



The direct effect of basic need services, and social support on positive mental health among institutionalized children: the mediating role of psychological capital

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Abstract

Previous research in Ethiopia mainly contemplated studying children’s mental distress and the negative effects of orphanages. However, there is a dearth of documented evidence on how positive psychological resources, social support, basic needs services, and mental health impact the well-being of children in childcare institutions and how care centers can benefit vulnerable children. This study aimed to investigate the direct impact of perceived social support (PSS), basic need services (BNS), and Psychological Capital (PsyCap) on the mental health of children in childcare settings. Additionally, the study sought to explore the mediating role of PsyCap between PSS, BNS, and children’s positive mental health (PMH). A total of 420 institutionalized Ethiopian children, comprising 187 females and 233 males, were selected by using a stratified multistage random sampling approach. Validated and standardized measures of psychological well-being (PWB), PsyCap, BNS, and PSS were employed to collect data from the study participants. The findings from the structural equation modeling (SEM) analysis revealed that BNS and PsyCap directly and significantly predicted the PMH of children. Moreover, both BNS and PSS exhibited a positive and significant effect on the higher-order PsyCap construct. Although PSS did not directly influence positive mental health, it indirectly predicted mental health outcomes through the presence of PsyCap. Furthermore, PsyCap played a mediating role between BNS and positive mental health outcomes. It is recommended that future research replicate and expand upon the current study’s findings to gain insights into the positive mental health of institutionalized children.

Keywords Mental health · Basic need · Social support

Introduction

Mental health is a broader spectrum covering various aspects, from mental illnesses like anxiety, depression, and bipolar disorder to positive mental well-being, including self-esteem, emotional intelligence, and the ability to manage life’s challenges (Schönfeld et al., 2017; Weich et al., 2011). This notion reflects the dual continua model that mental illness and positive mental health are separate continuums, not opposite ends of one spectrum (Lasiello & Van

Agteren, 2020). The idea implies that the interconnection of mental health and mental illness is a fundamental concept in the mental health care system (Keyes, 2005). While these aspects exist on a spectrum, they have distinct underlying factors (Keyes, 2007). Bohlmeijer and Westerhof (2021) suggested that mental health encompasses various aspects of psychological well-being, which can lower the likelihood of experiencing future psychological disorders. Thus, it is indispensable to consider both mental illness and positive mental health when looking at the overall mental well-being of individuals. The World Health Organization defines mental health as “a state of well-being in which the individual realizes their abilities, copes with life’s stresses, works productively, and contributes to their community” (WHO, 2001, p.1). This definition underscores the critical importance of mental health for individual happiness and societal harmony. Moreover, it views mental health as the

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integration of emotional, psychological, and social well-being, encompassing both the subjective experience of life satisfaction and the broader aspects of psychological functioning (Pedersen et al., 2023; Wang et al., 2022).

The mental well-being of children and adolescents residing in care centers, especially those separated from their biological parents, is a topic of considerable apprehension. The absence of a stable family environment can have both direct and indirect consequences on children's development, as well as implications for the broader community (Perry et al., 2020). Unlike previous research that has mainly focused on psychological distress, mental illness symptoms, and the negative effects of institutionalization or orphanages on children's mental health (Firouzbakht et al., 2018; Perry et al., 2020; Yendork, 2020), this study aims to emphasize the importance of positive mental health resources for institutionalized children. Positive psychology underscores the importance of nurturing positive mental well-being (Csikszentmihalyi et al., 2014). This perspective shifts attention from exclusively dealing with psychological illnesses to encouraging wellness and fortitude (Meyers et al., 2013). We investigate various aspects, including PWB, PSS, BNS, and PsyCap. These positive psychological resources play a crucial role in nurturing positive mental health and highlight the beneficial influence of childcare institutions on vulnerable children in care centers. This support equips them to effectively manage psychological distress, overcome challenges, and develop a positive outlook on life.

Basic needs and mental health

According to Maslow's hierarchy of needs theory, human basic needs, such as physical well-being, safety, love, self-esteem, and self-fulfillment, are indispensable for both survival and holistic individual well-being (Maslow, 1948). Maslow also posits that once basic needs are appropriately satisfied an individual's psychological well-being will be possible (Maslow, 1948). Moreover, empirical research by Malek Rivan et al. (2021) underscores the pivotal and positive association between physiological essentials such as food, clothing, security, warmth, and love with the mental health of children and adolescents. Furthermore, Ilhan et al. (2019) demonstrated that fundamental aspects of basic needs, safety, and the desire for autonomy significantly influence the mental well-being of adolescents and children. The satisfaction of fundamental psychological and physiological needs fosters positive functioning and psychological welfare across diverse domains of life (Derakhshan et al., 2023; Harrer et al., 2019). Turkdogan and Duru (2012) further assert that the degree to which individuals have their basic needs met directly influences their sense of well-being and happiness. Conversely, failure to meet basic needs can

greatly impact mental health, while neglecting psychological needs may lead to aggression, low self-confidence, and negative emotions in children (Kuzucu & Şimşek, 2013; Soria, 2023). According to research conducted among university students, the fulfillment of fundamental basic needs has the potential to enhance positive functioning and PWB across multiple spheres of life, including work, education, and health (Kormas et al., 2014). This study suggests that fulfilling basic needs can have a positive impact on an individual's mental well-being. On the other hand, when these needs remain unfulfilled it can lead to psychological anguish and create barriers to overcoming challenges and achieving development and growth (Kuzucu & Şimşek, 2013). A constituent element of basic needs can positively contribute to the positive functioning of PWB and failure to satisfy these needs negatively impacts one's mental health including mental distress (Huang et al., 2018). Therefore, based on the literature review we proposed the following hypothesis.

