



The direct and interactive effects of materialism and hope on the well-being of Nigerians

Aaron Adibe Agbo¹, Christopher Ndubisi Ngwu², & Nkechi Gloria Onah³

¹Department of Psychology, University of Nigeria, Nsukka, Enugu State, Nigeria.

²Department of Social work, University of Nigeria, Nsukka, Enugu State, Nigeria.

³Department of Religion and Cultural Studies, University of Nigeria, Nsukka, Enugu State, Nigeria.

ARTICLE INFO

Keywords:

Hope
Materialism
Hedonic Well-Being
Eudaimonic Well-Being
Happiness

ABSTRACT

The individual influences of hope and materialism on subjective well-being have received substantial attention from scholars. However, most of the studies in this area were largely conducted in developed nations. Underdeveloped countries like Nigeria have remained understudied. In addition, despite apparent possible relationship between hope and materialism, there is dearth of studies on their possible interactive effect on well-being. Thus, the present study examined the independent as well as the joint influences of hope and materialism on the different dimensions of subjective well-being among Nigerians. Using a survey method, 325 undergraduates, comprising 208 females and 177 males, aged between 17 years and 37 years, with mean age of 22.19 (SD = 4.71), completed measures of hope, materialism, and subjective well-being. Data was analysed with regression technique. Consistent with previous findings, result confirmed the positive influence of hope on well-being. However, agency hope was a stronger predictor of well-being than the pathway hope. Interestingly and contrary to the popular perspective that materialism is often inimical to well-being, result revealed positive influence of materialism on flourishing and positivity. Generally, findings provide support for a theoretical perspective on the influence of hope and materialism that accommodates the importance of cultural variations and unique population characteristics. Implications of the findings and suggestions for future studies were discussed

Introduction

Subjective well-being, which is defined as “the appreciation of one’s personal condition or one’s subjective enjoyment of life as a whole” (Pleeging et al., 2021, pp. 1021), has been shown to positively potentiate numerous desirable dispositions and behaviours (see De Neve et al., 2013; Howell et al., 2007). Consequently, there is a concerted effort towards unravelling factors that can potentiate or hinder the experience of subjective well-being across populations and cultures. Dispositional hope and materialism appear to feature prominently in this effort. Their relationships with different aspects of well-being appear to have gained extensive attention (see Diener & Bis-was-Diener, 2002; Kasser, 2018; Pleeging et al., 2021). However, the greater part of the findings in this area is from developed nations, which raises the question of their applicability in underdeveloped nations like Nigeria. This concern is heightened by the findings that variations in subjective well-being, hope, and materialism may not be immune from the influences of culture and other social circumstances (see Diener et al., 2003; Griffin et al., 2004; Panter-Brick & Eggerman, 2012; Pleeging et al., 2021; Richins, 2017; Suh & Oishi, 2004). Concerning materialism, Richins (2017) stated, “the development and expression of materialism is culture-specific” (p. 2). Similar view applies to both hope and subjective well-being (see Averil &

Sundararajan, 2005; Diener et al., 2003; Flores-Lucas et al., 2018). The apparent implication of this is that the pattern of relationship among these variables may not hold consistently across cultures and populations. It is therefore important to advance the studies into underdeveloped and understudied populations like Nigeria. Findings from such studies will not only help fill the gap in the quantity of studies between the two worlds but, more importantly, it will help in providing insight into the cross-cultural pattern of relationship among the variables.

Furthermore, we also observed the dearth of literature on the possible joint effect of hope and materialism on well-being. Both variables might be conceptually different, but a closer look into their underlying theoretical roots and characteristics show some possible nexus of intersections that suggest that they might have interactive effect on well-being. For instance, common in the conceptualization of both variables is the idea that they are motivational in nature and goal oriented (see Sirgy et al., 2013 and Snyder, 2002). Thus, the aim of the present study is two-pronged. First, we aim to examine the roles of hope and materialism among Nigerians with the view to filling the gap in what we already know vis-à-vis findings from other climes. Second, we also sought to explore possible joint effects of hope and materialism on subjective well-being. In pursuing these aims, we took into

consideration the dimensional nature of hope and well-being. We adopted the dimensional approach in order to gain fine-grained insight into the actual pattern of relationship among the variables. Next, we start by exploring the relationship between hope and well-being.

Hope and well-being

According to Pleeging et al. (2021), the theory of hope, as enunciated by Snyder, views hope as “a cognitive, goal-oriented, pattern of thought in which people come up with different 'pathways' to achieve their goals, remain motivated to follow the pathways, and actively look for alternative pathways to these goals” (pp. 1020). Although Snyder's view is not the only existing conceptualization of hope, most of the perspectives seek to describe a kind of personality disposition that explains individuals' ability to conceive goals and actively, creatively, and purposefully pursue the goals. Thus, hope involves setting of goals, active participation in the achievement of the goals, and the associated positive experiences that arise in the hope process (Pleeging et al., 2021). From the foregoing, the general role of hope in the feelings of well-being can be readily deduced.

Generally, hope is made up of indicators that are positively associated with well-being. The prospect of attaining set goals arouses positive feelings and increases the sense of meaningful living (Pleeging et al., 2021). According to Snyder et al. (1997), hope gives individuals a sense of something to live for, which is at the core of the construct of meaning in life, a strong indicator of eudaimonic well-being (see Diener et al., 2010 and Heikamp et al., 2014). Aside from its direct impact on well-being, hoping also allows individuals to savour other desirable behaviours that progressively emerge along the hope latitude (Snyder et al., 1997). Pleeging et al. (2021) outlined additional routes through which hope positively potentiates well-being. The authors argued that hopeful people are more likely to identify opportunities that help them achieve their goals, which in turn make them happy. Relying on the broaden-and-build theory of emotion (see Fredrickson, 2001), the authors equally argued that hope broadens positive emotions which in turn enhances subjective well-being because people who feel good are usually more open to new situations, relationships and impressions and are, therefore, more likely to gain more experience and skill.

They also pointed out that the positive effect of hope on coping and resilience helps people experience fewer negative experiences thereby boosting their feelings of subjective well-being. Murphy (2023) summarized the reasons and processes through which hope enhances well-being in the following words: “increasing one's capacity to find different pathways to the desired goal, increasing their confidence, and their agency should theoretically lead them to make decisions that produce favourable outcomes. These positive outcomes, and the process of attaining them can increase one's subjective well-being by promoting more positive emotional experiences than unpleasant experiences” (p. 2).

