of the gratification delay scale were subjected to principal components analysis (PCA). Before performing PCA, the suitability of the data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of many coefficients of .3 and above. The Kaiser Meyer-Olkin value was .72, exceeding the recommended value of .6 and Bartlett's Test of Sphericity reached statistical significance, supporting the factorability of the correlation matrix (Mclean & Ernest, 1998).

Principal components analysis revealed the presence of four components with eigenvalues exceeding 1, explaining 23.5%, 15.87%, 11.86% and 8.6% of the variances respectively. An inspection of the scree plot revealed a clear break after the third component, and thus it was decided to retain three components for further investigation. The three-component solution explained a total of 58.36% of the variance. Accordingly, only nine items with a commonality coefficient of .45 or above and showing strong loadings (.5 or above) and loading substantially on only one component were considered. Correspondingly, two of the factors were also discarded and thus only three factors were considered.

For measuring youths' experience of personal developmental assets, a Developmental Assets Profile (DAP) scale developed by Search Institute in 2005 (Scales et al., 2011) and piloted in the current study context was used. The original scale consists of 32 items with four factors namely, positive value, positive identity, commitment to learning, and social competence. Considering the contextual differences of the current study area, adapting this instrument was required. Thus, using pilot data collected from 258 participants, the 32 items were subjected to principal component analysis (PCA). Before performing PCA, the suitability of data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of many coefficients of .3 and above. The Kaiser Meyer-Olkin value

was .88, exceeding the recommended value of .6 and Bartlett's Test of Sphericity reached statistical significance, supporting the factorability of the correlation matrix (Mclean & Ernest, 1998). Principal component analysis revealed the presence of six components with eigenvalues exceeding 1. An inspection of the scree plot revealed a clear break after the third component, and thus it was decided to retain three components for further investigation. The three-component solution explained a total of 54.6% of the variance. Accordingly, only three of the personal developmental asset factors, namely positive identity, commitment to learning and social competence were considered. However, only seven items with a commonality coefficient of .45 or above and showing strong loadings (.5 or above) and loading substantially on only one component were selected.

Concerning the eudaemonic well-being construct, contextualized items from Ryff's(1995) psychological well-being scale with six factors were used (Ryff et al., 1995). The original six-factor scale namely, Autonomy, Personal growth, Environmental mastery, Purpose in life, Positive relationship with others and self-acceptance were subjected to principal components analysis (PCA). Before performing PCA, the suitability of data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of coefficients of .3 and above. The Kaiser Meyer-Olkin value was .73, exceeding the recommended value of .6 and Bartlett's Test of Sphericity reached statistical significance, supporting the factorability of the correlation matrix (Mclean & Ernest, 1998). Hence, only ten items with a three-component solution (environmental mastery, purpose in life and self-acceptance) that explained a total of 50% of the variance and with a commonality coefficient of .45 or above and showing strong loadings (.5 or above) and loading substantially on only one component were considered.

Data Analysis

AMOS 28 was used for computing the confirmatory factor analysis (measurement model) and structural equation modelling (SEM). SEM is a well-known statistical technique that has become an indispensable tool for academics and practitioners. Literature unfolded that SEM is a statistical technique which is particularly well appropriate for assessing the relationships among observed and latent variables and is primarily applicable for model and theory testing as well as scale development(Mcquitty & Wolf, 2015; Ockey & Choi, 2015). Given that this study intends to examine the relationships of the structural and measurement models between and within developmental assets, eudaemonic well-being and gratification delay, the researchers used SEM for analysing the data.

Though data were collected from 682 participants, 57 questionnaires were incomplete and thus discarded. The remaining 625 questionnaires were encoded;

however, while checking for the univariate and multivariate assumptions 11 cases were found to be multivariate outliers and thus deleted. Hence, the analysis was done based on the data collected only from 614 secondary school students. In addition, based on a preliminary analysis of the final data, items which indicated low loading with the corresponding factor were discarded. Furthermore, after checking the convergent and discriminant validity of the final data using the average variance extracted technique one factor from the gratification delay was discarded(Alarcón et al., 2015). Therefore, the analysis was done based on two factors for the gratification delay and three factors for the eudaemonic well-being and personal assets.