Hypothesis 1 BNS directly predict PMH

Social support and mental health

Social support encompasses various forms of assistance, including instrumental, emotional, and informational aid, which are essential for meeting psychological, social, and health needs (Gottlieb & Bergen, 2010). This network of support, crucial during stressful times, not only offers practical help but also comfort, guidance, and motivation, fostering resilience and well-being (Bavik et al., 2020). The notion of social interaction and social support represents intrinsic human necessities, akin to physiological requisites (Orben et al., 2020). Furthermore, social support serves as a buffering factor against negative outcomes and promotes well-being by providing emotional support and practical assistance (Freeman, 2021; Reeve & Maslach, 2001).

Its positive influence on mental well-being is evident either directly or through stress buffering, especially in benefiting institutionalized children facing heightened stress levels (Freeman, 2021). Social support serves as both problem- and emotion-focused coping strategies, providing either informational or tangible assistance to address challenges and manage emotions stemming from stressors (Hellfeldt et al., 2020).

Research shows that interpersonal connections have both immediate and indirect effects on a person's well-being (Emadpoor et al., 2016). Deprivation of these connections can engender profound and enduring ramifications on both physical and PWB, potentially culminating in a shortened lifespan (Hawkey & Cacioppo, 2010). Social support and social connections are fundamental human needs,

particularly crucial for the well-being of young and institutionalized individuals, acquired through interactions with significant figures such as friends, peers, teachers, and family members (Durlak et al., 2011; Pan et al., 2023). Social support plays a vital role in nurturing psychologically and emotionally healthy youths. Moreover, Ditzen and Heinrichs (2014) contend that the correlation between social support and human health has been extensively studied over the years, highlighting its pivotal role in safeguarding against psychological disturbances. Conversely, lower perceived social support is linked to increased mental health issues, (Geweniger et al., 2024). Furthermore, individuals who lack sufficient instrumental, emotional, and informational support are more likely to experience heightened levels of anxiety and depression (Cai et al., 2021).

In this respect, PSS has considerable implications for the mental and physical well-being of institutionalized children, concurrently acting as a protective buffer against adverse psychological and social incidences and associated distress (Berkman & Glass, 2000). A substantial body of empirical studies revealed the significance of perceived social support from influential individuals and substantial familial support in mitigating the risk of depression and anxiety symptoms, while concurrently fostering heightened subjective well-being among youths and adolescents (Hellfeldt et al., 2020; Rothon et al., 2011).

In the realm of general theoretical frameworks, two prominent paradigms delineate the nexus between social support and the PWB of an individual. These are the Stress-Buffering Model and the Main Effect Model. Conceptually, the prospective advantages of social support are consonant with the Stress-Buffering Model (Newman et al., 2005), positing its pivotal role as a coping mechanism for adolescents amidst stressful circumstances (Freeman, 2021). The Stress-Buffering Model posits that social support has a crucial role in protecting individuals from the negative consequences of stressful experiences and it directly contributes to their overall happiness (Redman & Snape, 2006). This model also suggests that social support acts as a mediator in the link between stress and mental health. Furthermore, a study by Emadpoor et al. (2016) has thoroughly examined the essential role of social support as a protective mechanism against stressful situations. Moreover, research findings have shown that increased social support has a beneficial effect in reducing the harmful effects of stress and psychological distress (Emadpoor et al., 2016; Redman & Snape, 2006).

On the other hand, the Main Effect Model posits that social support plays a crucial role in actively promoting positive emotions and reducing psychological distress within social connections (Thoits, 2011). Furthermore, advocates of this model assert that positive social interactions

contribute to individuals' feelings of stability, belonging, security, predictability, self-esteem, and purpose in their lives (Laidlaw, 2018; Pilane, 2011). This led us to formulate the subsequent hypothesis.

Hypothesis 2: PSS directly predicts PMH.

The mediating role of PsyCap in the relationship between BNS and PSS and mental health

Although a recent field of study, PsyCap has its roots in the positive psychology movement (Seligman & Csikszentmihalyi, 2000). Positive psychology prioritizes individuals' strengths over weaknesses (Csikszentmihalyi et al., 2014). This shift emerged as a response to the dominance of research in behavioral, biological, and social sciences, which focused on mental illness and dysfunction (Csikszentmihalyi et al., 2014). Despite extensive research in these fields, they failed to fully comprehend the significance of human strengths, flourishing, and overall well-being for optimal functioning. As a result, the prevailing perspective changed from labeling individuals as normal or abnormal, sane, or insane, or healthy or unhealthy, to one that promotes and acknowledges the strengths and positive qualities of human beings (Csikszentmihalyi et al., 2014; Luthans, 2002).

Research has shown that replacing negative thought patterns with positive strategies in the fields of psychology and organizational behavior can effectively improve mental well-being. This concept, known as PsyCap, is rooted in the positive organizational behavior movement, suggested by Luthans (2002) and further developed in collaboration (Luthans & Youssef, 2004). PsyCap is defined as an individual's positive psychological state of growth, comprising four key elements: self-efficacy, optimism, hope, and resilience (Luthans et al., 2007). These elements involve having the confidence to take on challenging tasks, maintaining a positive outlook on present and future success, persisting towards goals, adapting as necessary, and showing the ability to endure setbacks and bounce back stronger in the pursuit of achievement (Luthans et al., 2007).

