Innovations

A Study of Public Belief in Maternity Benefit Provisions in PMMVY among Pregnant Women & Lactating Mothers in Haryana Nisha*a1, Vinod Kumar Bishnoi^{b1}

^a Research Scholar at the Haryana School of Business
^b Professor at Haryana School of Business
¹Guru Jambheshwar University of Science & Technology, Hisar, Haryana, India- 125001
*Corresponding author: Nisha
DOI: 10.54882/7420237416930

Abstract

The most productive years of a woman's life and her reproductive years are in the same period. Pregnancy causes different physiological and anatomical alterations in a woman's body that help in adaptations to allow the growth of the foetus. These changes demand nutritious food, adequate rest, and timely health checkups in the prenatal and post-natal period. A working woman has to take a break from her job to have proper rest before and after childbirth. Money is required to meet the expenses incurred in purchasing nutritious food, visiting gynaecologists for health checkups, and institutional delivery. To meet these compulsions, paid maternity leaves have been legislated for female workers in organized sectors in several countries. However, such provisions are not available for female workers in unorganized sectors. The governments of different countries are implementing innovative conditional maternity benefit schemes and the current study is focussed on checking the awareness of India's Pradhan Mantri Matru Vandana Yojana (PMMVY) among the potential beneficiaries in Haryana state. The study involves different statistical tests such as descriptive statistics, item analysis (using commonalities, Cronbach's Alpha if item deleted, item-total correlation, and inter-item correlation), factor analysis (using Kaiser Meyer Olkin (KMO), Bartlett's test statistics), factor extraction, and hypothesis testing related to differences in awareness using IBM SPSS Statistics v29.0 software. The study is useful for potential beneficiaries and policymakers to make PMMVY a better maternity benefit scheme in terms of implementation and utilization.

Keywords: Pradhan Mantri Matru Vandana Yojana; Conditional Maternity Benefit; PMMVY; Maternity Benefit Scheme; exploratory factor analysis; India; EFA

Abbreviations

ANM= Auxiliary Nursing Midwifery; ASHA= Accredited Social Health Activist; AWW= Anganwadi Worker; CMB = Conditional Maternity Benefit; IMR= Infant Mortality Rate; MMR= Mother Mortality Rate; PMMVY= Prime Minister Matru Vandana Yojana; PW & LM= Pregnant Women & Lactating Mother

Introduction

Maternal and child health issues continue to be the underpinnings of global and national health policies. Maternal health is a decisive factor for a healthy newborn as the start of a healthy life begins in the womb of a healthy mother. Pregnancy is a period during which many physiological as well as anatomical alterations and adaptations take place in a woman's body to allow the growth of the foetus. These alterations in the woman's body also allow the mother and foetus to make it through the demands of childbirth (Datta et al., 2010; Tan & Tan, 2013). These physiological and anatomical alterations get

restored to normal during the postpartum period. And the period for rest and recovery to normal health depends on the type of delivery (caesarean or vaginal) and breastfeeding. Researcher suggests that mothers experience childbirth-related symptoms up to 5 weeks postpartum. Health concerns persist for an even longer period in lactating mothers who have undergone caesarean delivery (McGovern et al., 2006; Ritonga et al., 2022).