Table 1.
Demographic Information of the Participants (N=614)

Characteristics		Frequency	Percentage
Gender	Male	317	51.6
	Female	297	48.4
Grade Level	Grade Ten	204	33.2
	Grade Eleven	203	33.1
	Grade Twelve	207	33.7
Resident	Rural	210	34.2
	Urban (Bahir Dar City)	404	65.8
School type	Private	208	33.9
	Public rural	209	34.0
	Public urban	197	32.1

Age: Mean= 17.95; Minimum=15; Maximum=25

As shown in Table 1, majority of the participants (51.6%) are males. In terms of grade level, the participants are approximately equal. However, concerning resident 65.8% are from urban schools (both private and public schools).

Results

Measurement Model

As part of evaluating the measurement model, the convergent and discriminant validity was checked. Regarding the convergent validity, the standardized loadings were significant, and most loadings were above 0.71, which indicates that the latent variables explain more than 50% of the variance for most indicators. This revealed reasonable convergent evidence. Concerning the discriminant evidence, the cross-loadings between indicators and other latent variables were examined. It is demonstrated that indicators load considerably higher on the latent variables they measure than on other latent variables. From the results of Modification Indices, no Modification Indices for cross-loading are significant which indicates good discriminant evidence(Alarcón et al., 2015; Wang et al., 2015; Reichardt & Coleman, 2010).

CFA was carried out with respective dimensions of GD, PA, and EW to assess the parameter estimates and the overall fit of the measurement model to the data. In this

study, the commonly used fit indexes, namely chi-square (CMIN/DF), goodness of fit index (GFI), adjusted goodness of fit index (AGFI), comparative fit index (CFI), standardized root mean squared residual (SRMR), and root mean square error of approximation (RMSEA) were used to assess the degree to which the measurement model fits the data.

Table 2:
AMOS outputs on the fitness indices of the measurement model against the criteria

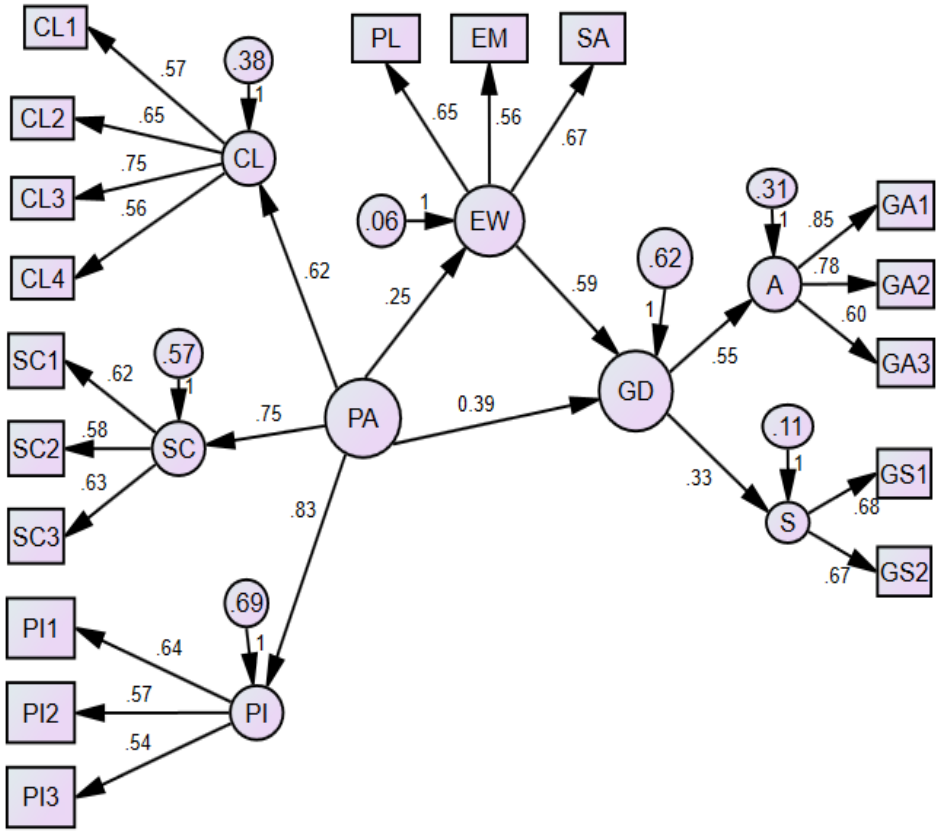
Criteria	PA	EW	GD	Cutoff
Relative chi-square (CMIN/DF)	2.51	2.21	1.92	<5
Goodness of fit index (GFI)	.98	.98	.99	>.90
Adjusted goodness of fit index (AGFI)	.97	.96	.98	>.90
Comparative fit index (CFI)	.98	.98	.99	>.90
Standardized root mean squared residual (SRMR)	.05	.06	.06	<.08
Root mean square error of approximation (RMSEA)	.04	.04	.03	<.06