Research suggests that PsyCap is linked inversely to psychological distress symptoms like anxiety and depression and is positively associated with PMH resources (Boumparis et al., 2016; Turliuc & Candel, 2022). Moreover, the components of PsyCap show a positive connection with PMH and a negative link with mental health disorders (Bakker et al., 2017; Han et al., 2019; Huang et al., 2023). Turliuc and Candel (2022) have also shown that PsyCap is positively related to life satisfaction and negatively related to anxiety, stress, and depression. These findings indicate that PsyCap acts as a protective factor against mental health

issues. Moreso, Allman et al. (2023) and Avey et al. (2010) found a direct and positive relationship between PsyCap and subjective well-being. In organizational settings, PsyCap is primarily known as a mediator between an individual's performance and a positive work environment. Furthermore, PsyCap serves as a mediator in the relationship between BNS and mental health (Jones, 2017), and it also mediates the connection between PSS and mental well-being (Gao et al., 2022; Nielsen et al., 2017). Thus, based on this literature review, we developed the following hypotheses:

Hypothesis 3: PsyCap directly predicts PMH.

Hypothesis 4: PsyCap mediates the relationship between BNS and PMH.

Hypothesis 5: PsyCap mediates the relationship between PSS and PMH.

Method

Participants

A quantitative cross-sectional methodological approach was used in this study. The target population of this study was childcare institutions in Ethiopia. According to the Ministry of Ethiopian Women, Children, and Youth (MoWCY) (2020), approximately 9,853 children were lived in 145 childcare institutions. From nine regional states and two city administrations in Ethiopia, Amhara, Benshangul Gumuz, Southern Nation, Nationality and Peoples Regional (SNNPR) states, and Addis Ababa were chosen using simple random sampling within a stratified multi-stage framework. A total of 73 childcare institutions were identified in these regions and city administration (14 in Amhara, 2 in Benshangul Gumuz, 21 in SNNPR, and 36 in Addis Ababa). Finally, 11 care centers were randomly chosen (3 from Amhara, 1 from Benshangul Gumuz, 4 from SNNPR, and 3 from Addis Ababa), comprising 420 institutionalized children and/or adolescents (187 girls and 233 boys) aged 13 to 18 years. The participants' mean age (*M*) was 15.9 years with *SD* of 1.68. Among the participants, 242 (57.6%) identified as Orthodox, 29 (6.9%) Muslim, 106 (25.2%) Protestant, and 43 (10.2%) Catholic. These children and/or adolescents were chosen based on their fluency in reading, writing, and communication skills to share their thoughts and experiences regarding the quality of psychosocial services in childcare institutions. Ethics clearance was obtained from the Biomedical Sciences Research Ethics Committee (BMREC) at the University of the Western Cape in South Africa, and institutional permission was granted by the Ministry of Women, Children, and Youth (MoWCY) of

the Federal Democratic Republic of Ethiopia before data collection from institutionalized children.

Measures

To ensure the validity and reliability of the instruments used, we adopted, and translated them into Amharic, Ethiopia's national and working language for the participants' convenience. The translation process followed Cicchetti's (1994) four-step guideline and involved bilingual experts in English, developmental, and clinical psychology to minimize language barriers and ensure contextual and academic accuracy. In the first step, the instruments were translated, and the second step involved collaboration among experts to address any translational discrepancies, considering cultural contexts including words, meanings, customs, and beliefs. All experts engaged in discussions to reach a consensus and minimize differences. Finally, the Amharic version was cross-validated, and the forward-translated version was ready for the pilot test. Demographic data from participants were collected using a custom questionnaire and standardized surveys.

Psychological well-being scale

We used Ryff's (1989) 42-item self-assessment tool to evaluate the positive mental well-being of institutionalized children and adolescents. This instrument measures aspects of well-being including self-acceptance, environmental mastery, positive relationships, purpose in life, personal growth, and autonomy. Participants rated their responses on a six-point Likert scale from "1" (strongly disagree) to "6" (strongly agree). The scale demonstrated strong reliability and internal consistency with Cronbach's alpha ranging from 0.87 to 0.90 and in our study, it was found to be 0.89.

Psychological capital scale

Luthans et al. (2007) identified four key components of PsyCap, abbreviated as "HERO": hope, efficacy, resilience, and optimism. In this study, twenty-four items were used to assess the PsyCap of children in institutionalized settings. Each dimension was measured with six specific items and combined to create the PCQ-24 questionnaire. Participants rated their responses on a six-point Likert scale, ranging from 1 (strongly disagree) to 6 (strongly agree). The PsyCap composite Cronbach alphas were 0.88 to 0.89 (Luthans et al., 2007) and 0.88 in our current study.

Multi-dimensional scale of perceived social support

The Multi-dimensional Scale of PSS, created by Zimet and colleagues (Zimet et al., 1988), is a well-known and commonly used tool for assessing social support. In our study, we used a shorter 12-item version to assess how institutionalized children perceive support from significant individuals, such as family, friends, and significant others. This version is a quick and efficient assessment, typically taking only 3–5 min to complete. Participants rated their agreement on a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). The scale demonstrated high internal consistency, with reliability scores between 0.88 and 0.93 (Zimet et al., 1988). In our study, the reliability test resulted in a Cronbach's alpha of 0.88.

Child Status Index (CSI)

The Child Status Index (CSI) developed by O'Donnell et al. (2008) measures satisfaction with BNS in childcare institutions. It covers six domains: Nutrition, Shelter and care, Protection, Health, Psycho-social, and Education and skills training. It includes 12 factors like food security, nutrition, shelter quality, protection from abuse, healthcare, emotional well-being, and academic and vocational training. We employed this tool to assess childcare institutions' services for institutionalized children. Participants were rated based on a four-point Likert scale (1 = very bad, 4 = good). This study had good internal consistency with a Cronbach's alpha of 0.73 score, and the factors showed internal consistency ranging from 0.63 to 0.82 (O'Donnell et al., 2008).