However, there are concerns that the different

dimensions of hope may exert different patterns of influence on well-being (Pleeging et al., 2021). Pleeging et al. (2021) are of the opinion that the agency aspect of hope is more likely to exert a stronger positive influence on well-being than the expectation aspect of hope. It is argued that positive expectations, for instance, if not properly managed, can lead to negative consequences. People with high expectations can easily get disappointed and discouraged than others when expectation fails to materialize. Observably, whereas the idea that hope is positively associated with well-being is almost like a truism in the literature, the actual pattern, and comparative influences of the different dimensions of hope on the different forms of well-being is only beginning to gain attention (see Pleeging et al., 2021).

The possibility that the different dimensions of hope may not command similar effect on the different dimensions of well-being can be glimpsed from Snyder's (1997) two-dimensional theory of hope. According to the theory, hope is made up of two major dimensions, namely agency hope and pathway hope. Agency hope refers to individuals believe in their capacity to pursue their set goals and achieve it, whereas pathway hope refers to one's belief that one can articulate or find multiple opportunities or routes through which one can use to reach one's goal (Snyder, 2000). Although Murphy (2023) concluded after a review of findings on the relationship between hope and well-being that both dimensions of hope are positively associated with psychological, subjective, and mental well-being, there are indications that both dimensions may not have equal influence on the three major dimensions of subjective well-being, namely affect, life satisfaction, and eudaimonic well-being. Pleeging et al. (2021) argue that the different dimensions of hope differ in their capacity to engage individuals in the hope process; hence, are likely to differ in their ability to elicit those positive experiences that lead to subjective feelings of well-being. According to the scholars, those hope dimensions that have more “passive characteristics of positive expectations have less of an impact on subjective well-being than a more agentic hopeful disposition” (Pleeging et al., 2021, pp. 1019). Thus, given that agency hope appears more agentic than pathway hope, one expects agency hope to exact stronger influence on subjective well-being than pathway hope. Consistent with this view, Pleeging et al. (2021) found that agency hope is a stronger predictor of life satisfaction, positive affect, and negative affect than other dimensions of hope. However, whether this assumption holds for eudaimonic well-being is still unknown.

Although all the dimensions of subjective well-being usually correlate significantly with each other, they do not always relate equally or similarly to other factors across cultures, and there is evidence that this might be true for hope, particularly (Disabato et al., 2016). In a cross-cultural examination of the validity of the classification of subjective well-being into hedonia and eudaimonia, Disabato et al. (2016) found that hedonia and eudaimonia almost related equally and similarly to most of the relevant predictors of well-being in most of the cultures, but differed in their relationship with hope. They

also observed that this differential relationship with hope was partly dependent on culture. Thus, in addition to the fact that the comparative influence of both dimensions of hope on eudaimonia is largely unknown, the foregoing finding is an indication that Pleeging et al. (2021) findings on the relationship between the two forms of hope and hedonic well-being may not be sacrosanct across cultures. However, given the dearth of studies in this area among the current study population, we refrain from hypothesizing on the likely direction of the result. We take an explorative approach and observe the pattern of relationship among the variables.

Materialism and well-being

Materialism represents the belief that material wealth is positively associated with success, happiness, and enhanced self-worth (Kashdan & Breen, 2007). Materialistic people are often likely to believe that their happiness is dependent on how much of the material and tangible luxuries they have (Tsang et al., 2014). They are often inclined towards consumerism (Burroughs & Rindfleisch, 2002). The common perspective in the literature is that materialism is detrimental to well-being (Burroughs & Rindfleisch, 2002; Kasser & Ahuvia, 2002; Dittmar et al., 2014; Kasser et al., 2014; Tsang et al., 2014). It is argued that excessive focus on materialism undermines happiness (Belk, 1985) and life satisfaction (Richins & Dawson, 1992). Its negative impact on well-being seems to arise partly from its positive influences on negative experiences such as depression (Kasser & Ryan, 1996), loneliness (Pieters, 2013), and low self-esteem (Christopher et., 2009).

The theoretical explanation of the negative impact of materialism on well-being is locatable in the self-determination theory of motivation. The theory divides motivation into two major dimensions – intrinsic motivation and extrinsic motivation. Whereas intrinsic motivation refers to the desire to engage in an activity because of the inherent joy and satisfaction that one derives in engaging in the activity, extrinsic motivation refers to the drive to engage in activity because of associated rewards attached to such activity (Ryan & Deci, 2000). Self-determination theory contends that inappropriate focus on tangible and material rewards, such as monetary incentives, undermine well-being (Ryan & Deci, 2017), a position that has been consistently confirmed by studies (Ryan & Deci, 2000; Deci & Ryan, 2008; Schmuck et al., 2000; Ryan et al., 1999). As observed by Kasser and Ryan (1996), when people become highly absorbed in thoughts to acquire material possessions, two related routes that are antagonistic to well-being are likely to emerge. First, such obsession undermines individuals' ability to attend to other necessary personal and social needs, such as positive interpersonal relationships (Kasser and Ahuvia, 2002). Second, as espoused in self-determination theory, excessive focus on extrinsic desires hinders the manifestation of intrinsic motives, such as the desire for competence and satisfying relationship (Deci & Ryan, 2008; Kasser, 2016; Ryan & Deci, 2000). Materialism, although not often explicitly stated, arguably shares a lot in common with extrinsic motivation (Unanue et al., 2014).

Interestingly, however, there are suggestions that materialism could lead to positive feelings of well-being under some conditions. This idea arises from the fact that satisfaction and attainment of some material needs is necessary for the feelings of well-being to manifest. For instance, Richins and Rudmin (1994) argue that materialism is likely to promote well-being in poorer populations. The idea is that some basic material needs, such as food, shelter, and security, are not just desired for pleasure, but are necessities of life. Unfortunately, they are scarce in underdeveloped nations. Hence, there is the likelihood that the desire for materialism might be higher in such populations, but the hope associated with the possibility of acquiring such material needs are likely to lead to satisfying feelings and positive experiences instead of negative experiences. Interestingly, some findings provide support for this view. Diener et al. (2010) found that the fulfilment of basic needs significantly predicted life evaluation. Tay and Diener (2011) took the study further by explicitly looking at the direct effect of needs on subjective well-being around the world. While confirming Diener et al. (2010) findings, they further averred, “the society in which one lives has strong associations with whether one's basic and safety needs are met, but a more modest relationship with whether one's psychological needs are met. Because nations strongly influence people's basic needs but more modestly influence their psychosocial needs. This helps explain why life evaluation – which is linked to basic needs – are more dependent on one's society” (pp. 363). The authors went further to assert that the “meeting of physical needs is required for optimal SWB” (pp. 363).