As it has been indicated in Table 2, the measurement model satisfied all the fit indices. To all the latent constructs (PA, EW, and GD), the chi-square test (CMIN/DF) is below 5; GFI, AGFI and CFI are all above .9. In addition, the SRMR and the RMSEA are lower than the cutoff (.08) and (.06) respectively, for all factors (Hooper et al., 2008; Hu & Bentler, 1999; Mcquitty & Wolf, 2015). This implies that the model fits the data well.

Structural Equation Modelling (SEM)

In the full structural equation model presented below, gratification delay with two factors and personal asset with three factors were treated as endogenous and exogenous constructs respectively, whereas eudemonic well-being with three factors was treated as a mediator.

Figure 2:
Structural and Measurement Model



Note: PA (Personal Asset); EW, (Eudaemonic well-being); GD (Gratification delay); A (Achievement); S (Social); PL, (Purpose in life); EM (Environmental Mastery); SA (Self-acceptance); PI (positive identity); SC (Social competence); Cl (Commitment to learning).

Table 3.
AMOS outputs on the fitness indices of the Structural Equation Modelling (SEM) against the criteria

Criteria	Obtained Value	Cutoff
Relative chi-square (CMIN/DF)	3.14	<5
Goodness of fit index (GFI)	.94	>.90
Adjusted goodness of fit index (AGFI)	.92	>.90
Comparative fit index (CFI)	.92	>.90
Standardized root mean squared residual (SRMR)	.07	<.08
Root mean square error of approximation (RMSEA)	.043	<.05

As presented in Table 3, the SEM output satisfied all the fit indices. The chi-square test (CMIN/DF) is below 5; GFI, AGFI and CFI are all above .9. In addition, the SRMR and the RMSEA are also lower than the cutoff (.08) and (.06) respectively, for all factors (Hooper et al., 2008; Hu & Bentler, 1999; Mcquitty & Wolf, 2015) This implies that the full model fits the data well.

Table 4:
Unstandardized and standardized regression weights of the measurement model

Parameters/dimensions			Unstandardized				Standardized
Estimate S.E.			C.R.	P	Estimate		
Social	<---	GD	1.000				.33
Achievement	<---	GD	.478	.128	3.74	***	.56
Social Competence (SC)	<---	PA	1.000				.83
Positive Identity (PI)	<---	PA	.834	.118	7.06	***	.75
Commitment to learning (CL)	<---	PA	.934	.128	7.29	***	.62
Environmental Mastery (PL)	<---	EW	1.000				.65
Self-acceptance (SA)	<---	EW	.711	.073	9.74	***	.56
Purpose in life (PL)	<---	EW	.884	.087	10.20	***	.67

Note: *P<.05; **P<.01; ***P< .001; FO (first order)

As shown in Table 4, the regression weights of all the dimensions of GD, PA, and EW are significant with the critical ratio test greater than ±1.96, at p< .05. Similarly, the standardized regression weights of all dimensions in the measurement model were significantly represented by their respective latent variables. Specifically, the standardized regression weights of the second-order latent factors in the measurement model range from .33 (social dimension of the GD Construct) to .83 (Positive identity, in the PA construct). This implies that the measurement model explained the respective second-order constructs ranging from 33% to 83%. This, in turn, reveals that the first-order factors were significantly represented by their respective latent variables at p<.05. Furthermore, the standardized regression weights of the EW dimensions were significantly represented by their respective latent variables with standardized regression estimates ranging from .56 (self-acceptance to .67(purpose in life).

Relationships among DG, PA, and EW Constructs

Table 5:
Correlation coefficients of GD, PA, and EW

Latent variables			Unstandardized				Standardized
Estimate S.E.			C.R.	P	Estimate		
PA	-->	EW	.46	.09	5.16	***	.25
PA	-->	GD	.52	.06	8.67	***	.39
EW	-->	GD	.34	.07	4.85	***	.59

Note: *P<.05; **P<.01; ***P< .001

In the hypothesized model in Figure 2, the circles represent latent variables, and the rectangles represent measured variables. The absence of a line connecting variables implies a lack of a hypothesized direct effect. The hypothesized model examined the predictors of the ability to delay gratification. Gratification delay was a second-order latent construct with 2-factor indicators (achievement and social). It was hypothesized that exposure to personal assets, a latent variable with 3 latent factor indicators (social competence, positive identity, and commitment to learning) directly predicted

the ability of gratification delay. Additionally, it was hypothesized that exposure to personal assets directly predicts eudemonic well-being and eudemonic well-being with 3 observed variable indicators (environmental mastery, self-acceptance, and purpose in life) also directly predicts the ability to delay gratification. Furthermore, eudemonic well-being was examined as a mediator factor between personal assets and gratification delay.