Procedure

The researcher contacted leaders of childcare institutions to discuss a research project focused on PMH and social support services for children in institutional care. Once the directors and children approved the study, skilled data collectors distributed the questionnaire to the participants. The participants were informed about the study's purpose, their rights (including confidentiality, anonymity, informed consent, and the ability to withdraw), and in the case of minors, their guardians granted consent. Additionally, the participating children themselves expressed their agreement to participate. Following this, the data was prepared for analysis.

Data analyses

After gathering the necessary data, we used Statistical Package for the Social Sciences (SPSS) and Analysis of Moment Structures (AMOS) version 28.0 software to code and arrange the data for analysis. Before diving into structural equation modeling (SEM) to explore the relationships among the study's latent and observed factors, we first employed confirmatory factor analysis (CFA), which is a measurement model. Among the four available methods for estimating models in SEM, we chose to use the maximum likelihood (ML) estimation technique due to its popularity and practicality among researchers (Brown, 2015). To assess the goodness of fit for the CFA, we used various indices, such as Chi-square (χ^2), Standardized Root Mean Square Residual (SRMR), Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), and P of Close fit (pClose).

Results

Descriptive statistics and correlations between study variables

Table 1 provides the descriptive statistics and correlation matrix among four variables. There is a positive and significant correlation between institutionalized children's PMH and PsyCap ($r=0.62$). Similarly, mental health has a positive and significant relationship with PSS ($r=0.41$). Furthermore, BNS have a positive relationship with all variables, PMH ($r=0.58$), PsyCap ($r=0.50$), and PSS ($r=0.45$) respectively. Furthermore, the normality distribution of the measured constructs, Cronbach's alpha values, skewness, and kurtosis, fall within acceptable ranges, with skewness levels below 3 and kurtosis levels below 10, respectively.

Construct reliability and validity measures

Table 2 indicates strong indicators with standardized loadings above 0.7 and all constructs surpassing an AVE value of 0.5, indicating acceptable convergent validity. Discriminant validity is confirmed by moderate inter-construct correlations and the absence of problematic cross-loadings. Additionally, AVE values on the diagonal exceed those in

Table 1 Mean, standard deviation, and correlation between study variables ($N=420$)

Variables	Mean	SD	Skewness	Kurtosis	α	1	2	3	4
PMH	3.54	1.19	0.127	-0.928	0.89	1.00			
PsyCap	4.24	1.23	0.164	0.713	0.88	0.62**	1.00		
PSS	4.67	1.40	-0.353	-0.142	0.88	0.41**	0.468**	1.00	
BNS	11.22	2.47	0.243	0.294	0.73	0.58**	0.50**	0.45**	1.00

** $P < 0.01$. (2-tailed): PMH Positive mental health, PsyCap Psychological Capital, PSS Perceived social support, BNS Basic need services

Table 2 Construct reliability and validity measures

Variables	CR	AVE	MSV	BNS	PSS	PsyCap	PMH
BNS	0.837	0.633	0.108	0.750			
PSS	0.771	0.596	0.106	0.530***	0.828		
PsyCap	0.831	0.643	0.353	0.659***	0.627	0.781	
PMH	0.816	0.779	0.237	0.908**	0.673	0.582	0.817

CR Construct Reliability, AVE Average Variance Extracted, MSV Maximum Shared Variance; and the square root of the AVE in the diagonal

Table 3 Model fit measures for exogenous, mediator, and outcome variables

Measure	Estimate	Terrible	Threshold	Interpretation
CMIN	4500.892	–	–	–
DF	3218.000	–	–	–
CMIN/DF	1.399	> 5	Between 1 & 3	Good fit
CFI	0.952	< 0.90	> 0.95	Good fit
SRMR	0.046	> 0.10	< 0.08	Good fit
RMSEA	0.031	> 0.08	< 0.06	Good fit
PClose	1.000	< 0.01	> 0.05	Good fit

respective columns, while MSV values are lower than AVE values, further supporting discriminant validity.

Structural model fitness test for all variables

Assessing the suggested model through SEM is crucial for understanding how different variables in the theoretical framework are interrelated. The main goal of evaluating the structural model in this study is to examine the relationship between BNS and PSS as predictors, with PsyCap as a mediator, and PMH as the outcome variable. We use the cutoff criteria established by Hu and Bentler (1999) to make this determination. Below in Table 3, we provide a summary of the analysis of the proposed structural model based on the collected empirical data. The (χ^2) was used to evaluate how well the proposed model aligns with the data structure. The chi-square to a degree of freedom ratio CMIN/DF of 1.399 falls within the acceptable range of 1 to 3, indicating a reasonable fit. Other fit indices, like SRMR and RMSEA, were also examined. These fit indices are less influenced by sample size, model misrepresentation, and parameter estimates. The SRMR value of 0.046, below the threshold of 0.08, indicates a good fit. Similarly, the RMSEA value of 0.031 is below the standard cutoff of 0.06, suggesting a good fit as well. The P Close (P of close fit) also supports a good fit, with a pClose value of 1, which is greater than 0.05. The CFI, an incremental fit index, has a value of 0.952, exceeding the minimum cutoff of 0.95, indicating a favorable fit. In conclusion, the structural fit indices among variables affirm that the theoretical measurement model is the best fit for the collected survey data or the hypothesized model.

Hypotheses tests for the proposed structural model

Evaluating the model fit of the proposed research model is crucial to assess the implied relationship. Figure 1 displays the structural model path diagram.