What the foregoing suggests is that the role of materialism on well-being may not have a common currency around the world or command the same intensity of effect across all populations. However, some scholars contend that materialism remains detrimental to well-being irrespective of culture or population. Some scholars argue that the effect of fulfilment of economic and physical needs on the relationship between materialism and subjective well-being depends largely on the intensity of the desire for materialism. It is argued that high levels of materialism are likely to be detrimental to well-being for both economically satisfied and less satisfied individuals as no amount of material wealth would be considered enough for such individuals (Richins & Dawson, 1992). In other words, whereas the attainment of a certain economic status can temper materialism, such a beneficial effect appears to be only possible for those who are not highly disposed to pursuing material possessions as a source of well-being. In what seems to be strong evidence in support of this line of thought comes from a recent meta-analysis by Moldes and Ku (2020). The authors failed to find any moderation effect of the origin of samples (nations) on the relationship between materialism and well-being. Hence, they concluded that materialism seems to be universally detrimental to well-being. However, a closer look at the populations involved in the meta-analysis shows a concern that we had earlier observed – that most of the studies in this area come from developed nations. The nations that were involved in the study include the United Kingdom, France, Germany, Canada, the USA, China, and

Singapore. Apparently, these nations are substantially developed nations with higher wages and appreciable economic progress and not comparable to countries like Nigeria in many ways. Nevertheless, given these conflicting views, and given the dearth of studies in this area among the current study population, we are constrained from projecting the direction of result. We only hope to observe the pattern of relationship between materialism and subjective well-being among the current study population with the view to understanding how the pattern concurs with the foregoing highlighted views and existing findings.

Hope, materialism, and well-being

As we earlier observed, our literature search revealed dearth of studies on the interactive effect of hope and materialism on well-being. However, insight can be drawn from the theoretical tenets and conceptual properties of both variables. A critical look at the indicators and cognitive processes associated with both dispositions suggest a possible relationship, a relationship that can significantly rob off on well-being. The first line of insight into the possibility that both dispositions may have an intersection comes from the fact that both have similar motivational component. In fact, it has been argued that the major distinguishing factor between dispositional optimism and hope is the motivational aspect of hope. Hope entails not only the anticipation of desirable outcome, but equally involves the push and engagement towards the realization of the desired goal (Pleeging et al., 2021). Similarly, materialism goes beyond passive wish for extrinsic desires. It entails an active pursuit for material things (Richins, 2017). Just as it has been said about hope, Giacalone et al. (2008) argues that a successful pursuit of materialism possessions involves “an expectation that these values are executable and impactful” (pp. 488). In summary, both hope and materialism are described as goal-oriented behaviours (see Snyder, 2002; Sirgy, 2013). The goal associated with materialism has been clearly defined as acquisition of material possession (Sirgy et al., 2013). Thus, the fact that both dispositions are goal oriented and have been shown to relate significantly to well-being are pointers to possible significant intersection in the process of defining variations in other behaviours.

In the light of the foregoing, some scholars have actually argued that the role of materialism on behaviour will be better understood when studies take into consideration the variations in order human dispositions (see McHoskey, 1999). On this note, Giacalone et al. (2008) focused on the interactive effect of hope, materialism, and post materialism on ethics and social responsibility. In fact, the study is the only one we found that proposed and examined the possible interactive effect of materialism and hope on behaviour. Although the authors did not find interactive effect of hope and materialism on the study outcome variables, they found that the interactive effect of postmaterialism and materialism on ethics and social responsibility was dependent on hope. However, there are several differences between Giacalone et al. (2008) and the current study. First, the outcome variables are different.

Whereas Giacalone et al. (2008) studied ethics and social responsibility, our focus here is on subjective well-being. Both hope and materialism have been shown to predict subjective well-being. Second. Whereas Giacalone et al. (2008) used a composite hope measure, the current study recognizes the dimensional nature of hope as proposed by Snyder (2002) in which hope is classified into two dimensions – agency and pathway hope, as earlier noted. Furthermore, that Giacalone et al. (2008) did not record significant interactive effect between materialism and hope does not out rightly imply that such results will replicate among the current study population. Both materialism and hope have been defined as cultural values (see Averill & Sundararajan, 2004; Ger & Belk, 1999; Kasser, 2018; and Panter-Brick & Eggerman, 2012).

However, it is not clear how both variables are likely to influence subjective well-being given the lack of studies in this regard. Insights can, however, be drawn from how each of the variables have been shown to relate to subjective well-being. If, as earlier noted, materialism is negatively associated with subjective well-being, and hope is positively associated with well-being, one would expect hope to undermine the negative impact of materialism on subjective well-being. However, this suggestion is dependent on some earlier highlighted conditions. Recall the idea that materialism has the potentials to boost the experience of subjective well-being among underdeveloped nations such as Nigeria. Thus, if materialism ends up boosting well-being among the current study population, it becomes possible for both hope and materialism to produce positive interactive effect on subjective well-being. Another condition around this scenario is the dimensional nature of both hope and well-being. As earlier noted, how materialism is related to either of the hope dimensions is unknown. The consequential implication is the lack of knowledge on how any interaction between either of the hope dimension and materialism is likely to influence each dimension of the subjective well-being. Given these gaps, we again refrain from making any directional hypothesis on how hope and materialism is likely to interact to influence subjective well-being among the current study population. Rather, we take an exploratory approach and observe how the results will emerge.

The Nigerian Context

Nigeria is the most populous black nation on earth, a multi-ethnic nation, with over 250 million people. The country is also ranked as one the largest economy in Africa, although that rating has failed to translate into increased personal income among her population (Balcilar et al., 2019). More than half of her population live under the poverty line, and over 60% of the young population are unemployed (Jaiyeola & Choga, 2021; Opuala-Charles & Oshilike, 2023). In fact, Nigeria is sometimes referred to as the poverty capital of the world (Abubakar, 2022). In addition to poor economic indices, the country is currently facing serious social and political crises, with the attendant consequences of increase in crime rates (Adebayo, 2013; Ghani, 2017). In fact, terrorism, banditry, and other serious crimes, such as kidnapping, are seriously

threatening the existence of the country (Ike et al., 2022; Ordu, 2017). Given these conditions, life in the country is expectedly difficult and holds some implications for the current study.