As shown in Table 5, at 0.05 level of significance, a positive and statistically significant relationship is indicated among GD, PA, and EW constructs with standard regression weights ranging from .25 to .59. Specifically, PA had positive standardized regression weight with GD (β = .39) and EW (β= .25). Similarly, EW is positively and significantly correlated with GD (β=.59). The above finding implies that the three latent constructs in the structural model are significantly interrelated.

Based on the structural model in Figure 2, we examined the direct, indirect, and total effects of the independent (PA) and mediator (EW) factors on the dependent variable (GD) using bootstrapping. Accordingly, as shown in Table 5, the paths pointing from PA to EW (β =.25, $p<.01$) and GD (β =.39, $p<.01$) have positive standardized regression coefficients indicating that PA significantly predicted both EW and GD. Unlike our hypothesis for a non-significant contribution of PA to GD, the standardized regression coefficients also indicated that PA had a more direct effect on GD than EW. In addition, despite its significance, the square multiple correlation was .06 for the EW construct, indicating that PA explains only 6% of the variance in EW.

The path that links EW and GD with a standardized coefficient (β =.59, $p<.01$) indicates that GD was significantly predicted by EW. The squared multiple correlation for GD construct also revealed that 62% of the variance in GD was predicted by the joint effects of PA and EW, whereas the rest 38% of the variation in GD was attributed to the residual that couldn't be explained by the model. Correspondingly, PA had an indirect significant effect on GD through the mediation of EW with a standardized regression coefficient (β = .15, $p<.01$). Furthermore, the total effect of the model is (β= .54, $p<.01$). In general, findings show that PA has a significant direct, indirect, and total effect on the ability to delay gratification. However, contrasting our hypothesis of a full mediation, the relationship between exposure to PA and the ability to GD is partially mediated by the EW which implies that H4 is not supported.

Discussion

The structural model depicted that the ability to delay gratification is meaningfully explained by the joint effect of personal assets and eudaemonic well-being. This finding is consistent with our hypothesis and is supported by evidence. For example, previous studies have shown that the ability to delay gratification and sustain goal-

oriented behaviour is determined by the personal and ecological developmental asset profiles of youths (Scales et al., 2006, 2000, 2011). Similarly, it is supported by studies which indicate that the greater the amount of positive experience the youths have, the greater the likelihood of controlling their emotion, self-regulation and delaying gratification (Leffert et al., 1998; Scales, 1999; Scales et al., 2006).

The current finding is also supported by a study conducted by Krueger et al.(1996) which unfolded that youths who can delay gratification are ego-controlled, ego-resilient, conscientious, open to experience, and agreeable. Likewise, this finding is consistent with studies which demonstrated that low self-control and deprived gratification delay are risk factors for aggression and delinquency(Cheng & Catling, 2015; Erikson & Roberts, 1971). Furthermore, the current finding is consistent with what Funder and Block (1989) enlightened which stated that youths who exhibited the ability of gratification delay tended to be accountable, ethically consistent, productive, and overly controlled; however, those who are unable to delay gratification exhibits disobedient and self-indulgent. This implies that fruitful development is linked to the experience with assets, and the more personal assets the youth reveal the better gratification delay capability they would exhibit.

The correlation between eudaemonic well-being and gratification delay was also significant as presented elsewhere. This finding is also supported by evidence. For instance, a study conducted by Poon et al.(2021)life flourishing, and lack of depressive symptoms. We collected four waves of data from 111 Hong Kong youths (75.7% male, mean age = 17.7 showed that delayed gratification was associated with well-being indicators. Correspondingly, Soares et al.(2019) suggested that the cumulative effects of the total personal as well as each personal asset independently are positively correlated with eudaemonic well-being. Moreover, this finding is consistent with a study conducted by Oshri et al.(2019) which suggested that exposure to socioeconomic hardship is associated with greater delayed reward disregarding, which is a form of thoughtless decision-making that reflects a reduced capacity to delay gratification and a significant correlate of various risk behaviours.