Diagram 1. shows that basic needs, perceived social support, and PsyCap have a direct impact on mental health. Additionally, PsyCap acts as a mediator between basic needs and perceived social support, and mental health. The study analyzed both the direct and indirect influences and presented the results in subsequent sections.

The direct effect of BNS and PSS on PMH and PsyCap

The first three hypotheses in Table 4 show the direct effects of exogenous variables BNS and PSS along with the mediator variable PsyCap on the outcome variable PMH. Similarly, the last two hypotheses demonstrate the direct effects of exogenous variables BNS and PSS on the mediator variable PsyCap. Thus, factors related to BNS, such as food, shelter, care, and health services, have a positive and significant direct impact ($B=0.429$, $p=0.001$) on the PMH construct. Likewise, PsyCap has been found to have a significant effect ($B=0.597$, $p=0.001$) on PMH. However, PSS does not have a significant direct impact ($B=-0.070$, $p=0.284$) on PMH. On the other hand, the exogenous variables' direct effects on the mediator variable PsyCap indicated that the BNS have positive and direct effects on PsyCap, with statistically significant coefficients ($B=0.384$, $p=0.001$) and PSS exerts a positive and direct influence on the PsyCap construct at a significant level ($B=0.410$, $p=0.001$) respectively.

Mediation effect

The fourth and fifth hypotheses of this study were to explore how PsyCap mediates the connection between BNS and PSS with the PMH of institutionalized children. Drawing on the works of (Keith, 2014) a mediator variable is understood to contribute to fully or partially explaining the association between exogenous (independent) and endogenous (dependent) constructs. In this study, PsyCap was posited as a mediating construct between the factors of BNS and PSS, and the PMH status of institutionalized children.

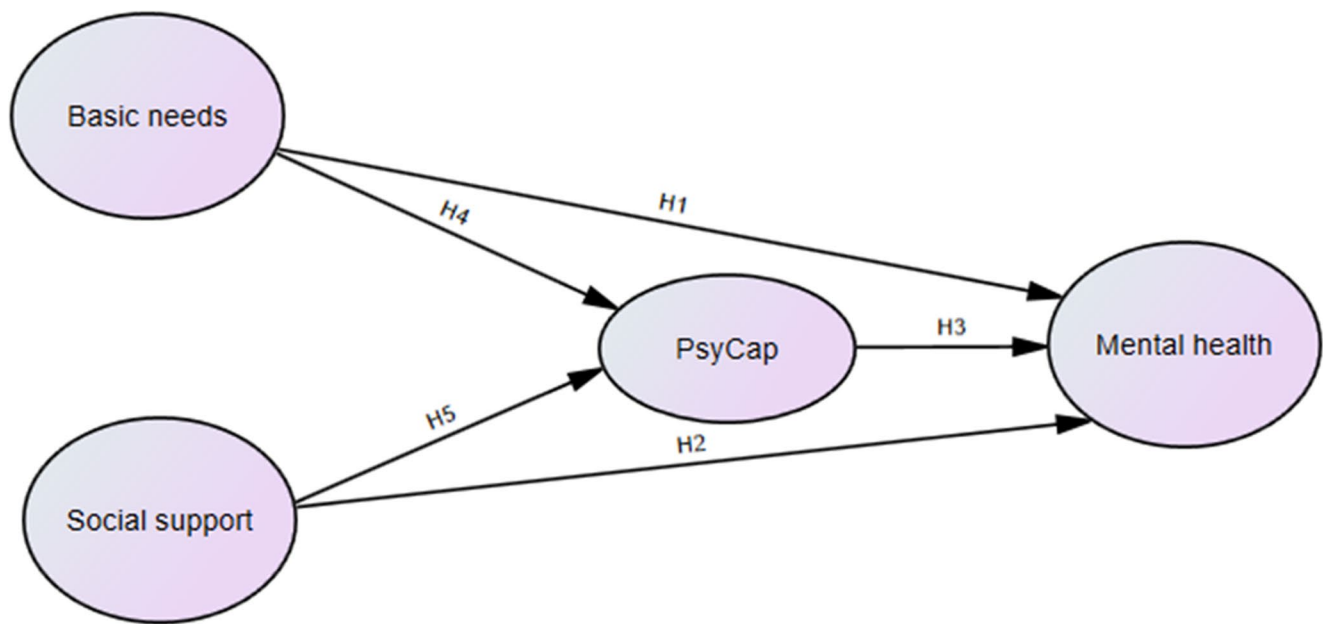


Fig. 1 Research hypothesis diagram 1

Table 4 The direct effect of exogenous variables on outcome and mediator variables

Hypotheses	proposed relationship among constructs	Std Beta Coefficient/estimates	SE	95% BC CI		<i>p</i>
				Lower bounds	Upper bounds	
H1	BNS → PMH	0.429	0.055	0.330	0.514	0.001
H2	PSS → PMH	-0.070	0.059	-0.159	0.038	0.284
H3	PsyCap → PMH	0.597	0.065	0.490	0.702	0.001
H4	BNS → PsyCap	0.384	0.060	0.281	0.476	0.001
H5	PSS → PsyCap	0.410	0.073	0.289	0.525	0.001

$p < 0.05^*$ $p < 0.01^{**}$ $p < 0.001^{***}$ NB: *BC CI* Bias-corrected confidence intervals, *PMH* Positive mental health, *PsyCap* Psychological Capital, *PSS* Perceived social support, *BNS* Basic need services

Table 5 The mediating role of PsyCap on the relationship between exogenous and outcome variable