In addition to earlier reviewed perspectives that suggest a relationship between lack of basic need fulfilment and materialism, some scholars have actually tried to conjecture a direct link between the situation in Nigeria and valuing of materialism. It has been suggested that the conditions in which Nigerians live lead to an increased quest for materialism (Odera et al., 2020). In fact, Iheriohanma (2009) copiously argued that economic hardship, poor leadership, and hopelessness, which have ravaged the people, especially the youth, have spurred inordinate craze for materialism through antisocial means, such as crime, ritual killings, and all manner of condemnable behaviours among the youth of the country. Brownsberger (1983) equally argued that the political structure and its reward system in Nigeria have helped to create a sense of materialism as a value within the society whereby almost everyone admires the extravagancy of the political class and appears to be equally motivated to seek material things through several inordinate and inappropriate means. Some suggest that when such conditions persist for a long time, the desire for materialism becomes a value, which could be transmitted to younger generations (Banerjee & Dittmar, 2008). Deducible from the foregoing is the possibility of a high level of materialism among Nigerians. However, this possible high level of materialism is probably goaded by the lack and motivation to satisfy basic human needs. Thus, in line with the perspective that materialism is likely to yield positive influences on well-being in poor countries as earlier reviewed (see Diener et al., 2010; Tay & Diener, 2011), it may be cogent to suspect that materialism will exert positive influence on well-being among Nigerians. However, it is not clear whether such effect holds for all the dimensions of subjective well-being. There is also dearth of information on the possible interactive effect of materialism and hope on subjective well-being under such conditions.

Methods

Participants

Participants were undergraduates, who were drawn from a federal university located in the Southeastern part of Nigeria. They were 208 females with Mean age of 21.46 and 177 males with Mean age of 22.92. They were aged between 17 and 37 years, with a combined Mean age of 22.19 (SD = 4.71). Majority of the participants were Christians. This is not surprising because the Southeastern part of Nigeria is dominated by Christian religion. Three hundred and two (302, 77%) participants were members of the orthodox Christian denominations such as Roman Catholic and Anglican churches. Forty-eight (48, 12.3%) were members of Pentecostal churches. Thirty-eight (38, 9.7%) practised African Traditional Religions (ATR). Only two participants (2, 0.5%) indicated that they practised Islamic religion. Most of the participants were from the Igbo-speaking people of Nigeria (92%), whereas the other 7.7% of the participants were from other different ethnic groups in Nigeria, including Hausa/Fulani (n = 4), Yoruba (n = 5),

Niger-Delta (n = 9), Igala, and others (n = 12, 3%). The greater number of the Igbos in the sample is attributable to the location of the University where the study took place. Similar to the distribution of religion in the Southeastern part of Nigeria, as earlier observed, the region is home to the Igbo speaking people of Nigeria. A greater number of the participants were single (96%). Those who were married and living with their partners were nine (9, 2.3%). Four (4, 1%) indicated that they were divorced or separated from their partners.

Materials

Hedonic well-being: We measured hedonic well-being with a 23-affect word scale. The affect words are the ones that have been used severally in measuring hedonic well-being. The scale assessed two dimensions of hedonic well-being, namely positive (PA) and negative (NA) affect. The negative dimension was assessed with *angry, sorrowful, depressed, afraid, negative, bad, frustration, sad, unpleasant, upset, and uncomformable*. The positive dimension was measured with *Good, pleasant, joyful, friendly feelings, happy, excited, feeling close to others, outgoing, and inspired*. Participants rated how frequently they experienced each affect on the scale of 1 (*never*) to 7 (*always*). We obtained Cronbach's alpha coefficient of 0.78 and 0.89 for PA and NA dimensions, respectively.

Eudaimonic well-being: We assessed eudaimonic well-being with two recently developed measures of eudaimonic well-being, namely the Flourishing Scale (Diener et al., 2010) and the Positivity Scale (Heikamp et al., 2014). We used the two scales to ensure we captured most of the various components of eudaimonic well-being as currently espoused in the literature. Each of the scales contains eight items. Participants rated their agreement with each item on a scale of 1 (strongly disagree) (1) to 7 (strongly agree). We obtained Cronbach's alpha coefficients of 0.90 and .92 for the Flourishing and Positivity scales, respectively.

Satisfaction with Life: We assessed overall satisfaction with life with the 5-item *Satisfaction with the Life Scale* (Diener et al., 1985, e.g., *In most ways, my life is close to my ideal; I am completely satisfied with my life*). Participants rated their agreement with each item on a scale of (1) strongly disagree to (7) strongly agree. We obtained a Cronbach's alpha reliability estimate of .70 for the scale.

Materialism: The Material Value Scale (MVS; Richins, 2004) was used to assess materialism. The scale assesses people's inclination to pursue and depend on the acquisition of material things for happiness and feelings of well-being. It is made-up of eighteen (18) items. We used the composite score of the eighteen items to represent individuals' overall materialistic disposition. Participants rated their degree of agreement with each item on a scale of (1) strongly disagree to (7) strongly agree. We obtained a Cronbach's alpha of 0.85.

Table 1: Descriptive and correlation statistics of the study variables

Source	Mean(SD)	1	2	3	4	5	6	7	8	9	10	11	12
1. Gender	-	-											
2. Religion	-	-	-.17										
3. Ethnic Group	-	-	-.00	-.03									
4. Marital Status	-	-	.06	-.06	-.09								
5. Age	22.10(4.53)	.16	-.08	.07	.17								
6. Positive affect	54.28(7.60)	-.07	.06	-.06	.02	-.04							
7. Negative affect	41.73(13.97)	-.02	.02	.04	-.02	-.08	-.35						
8. Flourishing	31.81(6.77)	.02	.07	-.02	-.04	.00	.30	-.20					
9. Positivity	37.44(7.53)	-.04	.15	.02	.02	.02	.25	-.12	.70				
10. Satisfaction with Life	19.32(6.15)	.03	.09	-.03	-.03	.05	.18	-.15	.45	.49			
11. Hope (Pathway)	21.64(4.28)	.03	.05	-.01	-.01	-.06	.32	-.10	.36	.35	.15		
12. Hope (Agency)	22.02(4.17)	-.04	.04	.04	.04	-.03	.31	-.16	.39	.38	.22	.67	
13. Materialism	58.06 (14.34)	.00	.03	-.01	-.01	-.06	.01	.16	.13	.17	.02	.18	.11

Note: Figure in bold are significant coefficients, using $p < .05$

Hope: We assessed the two dimensions of hope – agency and pathway hope – with the Individual Differences Measure of Hope (Snyder et al., 1991). The pathway dimension measures the ability to engage in prospective planning and ability to discover ways through which desired goals can be achieved (e.g *I can think of many ways to get out of a jam*), whereas the agency dimension assesses goal-directed determination and active engagement towards the achievement of the set goals (e.g *I energetically pursue my goals*). Each dimension is measured with four items. Participants rated their agreement with each item on a scale of (1) strongly disagree to (7) strongly agree. We obtained Cronbach's alpha reliability coefficients of 0.86 and 87 for pathway and agency dimensions, respectively.