However, the current finding's relationship with studies which suggested that passing through challenging environments improves tolerance and in turn, the ability to delay gratification is not clearly shown in this study. For example, it does not clearly show how it is linked with a study which revealed that engaging in risky behaviour provides an experience that leads to greater patience for long-term rewards(Romer et al., 2010)such as sensation seeking, that increase during adolescence. Using a discounting of delayed reward paradigm, this research examines the ability to delay gratification as a potential source of control over risk-taking tendencies that increase during adolescence. In addition, it explores the role of experience resulting from risk

taking as well as future time perspective as contributors to the development of this ability. In a nationally representative sample (n=900. Furthermore, given the design of the current study, this finding's relationship with studies which has shown that individuals who have been in harsh environments develop 'hidden talents' is not explicitly supported (Ellis et al., 2022; Frankenhuis et al., 2020).

Concerning the mediation, the structural equation modelling output revealed that personal asset is considerably linked with both eudaemonic well-being (the mediator) and gratification delay (the dependent variable). In addition, eudaemonic well-being is also substantially connected with gratification delay. This implies that there is a partial mediation because there is a significant relationship between the independent and dependent variables controlling the mediator too. This essentially contrasts with our hypothesis for a full mediation. However, this finding is supported by empirical evidence. For instance, Bembenutty (2022) showed that experience with developmental assets is related to the ability to delay gratification and other thriving behaviours. This finding is also consistent with a study which indicated that gratification delay is positively and strongly correlated with sustaining motivation and academic success (Benson et al., 2011).

Given the direct, indirect, and total substantial effect results of the structural equation modelling, the researchers concluded that the ability to delay gratification is highly determined by the personal asset and eudaemonic well-being. Working on improving the personal asset context of youths and enhancing their eudaemonic well-being contributes to optimizing the potential to delay gratification. Therefore, parents, teachers, and governmental organizations such as the Ministry of Education, Ministry of Health, Ministry of Women, children and Social Affairs and NGOs working to strengthen the positive development of youths shall give due attention to cultivating the personal asset profile and enhancing eudaemonic well-being.

Despite its contribution in demonstrating the interplay among exposure to personal assets, eudaemonic well-being and gratification delay, this study has limitations. First, cross-sectional data were used which did not show age-related changes. This study also utilized only quantitative data which did not show the participants' unique experiences. Finaly, the study's sample size and demographic characteristics may limit the generalizability of the findings.

Considering the above-mentioned limitations, the following recommendations were suggested. Parents, teachers, and school administrators shall give due attention to cultivating the personal assets of students, including positive identity, commitment to learning, and social competence so that students will display thriving behaviour, including the ability to delay gratification and engage in academic competence. A subject focusing on personal development shall be developed and given to secondary

school students. In addition, clubs working on personal development track shall be initiated in each secondary school. Each textbook prepared for students shall integrate personal development ingredients to be incorporated with the content of the subject matter. How the personal asset experience of youths passing through a 'harsh environment' and those living with a "normal condition" is linked with the ability to delay gratification is subject to further investigation. Furthermore, a study demonstrating the causal relationships between eudaemonic well-being and gratification delay is suggested.

Acknowledgement. We deeply acknowledge the participants, data collectors and data clerks for their cooperation and commitment to the success of this study.

Ethical approval. This study was conducted considering the ethical procedures. First, a letter of collaboration was obtained from Postgraduate, Research and Community Service office of the College of Education, Bahir Dar University. The purpose of the study was explained to the participants and how they were selected. Participation was solely voluntary based, and the participants were asked for their consent.

Authors' contribution. All authors contributed to the study's conception and design. Material preparation, data collection, analysis and the first draft were performed by Meseret Ayalew. Dawit Astrat (PhD) and Amare Sahle (PhD) edited and commented the manuscript. All authors read and approved the final manuscript.

Peer-review. Externally peer-reviewed.

Funding. The data collection process of the dissertation from which this paper is derived was sponsored by College of Education, Bahir Dar University.

Disclosure statement. This study is derived from the dissertation titled "Developmental Assets, Well-being and Thriving" (2024); by Meseret Ayalew Dejenie. All authors declare that no actual or potential conflict.

Data availability statements. The data that support the findings of this study are available on request from the corresponding author.

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