Hypotheses	proposed relationship among constructs	Std Beta Coefficient/estimates	SE	95% BC CI		<i>p</i>
				Lower bounds	Upper bounds	
H4	BNS → PsyCap → PMH	0.230	0.044	0.166	0.300	0.001
H5	PSS → PsyCap → PMH	0.245	0.055	0.158	0.345	0.001

$p < 0.05^*$ $p < 0.01^{**}$ $p < 0.001^{***}$ NB: *BC CI* Bias-corrected confidence intervals, *PMH* Positive mental health, *PsyCap* psychological Capital, *PSS* Perceived social support, *BNS* Basic need services

Table 5. presents the findings indicating the substantial indirect effects of childcare institutions' BNS ($B = 0.230$, $p = 0.001$) on children's PMH. The 95% bias-corrected bootstrap (CI) analysis revealed that the lower and upper boundary values for the indirect BNS on PMH ranged from 0.166 to 0.300. These results affirm that the influence of NBS is statistically significant and supports the validity of the standardized beta or path coefficient, as well as the proposed causal relationships between BNS and MH constructs. Similarly, PSS ($B = 0.245$, $p = 0.001$) was found to have significant positive indirect effects on institutionalized children's PMH through the mediating factor of PsyCap. The 95% bias-corrected bootstrap (CI) analysis indicated a

range from 0.158 to 0.345 for this indirect effect, which was significantly different from zero. These findings provide further validation for the proposed indirect causal relationships between exogenous and endogenous factors of MH in the model.

The total effect of BNS and PSS on PMH

The finding in Table 4 shows that childcare institutions' BNS demonstrated a significant positive direct, indirect, and total effect on PMH of children with a total predictive value of ($B = 0.659$, $p = 0.001$). Similarly, PSS has a substantial positive impact on PMH of institutionalized children which

is supported by significant predictive value of ($B=0.175$, $p=0.001$). Analysis using a 95% bias-corrected bootstrap (CI) confirms that both BNS and PSS have statistically different from zero and significant total effects, affirming the accuracy of our path coefficients and the proposed causal relationships between predictors and outcome variables. In conclusion, BNS directly and indirectly predict institutionalized children's PMH, with PsyCap playing a partial mediating role. Furthermore, PsyCap fully mediates the relationship between PSS and PMH, implying that PSS indirectly influences children's PMH through the presence of the PsyCap construct.

Discussion

The overall aim of the present study was to examine how BNS, PSS, and PsyCap directly affect the PMH of institutionalized children. It also explored PsyCap's mediation role between PSS, BNS, and children's PMH status.

The direct effect of BNS, PSS, and PsyCap on PMH

Hypothesis one suggested examining how BNS affect PMH. The current study findings demonstrated that fulfilling basic needs has a direct impact on the mental health and overall well-being of children living in institutional settings. This finding provides robust evidence that the provision of necessities plays a significant role in shaping the PMH or psychological well-being of institutionalized children. The empirical study conducted by Huang et al. (2018) supports this claim, showing a clear and substantial connection between basic needs and the PMH/ well-being of children residing in care centers.

The study emphasizes the importance of providing positive psychological support and favorable health outcomes in early childhood development (Huang et al., 2018). BNS including food security, shelter quality, supportive care, and healthcare, collectively predict mental health both directly and indirectly. Meeting physiological needs is crucial for cognitive development and optimal functioning, as the availability and fulfillment of basic needs are fundamental for physical and mental well-being and survival (Narvaez, 2018). The availability of nutritious food, quality shelter, and adequate healthcare services are pivotal factors in nurturing the psychosocial and emotional development of institutionalized children (Singh & Sekher, 2021). Insufficient access to basic needs and inadequate nutritional intake is implicated in a spectrum of psychological disorders, encompassing anxiety, feelings of vulnerability, apprehension, and stress, which are further compounded by socio-cultural elements intertwined with food scarcity. Empirical research

consistently underscores the pivotal and affirmative role of food insecurity in predicting mental health disorders (Afulani et al., 2018). Scholarly discourse has firmly established a direct correlation between food insecurity and the scope of conditions including cognitive impairments, anxiety disorders, suicidal ideation, and depressive symptoms (Huang et al., 2018). Individuals grappling with food insecurity are predisposed to heightened levels of psychological distress. This difficulty is especially exacerbated among institutionalized minors relying on external care, confronting assorted psychological impediments stemming from inadequate food access and substandard nutritional provision (Huang et al., 2018). Additionally, lower socioeconomic status (SES) is associated with poorer mental health and well-being, with institutionalized children exhibiting slower cognitive development compared to their non-institutionalized counterparts (Singh & Sekher, 2021). Furthermore, inadequate housing conditions and food security have been identified as significant predictors of various psychological distress symptoms, including depression and generalized anxiety disorders (Soria, 2023). Housing insecurity is also linked to poor academic performance and overall poorer health status (Leung et al., 2021). Moreover, the absence of available and nutritious food significantly impacts both the physical and mental health of children, leading to poorer health statuses, disrupted sleep patterns, and diminished academic performance (Leung et al., 2021).

Hypothesis two posited a direct relationship between PSS and the PMH/well-being of children and adolescents residing in institutional care settings. However, the findings of this study indicate that there is no statistically significant direct effect of PSS on the mental health status of residential children. However, it is essential to highlight that existing literature consistently underscores the positive influence of social support on the mental well-being of children in institutional settings. Support from significant individuals such as friends, family members, and neighbors has been found to mitigate the development of depressive symptoms, stress, and anxiety (Chen et al., 2021). An empirical study by Wang et al. (2018) also demonstrated a robust correlation between social support and mental health. Perceived support from significant figures such as teachers, friends, and family are crucial in managing psychological stress and coping with challenges (Emadpoor et al., 2016; Siu et al., 2023). Additionally, Pan et al. (2023) found that social and psychological support and academic engagement are positively correlated and mutually predictive, highlighting their combined importance in enhancing learners' education quality. Moreover, social support serves as a protective factor against the detrimental impacts of psychological distress, promoting happiness and overall mental well-being of children (Chen et al., 2022; Emadpoor et al., 2016).