Procedure

The study utilized a survey method in which participants completed a questionnaire containing measures of the study variables and a demographic section. Convenient sampling technique was employed in which participants were students from a university where one of the authors works. Participants first completed an informed consent form before completing the questionnaire. The questionnaire was administered to the participants in groups within their various classes. The study was conducted in accordance with the University regulations guiding research involving human participants. The guideline requires that human participation in studies within the University must be voluntary. Accordingly, also, participation did not count in the students' overall class records. Before the collection of the questionnaires, participants were prompted to crosscheck their questionnaires to ensure that they responded to every item in the questionnaire. This action was taken to help eliminate the incidence of missing values. Thereafter, the

questionnaires were collected. Participants were thanked and an additional credit hour was added to their normal class period.

Statistical analysis

Analyses were conducted with Statistical Packages for the Social Sciences (SPSS). Both direct and interaction effects were explored with the hierarchical regression model. In line with recommendations, we centred all the predictors (materialism and the hope dimensions) around their means before forming the interaction terms (materialism x agency hope and materialism x pathway hope). Because, as shown in Table 1, none of the demographic variables had any significant relationship with any of the focal variables, they were not included in further analyses. In building the hierarchical equation, we first entered the two dimensions of hope in the equation. Next, we entered materialism. Thereafter, we entered the two interaction terms (materialism x Agency hope and materialism x Pathway hope). This equation was implemented for each of the well-being dimensions.

Results

Descriptive Statistics

Table 1 presents the correlation matrix for the study variables. At this point, we examined age and gender differences on both the predictors and outcome variables with a view to knowing if any of the demographic variables could play important role in subsequent analyses. Using independent t-test to examine gender differences in the variables, we found that none of the variables was defined by gender. Similarly, as can be seen in Table 1, there were no age differences in any of the variables. Consequently, we did not include them in subsequent analyses.

Influence of materialism and hope on hedonic well-being

With the PA as the outcome variable, the first Model with both hope dimensions yielded significant results: $R = .35$ (se = 7.15), $F(2, 387) = 26.59, p = .00$. Further examination of the result showed that both agency and pathway dimensions of hope had positive influences on PA: $b = .32$ (se = .12), $t = 2.70, p = .01$ and $b = .36$ (se = .12), $t = 3.24, p = .00$, respectively. The second Model involving materialism did not explain any additional significant variance in PA: $\Delta R^2 = .00, F(1, 386) = .83, p = .36$. With NA as the outcome variable, the first Model with the two hope dimensions yielded significant result, $R = .16$ (se = 13.84), $F(2, 387) = 5.05, p = .01$. A breakdown of the result showed that agency hope had negative significant influence on NA, $b = -.55$ (se = .23), $t = -2.44, p = .02$, but pathway hope failed to show significant influence on NA, $b = .51$ (se = 4.64), $t = .11, p = .91$. The addition of materialism (Model 2) explained additional significant variance in NA: $\Delta R^2 = .03, F(1, 386) = 12.36, p = .00$. An examination of individual predictors' influence on the NA showed that agency hope remained a significant influence on NA while pathway hope remained an insignificant influence on NA but, as already observed, materialism significantly enhanced the experience of NA: $b = 9.98$ (se = 2.84), $t = 3.52, p = .00$. The addition of the two moderation equations (Materialism x Hope Agency and Materialism x Hope Pathway) did not explain any significant additional variance in NA: $\Delta R^2 = .00, F(2, 384) = .60, p = .55$.

Influence of materialism and hope on life satisfaction

The Model with the two hope dimensions yielded significant results: $R = .22$ (se = .05), $F(2, 387) = 9.91, p = .00$. However, a breakdown of the result showed that only agency hope was significantly associated with satisfaction with life: $b = 6.93$ (se = 2.17), $t = 3.18, p = .00$. The addition of materialism did not explain any additional significant variance in life satisfaction: $\Delta R^2 = .00, F(1, 386) = .02, p = .90$. Similarly, the addition of the interaction terms failed to produce any significant change in variance: $\Delta R^2 = .01, F(2, 384) = .76, p = .47$.

Influence of materialism and hope on eudaimonic well-being (Flourishing)

Model 1, which had both hope dimensions, yielded a significant result: $R = .41$ (se = .17), $F(2, 387) = 39.99, p = .00$. Further examination of the result showed that both Agency hope [$b = 10.01$ (se = 2.24), $t = 4.50, p = .00$] and Pathway hope [$b = 5.76$ (se = 2.07), $t = 2.78, p = .01$] were positively associated with flourishing. The addition of materialism yielded an additional marginal significant change in variance: $\Delta R^2 = .01, F(1, 386) = 2.20, p = .12$. The addition of the interaction terms also produced marginal significant variations in flourishing: $\Delta R^2 = .01, F(2, 384) = 2.72, p = .07$. We examined the breakdown of the result and found that it was materialism x pathway hope (M x P) that was responsible for the additional marginal variation in flourishing: $b = -12$ (se = 7.87), $t = -1.58, p = .12$, and not materialism x agency hope: $b = -2.46$ (se = 9.14), $t = -.27, p = .79$. To understand the pattern of the M x P interaction, we tested

the influence of materialism at three levels of pathway hope. In line with the recommendation in the literature, we used the mean and plus/minus one standard deviation (SD) from the mean. The result revealed that the positive effect of materialism on flourishing was stronger at lower levels of pathway hope (i.e. one SD below the mean): coefficient = 4.12, (se = 2.36), $t = 1.74, p = .08$. The influence declined as pathway hope increased. At the mean, coefficient = 1.90 (se = 1.42), $t = 1.33, p = .18$, and the influence of materialism became insignificantly negative at higher levels of pathway hope (i.e. one SD above the mean), coefficient = -.32 (se = 1.72), $t = -.19, p = .85$.

Influence of materialism and hope on eudaimonic well-being (Positivity)

The first Model with the two hope dimensions yielded significant results: $R = .40$ (se = .693), $F(2, 387) = 36.48, p = .00$. Further examination of the result revealed that both Agency [$b = 10.36$, (se = 2.5), $t = 4.12, p = .00$] and Pathway [$b = 6.52$ (se = 2.32), $t = 2.81, p = .01$] hopes had positive influences on positivity. Interestingly, the addition of materialism explained additional significant positive variance in positivity: $\Delta R^2 = .01, F(1, 386) = 6.18, p = .02$. However, the addition of the interaction terms failed to explain any additional significant variances in positivity: $\Delta R^2 = .00, F(2, 384) = .04, p = .96$.