Conversely, low levels of social support have been linked to adverse mental health outcomes, including depression, anxiety, and stress (Wang et al., 2018). Individuals reporting limited social support tend to suffer from more severe mental health issues (Geweniger et al., 2024). In the case of institutionalized children without psychosocial support, the absence of social backing, especially from family members, can amplify negative mental health consequences. Various factors such as parental loss, divorce, economic crises, and separation from family members heighten the risk of mental disorders, potentially undermining the role of instrumental or material support. Emotional support is a vital component for children's mental well-being, might be lacking in institutionalized children due to homesickness and separation from their families. The intricate interplay between social support and mental health warrants further investigation, as research presents mixed findings on the direct impact of social support on mental health (Lakey et al., 2010). Inconsistencies in the relationship between social support and mental health among institutionalized children may be attributed to specific contexts and individual differences, emphasizing the need for more research in this area.

Hypothesis three posited that PsyCap directly influences the PMH of institutionalized children. The findings confirmed a positive association between higher-order PsyCap levels and enhanced mental well-being, which supports the hypothesis. Despite the limited availability of prior studies focusing on this population, existing research within organizational and academic contexts consistently underscores the advantageous effects of heightened PsyCap on mental health outcomes of individuals (Harms et al., 2017). Various studies have elucidated that higher-order PsyCap exhibits a direct and positive relationship with mental well-being (Wang et al., 2022; Youssef-Morgan & Luthans, 2015), while also demonstrating an inverse association with prevalent psychological disorders such as depression, anxiety, and stress (Han et al., 2019; Huang et al., 2023; Liu et al., 2015). Additionally, research by Turluc and Candel (2022) highlights PsyCap as a positive predictor of life satisfaction, concurrently indicating negative associations with depression and anxiety. The constituent components of PsyCap, including optimism, efficacy, hope, and resilience, have been shown to bolster individuals' adaptive capacities, furnishing them with psychological fortitude and resilience against adversities such as depression and stress (Bakker et al., 2017; Turluc & Candel, 2022).

Moreover, PsyCap has been shown to effectively alleviate psychological distress and enhance coping mechanisms (Gupta et al., 2019), while also bolstering individuals' resilience against stressors (Lv et al., 2022). These findings underscore the importance of sustained psychosocial support within childcare institutions to nurture higher-order

PsyCap among institutionalized children, ultimately promoting their PMH.

In the realm of institutionalized childcare, an opportunity arises for the enhancement of higher-order PsyCap resources, notably comprising hope, efficacy, resilience, and optimism, serving as a safeguarding mechanism conducive to fostering salubrious mental well-being and a forward-looking perspective. Poots and Cassidy (2020) posit that individuals forging robust emotional bonds and receiving social sustenance from significant others manifest reduced susceptibility to mental illnesses while concurrently exhibiting a propensity for sustained mental equilibrium. The dimension of PsyCap, particularly hope, demonstrates a robust and statistically significant correlation with PMH status. Concurrently, psychosocial assets such as self-esteem, efficacy, and emotional intelligence have been empirically associated with PMH outcomes and resilience within the milieu of orphaned and vulnerable children (Allman et al., 2023; Jardin et al., 2017).

Therefore, childcare institutions must enhance the quality of their psychosocial services following this empirical evidence to ameliorate the mental well-being and PsyCap of institutionalized children. Furthermore, Bronfenbrenner's bioecological model underscores the importance of contextual factors, such as religious leaders and educational institutions, in equipping institutionalized children with a positive PsyCap.

The mediating role of PsyCap in the relationship between BNS and PSS and PMH

Hypothesis four proposed that PsyCap acts as a mediator factor between BNS and the PMH status of institutionalized children. The findings demonstrated a connection between both BNS and PsyCap with PMH. Specifically, BNS was found to influence mental health through the presence of PsyCap. PsyCap was identified as a partial mediator in the relationship between BNS and the PMH of institutionalized children. As previously noted, the availability of basic needs, such as adequate nutrition, conducive housing conditions, and access to healthcare, have both direct and indirect effects on an individual's overall quality of life. In contrast, inadequate nutrition, in line with previous research by Malek Rivian et al. (2021) increases the likelihood of experiencing psychological distress. Similarly, insufficient dietary intake negatively affects the development of higher-order PsyCap elements in children, such as hope, efficacy, resilience, and optimism. Food insecurity has detrimental effects on the psychosocial development of children particularly among those who are vulnerable and disadvantaged (Huang et al., 2018).

Empirical research consistently establishes the pivotal role of food access and nutritional adequacy as determinants of traumatic events, while revealing their positive correlation with physical ailments, social isolation, and psychological distress (Stahre et al., 2015). Conversely, the cultivation of a balanced dietary regimen, routine physical exercise, and appropriate social engagement have been identified as factors contributing to the fortification of mental health resilience (Malek Rivan et al., 2021). Notably, it has been documented that food insecurity is positively associated with psychological distress, encompassing conditions such as depression, anxiety, and stress (Jones, 2017). Furthermore, the PWB and cognitive development of children are susceptible to adverse impacts resulting from insufficient nutrition intake due to food insecurity (Huang et al., 2018). Thus, PsyCap acts as a mediator in the correlation between the fulfillment of BNS and PMH.

Hypothesis five posited that PsyCap functions as a mediator factor in the relationship between the PSS and the PMH of children residing in institutional settings. The finding revealed that PsyCap serves as a complete mediator in the relationship between PSS and PMH. This finding aligns with previous research by Nielsen et al. (2017), which similarly demonstrated the mediating role of PsyCap in the relationship between PSS and PMH or mental well-being. PSS plays a crucial role in fostering the development of positive psychological resources (Newman et al., 2018). Empirical study by Siu et al. (2023) demonstrated that higher-order PsyCap mediates the link between social support and psychological well-being. Additionally, Siu et al. (2023) emphasized the significant influence of social support from key figures such as teachers, friends, and family members in conjunction with higher-order PsyCap on psychological well-being and PMH resources. Moreover, Gao et al. (2022) suggested that PsyCap acts as a mediator between PSS and positive mental health among adolescent participants. This study further underscored the pivotal roles of social support and PsyCap in fostering PMH and buffering against psychological disorders (Gao et al., 2022). Another empirical study intriguingly revealed a positive relationship between PSS, psychological well-being, and PsyCap, with PsyCap fully mediating the association between PSS and PMH / well-being (Roemer & Harris, 2018).

Both theoretical and empirical studies indicated that social support plays a crucial role in enhancing mental health and acts as a preventive measure against health-related problems (Pilane, 2011; Thoits, 2011). Strong social support has been found to correlate with better physical and mental health, acting as a protective factor against various health issues and contributing to overall well-being (Brugnoti et al., 2022). Recognizing and feeling supported within social networks is essential for fortifying mental health (Lo et al.,

2023). Derakhshan et al. (2023) emphasize that emotional factors boost mental health and quality of life. Similarly, Ikiz and Cakar (2010) found a strong link between positive psychological traits, such as PsyCap and self-esteem, and social support in adolescents. The study further highlighted that increased access to social support can improve mental health, including social adaptation, self-esteem, optimism, and academic achievement (Ikiz & Cakar, 2010). Moreover, familial, peer, and guidance and counseling professionals employ a potent and beneficial influence on the social environment within institutionalized environments for children. Conversely, insufficient social support is closely associated with psychological issues such as depression and anxiety (Bedaso et al., 2021). Conversely, sufficient social support from significant others including caregivers and counselors fosters better relationships, positive emotions, and enhanced performance, while also mitigating the impact of stress. The exploration of social support in workplace settings has surged due to its significant effects on well-being and productivity (Jolly et al., 2021).

Children and adolescents residing in childcare institutions are more tending to enhance their psychological resources like hope, self-efficacy, resilience, and optimism through social support, leading to improved mental well-being (Laidlaw, 2018). Extended stays in orphanages or institutional care are linked to higher self-esteem, emotional empathy, cognitive growth, and overall psychological health in children (Shekhawat & Gopalan, 2023). The perception of social support and PsyCap have a substantial influence on the mental health and overall well-being of institutionalized children. Authentic and tangible support from caregivers fosters a nurturing and empathetic environment for these children, serving as a protective barrier against psychological maladjustment and nurturing the cultivation of PsyCap resources. PsyCap's cognitive synergy resources play a pivotal role in facilitating the enhancement of children's mental health and well-being (Avey et al., 2010). Furthermore, social support positively affects the emotional well-being of children in institutional care, fostering the development of a constructive mindset and promoting healthy interpersonal relationships between children and caregivers within childcare institutions (Laidlaw, 2018).

Implications

Although childcare institutions are generally not recommended for optimal, cognitive, emotional, and psychological development of institutionalized children, they may present advantages over foster care, extended family arrangements, single-parent households, and poor or unstable family environments. This is because childcare centers often prioritize the provision of essential needs, educational opportunities,

and access to trained psychosocial professionals such as counselors, social workers, and nurses. Consequently, children residing in childcare institutions tend to exhibit better psychological functioning, including enhanced self-esteem, emotional resilience, and cognitive development compared to their counterparts in community-based, foster care, or extended family settings.

Limitations

This study had the following limitations. Firstly, the absence of standardized mental health measures in Ethiopia necessitated the adaptation of Western instruments, potentially losing some original meaning translation. In addition, the length of the data collection instruments and participants' unable to pose clarification questions about the questionnaires during their completion time might be another limitation of this study. Secondly, the study used a quantitative approach with cross-sectional data, limiting the depth of analysis. Future researchers could overcome these quantitative limitations by employing mixed methods and integrating qualitative approaches like interviews and focus groups with caregivers to obtain a more comprehensive understanding of institutionalized children's experiences and needs. Lastly, the reliance solely on quantitative data restricted the ability to establish causal relationships. Future investigations may benefit from exploring additional psychological factors such as self-esteem and emotional intelligence among institutionalized children.

Conclusion

Despite the extensive literature on PsyCap and mental health within organizational and work environments, the intricate interplay of these crucial positive psychological resources concerning the mental health of orphaned or institutionalized children remains uncertain. Furthermore, their contribution to facilitating the development of positive mental health in institutionalized children, enabling them to recover from scenarios of psychological distress, has not been adequately elucidated. The purpose of this study was to discern the direct influence of BNS, PSS, and PsyCap on the PMH of institutionalized children. Additionally, the study aimed to examine the mediating role of PsyCap in the relationship between PSS, BNS, and PMH. The findings revealed that both BNS and PsyCap have a direct impact on PMH. Moreover, PsyCap was found to mediate the relationship between PSS, BNS, and PMH.

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Declarations

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