Discussion

The study of the influence of hope and materialism on subjective well-being has gained substantial attention over the years. However, a cursory look at the literature reveals that underdeveloped countries, such as Nigeria, have been understudied with specific reference to this area. This gap becomes pronounced in the face of indication that variations in hope, materialism, and subjective well-being are not immune to cultural and other unique psychosocial circumstances of populations. In addition, there is also scarcity of studies on the possible interactive effect of hope and materialism on subjective well-being despite the overwhelming evidence that both dispositions are significantly associated with subjective well-being. Thus, the current study examined the direct and joint influences of hope and materialism on the different dimensions of subjective well-being among Nigerians. The result of the study while providing evidence in support of already existing findings from other climes also revealed some interesting scenarios.

In terms of confirmation of previous studies, both hope dimensions predicted most of the subjective well-being dimensions. However, in line with Pleeging et al. (2021) postulation that agency hope has the potential to outperform other forms of hope in influencing subjective well-being, the result showed that agency hope was the most active predictor of subjective well-being than the pathway hope. Whereas agency hope predicted all the five dimensions of subjective well-being, pathway hope predicted three out of the five dimensions. Recall that Pleeging et al. (2021) had argued that agency hope, because of its agentic composition, involves the activation of other dispositions, such as self-efficacy and competence, and requires

substantial involvement of the individual in pursuing the desired goal. The activation of these other dispositions leads to the experience of desirable fallouts, such as positive emotions and self-esteem. Although these attributes may be applicable to other hope dimensions, the intensity might not really equal that of agency hope. For instance, whereas pathway hope, which involves the ability to identify multiple pathways to achieving a desired goal may not necessarily activate other behaviours required to realize the goal, agency hope by nature automatically activates such behaviours with aforementioned positive fallouts. However, these propositions require further explorations.

In terms of the relationship between materialism and subjective well-being, we found two lines of result in which one line is consistent with the literature and one is inconsistent with the popular perspective that views materialism as generally inimical to well-being (see Dittmar et al., 2014; Moldes & Ku, 2020). In line with the literature, we found a positive association between materialism and negative affect. This result resonates with many previous findings (see Dittmar et al., 2014). It has been argued that excessive focus on extrinsic goals and desires predispose individuals to the experience of negative affect because those who focus excessively on extrinsic goals are more likely to live under high anxious state essentially because of the uncertainty of the expected goal (Holbrook & Gardener, 1998). Thus, it can be concluded that the uncertainty of the expected material possessions puts individuals on high anxious state, a condition that apparently has a lot in common with negative affect. It must, however, be noted that the hope of acquisition of material possessions, as observed by Donnelly et al. (2016), can lead to the experience of positive affect. However, this effect seems to be highly associated with populations that have good economic conditions in which majority of the members can afford or have access to luxurious goods (Donnelly et al., 2016). Apparently, as we had earlier observed, this condition is currently not present among the current study population because majority of Nigerians still live under poverty line, struggling to fulfil the basic human needs of food, shelter, and security; hence, are far from having access to luxurious possessions that may yield such positive experiences.

An intriguing finding that completely contradicts the popular view that materialism is generally inimical to well-being, although consistent with recent speculations as earlier reviewed, is the positive influence of materialism on the two measures of eudaimonic well-being – flourishing and positivity. This result is consistent with the idea that the influence of materialism on well-being may not hold similarly across developed nations and underdeveloped/economically deprived populations (see Diener et al., 2010; Kasser et al., 2014; Morrison et al., 2011; Oishi et al., 2022; Tay & Diener, 2011). The proposition behind this line of thought is that materialism as a value is associated with economic progress (Dittmar et al., 2014; Giacalone et al., 2008; Oishi et al., 2022). When people have achieved most of the basic material human needs, higher forms of motivation emerge and become easier to be pursued. This becomes different when such material human needs are yet

to be substantially fulfilled. This gives insight into why both eudaimonic measures were positively associated with materialism among the current study population of which the majority are yet to fulfil the basic bio-psychosocial needs like food, shelter, and other basic social amenities like water and energy. The positive relationship between materialism and eudaimonia can be further explained by the fact that eudaimonic well-being differs from the hedonic well-being in the sense that it does not only have affect as an outcome but involves the fulfilment of both basic human material and psychosocial needs (Tay & Diener, 2011). Thus, in the absence of fulfilment of those basic needs, endorsement of materialism, therefore, becomes a necessity, providing hope and believe that acquisition of material possessions will lead to enduring human development and growth, which are critical components of eudaimonic well-being. This becomes more pronounced when it is considered that the measures of eudaimonic well-being include items that seemingly tap into people's hope and optimism.

Result also confirmed our suspicion that materialism and hope may have joint effect on well-being. Although the interaction did not occur for all the dimensions of well-being, we found a substantial interaction effect of materialism and pathway hope on flourishing. The positive influence of materialism on flourishing was more pronounced at lower levels of pathway hope. The relationship between materialism and flourishing became insignificantly negative at higher levels of pathway hope. A potent possible explanation of this result is that materialism is more likely to promote well-being when people lack other alternative pathways through which they can achieve their goals. There is no gainsaying that the poor economic conditions and social unrest prevalent in Nigeria limit the opportunities available for people to pursue and achieve their goals. That is, it is possible that people who lack the capacity to chart multiple pathways to their goals focuses mainly on the acquisition of material possessions as the only way to experience flourishing. In other words, when these opportunities become rare, people increasingly view materialism as their only source of happiness. This perspective rhymes very closely with the views of Iheriohanma (2009) and Brownsberger (1983). These scholars contend that both poor economic condition and the political reward structure system in Nigeria, which appear to have endorsed inordinate acquisition of wealth, have not only skewed the thinking of the majority of Nigerians towards believing that materialism is the only way to success and happiness, but has equally engendered a kind of value system that venerates materialism.

Implication for theory and future studies

The present study provides confirmation for some already existing findings, such as the positive influence of hope on subjective well-being. Nevertheless, it has provided support for some theoretical speculations, opening new vistas for future study. For instance, the study confirmed Pleeging et al. (2021) theoretical speculation that agency hope is more likely to exert stronger influence on subjective well-being than pathway hope. Future studies may therefore need to explore the routes through

which this phenomenon occurs. For instance, future studies may need to explore whether the difference is located in Pleeing et al. (2021) suggestion that agency hope recruits active personality dispositions, such as self-efficacy, than other aspects of hope. More importantly, however, is the findings that materialism is positively associated with eudaimonic well-being among the current study population, which is contradictory to the popular view in which it is often posited that materialism is generally inimical to well-being. The finding provides support to the growing idea that materialism may be beneficial to well-being in economically disadvantaged populations, such as Nigeria (see Diener et al., 2010; Kasser et al., 2014; Morrison et al., 2011; Oishi et al., 2022; Tay & Diener, 2011).

Future studies may therefore begin to probe into this phenomenon in order to map out the actual route and boundary conditions around this phenomenon. For instance, it might be cogent to ask whether the positive association between materialism and eudaimonic well-being is associated with the internalization of materialism as a positive social value or because of economic lack as suggested by the aforementioned studies. Furthermore, the differential influence of materialism on the two major dimensions of subjective well-being – hedonia and eudaimonia – as well as the differences in how the two hope dimensions related to the different dimensions of well-being is a clear indication that the dimensional nature of the variables is very important in understanding the relationship among the variables in any population. In summary, therefore, the present study points to the need to tamper with the rigid theoretical idea that materialism is generally inimical to well-being. It supports a theoretical strand that accommodates cultural peculiarities of populations and the dimensional nature of the variables; a condition that obviously call for the advancement of this area of study into understudied populations, especially among underdeveloped nations.

Limitations of the Study and suggestions for further studies

The most apparent shortcomings of the present study concern the demographic composition of our participants. Our participants were largely younger members of the population. Second, majority were Christians. The majority were equally from only one of the major ethnic groups in Nigeria - the Igbo-speaking people of Nigeria. Nigeria is a multi-religious and ethnic nation. The fact that we didn't have substantial number of participants from other ethnic and religious groups raises cogent doubt on the generalization of the current findings across other groups, including different demographic strata. However, the hope that the findings might replicate across the entire country's population rests on the fact Nigerians, irrespective of language and religious differences, practice communalistic culture and are perceptibly similar in many other issues such as being very religious. This notwithstanding, future studies are likely to deepen our understanding of the relationship among the current study variables with more broad samples.

Conclusion

In conclusion, we can assert that the present study has further

affirmed the idea that hope is universally beneficial to well-being. The study also went further to confirm the hunch that agency hope, which is that aspect of hope that requires individuals to get involved in the process of realizing their dreams, is a stronger predictor of well-being than pathway hope, which is that part of hope that does not necessarily require individuals to get involved in the process of actualizing their expectations. The most interesting finding of the current study is that materialism is positively associated with some aspects of well-being, a result that clearly contradicts the popular perspective in the literature, which portrays materialism as generally inimical to well-being. This finding does not only call for caution in the application of the popular perspective but heightens the call for more inquiries into the cultural and social differences in the relationship between materialism and well-being across the world, especially among the underdeveloped populations of the world.

Disclosure Statement: The authors report that there are no competing interests to declare

Data availability statement: Data used in the current study is available from the authors on request.

References

- Banerjee, R., & Dittmar, H. (2008). Individual differences in children's materialism: The role of peer relations. *Personality and Social Psychology Bulletin*, 34(1), 17-31. <https://doi.org/10.1177/0146167207309196>
- Belk, R. W. (1985). Materialism: Trait aspects of living in the material world. *Journal of Consumer Research*, 12(3), 265-280. <https://doi.org/10.1086/208515>
- Brownsberger, W. N. (1983). Development and governmental corruption—Materialism and political fragmentation in Nigeria. *The Journal of Modern African Studies*, 21(2), 215-233. <https://doi.org/10.1017/S0022278X00023247>
- Burroughs, J. E., & Rindfleisch, A. (2002). Materialism and well-being: A conflicting values perspective. *Journal of Consumer Research*, 29(3), 348-370. <https://doi.org/10.1086/344429>
- Christopher, A. N., Saliba, L., & Deadmarsh, E. J. (2009). Materialism and well-being: The mediating effect of locus of control. *Personality and Individual Differences*, 46(7), 682-686. <https://doi.org/10.1016/j.paid.2009.01.003>
- Deci, E. L., & Ryan, R. M. (2008). Facilitating optimal motivation and psychological well-being across life's domains. *Canadian Psychology / Psychologie Canadienne*, 49(1), 14–23. <https://doi.org/10.1037/0708-5591.49.1.14>
- De Neve, J. E., Diener, E., Tay, L., & Xuereb, C. (2013). *The objective benefits of subjective well-being. CEP discussion paper NO.1236 August 2013*. London: Centre for Economic Performance.

- Diener, E., & Biswas-Diener, R. (2002). Will money increase subjective well-being?. *Social Indicators Research*, 57(2), 119-169. <https://doi.org/10.1023/A:1014411319119>
- Diener, E., Emmons, R., Larsen, R., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment*, 49, 1105-1117. <https://doi.org/10.1080/17439760701756946>
- Diener, E., Ng, W., Harter, J., & Arora, R. (2010). Wealth and happiness across the world: Material prosperity predicts life evaluation, whereas psychosocial prosperity predicts positive feeling. *Journal of Personality and Social Psychology*, 99(1), 52-61. <https://doi.org/10.1037/a0018066>
- Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D. W., Oishi, S., & Biswas-Diener, R. (2010). New well-being measures: Short scales to assess flourishing and positive and negative feelings. *Social Indicators Research*, 97(2), 143-156. <https://doi.org/10.1007/s11205-009-9493-y>
- Dittmar, H., Bond, R., Hurst, M., & Kasser, T. (2014). The relationship between materialism and personal well-being: A meta-analysis. *Journal of Personality and Social Psychology*, 107(5), 879-924. <https://doi.org/10.1037/a0037409>
- Donnelly, G. E., Ksendzova, M., Howell, R. T., Vohs, K. D., & Baumeister, R. F. (2016). Buying to blunt negative feelings: Materialistic escape from the self. *Review of General Psychology*, 20(3), 272-316. <https://doi.org/10.1037/gpr0000078>
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, 56(3), 218-226. <https://doi.org/10.1037/0003-066X.56.3.218>
- Griffin, M., Babin, B. J., & Christensen, F. (2004). A cross-cultural investigation of the materialism construct: Assessing the Richins and Dawson's materialism scale in Denmark, France and Russia. *Journal of Business Research*, 57(8), 893-900. doi:10.1016/S0148-2963(02)00290-4
- Heikamp, T., Alessandri, G., Laguna, M., Petrovic, V., Caprara, M. G., & Trommsdorff, G. (2014). Cross-cultural validation of the positivity-scale in five European countries. *Personality and Individual Differences*, 71, 140-145. <https://doi.org/10.1016/j.paid.2014.07.012>
- Howell, R. T., Kern, M. L., & Lyubomirsky, S. (2007). Health benefits: Meta-analytically determining the impact of well-being on objective health outcomes. *Health Psychology Review*, 1(1), 83-136. DOI: 10.1080/17437190701492486
- Iheriohanma, E. B. J. (2009). Socio-structural pressures and the challenges of survival and crime committal in Nigeria. *Journal of Social Sciences*, 21(3), 167-175. <https://doi.org/10.1080/09718923.2009.11892767>
- Kasser, T. (2016). Materialistic values and goals. *Annual Review of Psychology*, 67(1), 489-514. Doi: 10.1146/annurev-psych-122414-033344
- Kasser, T., & Ahuvia, A. (2002). Materialistic values and well-being in business students. *European Journal of Social Psychology*, 32(1), 137-146. <https://doi.org/10.1002/ejsp.85>
- Kashdan, T. B., & Breen, W. E. (2007). Materialism and diminished well-being: Experiential avoidance as a mediating mechanism. *Journal of Social and Clinical Psychology*, 26(5), 521-539. <https://doi.or/10.1521/jscp.2007.26.5.521>
- Kasser, T. (2018). *Materialism and living well. Handbook of well-being*. Salt Lake City, UT: DEF Publishers.
- Kasser, T., Rosenblum, K. L., Sameroff, A. J., Deci, E. L., Niemiec, C. P., Ryan, R. M., ... & Hawks, S. (2014). Changes in materialism, changes in psychological well-being: Evidence from three longitudinal studies and an intervention experiment. *Motivation and Emotion*, 38(1), 1-22. <https://doi.org/10.1007/s11031-013-9371-4>
- Kasser, T., & Ryan, R. M. (1996). Further examining the American dream: Differential correlates of intrinsic and extrinsic goals. *Personality and Social Psychology Bulletin*, 22(3), 280-287. <https://doi.org/10.1177/0146167296223006>
- Moldes, O., & Ku, L. (2020). Materialistic cues make us miserable: A meta-analysis of the experimental evidence for the effects of materialism on individual and societal well-being. *Psychology & Marketing*, 37(10), 1396-1419. <https://doi.org/10.1002/mar.21387>
- Morrison, M., Tay, L., & Diener, E. (2011). Subjective well-being and national satisfaction: Findings from a worldwide survey. *Psychological Science*, 22(2), 166-171. <https://doi.org/10.1177/0956797610396224>
- Odera, O., James, K., Scott, A., & Gow, J. (2020). Corporate social responsibility reporting of international oil companies in Nigeria: an historical materialism analysis. *International Journal of Ethics and Systems*, 36, 131-146. <https://doi.org/10.1108/IJOES-04-2019-0071>
- Oishi, S., Cha, Y., Komiya, A., & Ono, H. (2022). Money and happiness: the income-happiness correlation is higher when income inequality is higher. *PNAS Nexus*, 1(5), pgac224. <https://doi.org/10.1093/pnasnexus/pgac224>
- Panther-Brick, C., & Eggerman, M. (2012). Understanding culture, resilience, and mental health: The production of hope. In Ungar, M. (eds) *The social ecology of resilience* (pp. 369-386). New York: Springer. https://doi.org/10.1007/978-1-4614-0586-3_29
- Pieters, R. (2013). Bidirectional dynamics of materialism and loneliness: Not just a vicious cycle. *Journal of Consumer Research*, 40(4), 615-631. <https://doi.org/10.1086/671564>
- Pleeging, E., Burger, M., & van Exel, J. (2021). The relations between hope and subjective well-being: A literature overview and empirical analysis. *Applied Research in Quality of Life*, 16(3), 1019-1041. <https://doi.org/10.1007/s11482-019-09802-4>

- Richins, M. L. (2004). The material values scale: Measurement properties and development of a short form. *Journal of Consumer Research*, 31(1), 209-219. <https://doi.org/10.1086/383436>
- Richins, M. L., & Dawson, S. (1992). A consumer values orientation for materialism and its measurement: Scale development and validation. *Journal of Consumer Research*, 19(3), 303-316. <https://doi.org/10.1086/209304>
- Richins, M. L., & Rudmin, F. W. (1994). Materialism and economic psychology. *Journal of Economic Psychology*, 15(2), 217-231. [https://doi.org/10.1016/0167-4870\(94\)90001-9](https://doi.org/10.1016/0167-4870(94)90001-9)
- Ryan, R. M., Chirkov, V. I., Little, T. D., Sheldon, K. M., Timoshina, E., & Deci, E. L. (1999). The American dream in Russia: Extrinsic aspirations and well-being in two cultures. *Personality and Social Psychology Bulletin*, 25(12), 1509-1524. <https://doi.org/10.1177/01461672992510007>
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 227-268. https://doi.org/10.1207/S15327965PLI1104_01
- Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Publications.
- Schmuck, P., Kasser, T., & Ryan, R. M. (2000). Intrinsic and extrinsic goals: Their structure and relationship to well-being in German and US college students. *Social Indicators Research*, 50(2), 225-241. <https://doi.org/10.1023/A:1007084005278>
- Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., Sigmon, S. T., Yoshinobu, L., Gibb, J., Langelle, C., & Harney, P. (1991). The will and the ways: Development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology*, 60(4), 570-585. <https://doi.org/10.1037/0022-3514.60.4.570>
- Snyder, C. R., Hoza, B., Pelham, W. E., Rapoff, M., Ware, L., Danovsky, M., ... & Stahl, K. J. (1997). The development and validation of the Children's Hope Scale. *Journal of Pediatric Psychology*, 22(3), 399-421. <https://doi.org/10.1093/jpepsy/22.3.399>
- Tay, L., & Diener, E. (2011). Needs and subjective well-being around the world. *Journal of Personality and Social Psychology*, 101(2), 354-365
- Tsang, J. A., Carpenter, T. P., Roberts, J. A., Frisch, M. B., & Carlisle, R. D. (2014). Why are materialists less happy? The role of gratitude and need satisfaction in the relationship between materialism and life satisfaction. *Personality and Individual Differences*, 64, 62-66. <https://doi.org/10.1016/j.paid.2014.02.009>
- Unanue, W., Dittmar, H., Vignoles, V. L., & Vansteenkiste, M. (2014). Materialism and well-being in the UK and Chile: Basic need satisfaction and basic need frustration as underlying psychological processes. *European Journal of Personality*, 28(6), 569-585. <https://doi.org/10.1002/per.1954>