After birth, the quality of healthcare and breastfeeding to neonatal have diverse and lifelong effects on children's physical and mental health. Infants having exclusive breastfeeding for the first six months of their life undergo less morbidity due to gastrointestinal infection than those having partial breastfeeding for three or four months(Kramer & Kakuma, 2012). The World Health Organization recommends to breastfed the child up to 2 years of age to reduce undernutrition causing issues of being underweight, stunting and wasting (Syeda et al., 2021) Moreover, mothers who breastfeed their infants for longer duration have more prolonged lactational amenorrhea (Kramer & Kakuma, 2012). The amount and duration of regular breastfeeding for at least the first six months depends on the health of the mother and her work routines. A study by Shahla Meedya et al., to analyze the factors that positively influence breastfeeding duration intending to develop a midwifery intervention aimed at prolonging breastfeeding highlights that the breastfeeding duration mainly depends on breastfeeding intention and self-efficacy of the mother, and social support (Meedya et al., 2010). Out of these three factors, the breastfeeding intention and self-efficacy of the mother are highly individualized and social support is a generic factor. The social support for pregnant women and lactating mothers includes maternity protection legislation with the provisions of paid maternity leaves, creche facility at the workplace, and nursing breaks for employees for breastfeeding their infants (Barona-Vilar et al., 2009; Gyamfi et al., 2023). The employed females can be grouped into two categories; (i) women working in organized sectors and (ii) women working in unorganized sectors of the economy. Most of the countries have legislation to secure employment protection and paid maternity leaves for female workers in organized sectors but there is a dearth of such provisions in most countries for females employed in unorganized sectors. A comprehensive review of prominent maternity benefit schemes (MBSs) around the globe is covered in another work by authors (Bishnoi & Bishnoi, 2022). The current study is focussed on Pradhan Mantri Matru Vandana Yojana (PMMVY); translated as Prime Minister Maternity Salutation Scheme. It covers maternity benefits for female workers in unorganized sectors in India. PMMVY is the world's largest CMB scheme in terms of the number of beneficiaries (Von Haaren & Klonner, 2020).

Background

There have been several studies with the objective of analyzing awareness of different maternity benefit programs. Most of these studies cover maternity benefit legislation for female workers in the organized sector (Gethe & Pandey, 2023; Patnaik et al., 2014; Verma et al., 2020) or state-specific maternity benefits schemes in India (S & S, 2019). The PMMVY was implemented in 2017 and it is important to check if the potential beneficiaries and field functionaries are aware of the different features i.e., eligibility criteria, amount of money received, three different types of forms required to fill for receiving benefits etc.

Objectives of Study

To assess the awareness about Pradhan Mantri Matru Vandana Yojana (PMMVY) among potential beneficiaries of Haryana state in India.

Research Methodology

The present study commenced with research design i.e., identification of a potential research problem, sample size determination, data collection for the pilot survey, data preparation, and descriptive statistics analysis for identification and rectification of missing values and outliers and reliability analysis for omitting the irrelevant questions from designed questionnaires. The literature review as published in previous work by authors (Bishnoi & Bishnoi, 2022) and in-depth interviews of field functionaries helped in designing the questionnaires for beneficiaries and field functionaries. A questionnaire-based pilot survey was conducted in the Haryana state of India for assessment of the level of awareness among

beneficiaries as well as field functionaries of PMMVY. The objective of the pilot survey and following basic statistical data analysis is to know the direction of the designed research and modification in the designed questionnaire by adding and omitting questions. Responses of PW & LM and field functionaries were collected on a 5-point Likert scale with the meaning of data in the code sheet as 1-strongly disagree; 2-disagree, 3-neutral, 4-agree, and 5-strongly agree (Malhotra et al., 2017b). The collected data was univariate and non-metric with 540 independent samples of PW & LM. The selection of statistical data analysis technique is depicted in Figure 1.



Figure 1 Selection of data analysis technique

Population and Sample Size

Ideally, data should be collected from everyone constituting the universe but considering the constraints of available resources e.g., time for research, and finance (Malhotra et al., 2017a). So, the sampling method is preferred. The sample size in this study was selected in such a way that it represents the true features of the entire population of Haryana state. The pilot survey included data collection of 185 PW & LM. The collected data was analyzed in IBM SPSS Statistics software for its normality and internal consistency. The observed data was normal and various items related to awareness had Cronbach Alpha greater than 0.7 i.e., items were internally consistent. A few items were deleted to make the research robust before moving to final data collection from 540 PW & LM. Each new respondent was identified as referred by a previous respondent i.e., non-probability-based snowball sampling.

Statistical Analysis of Data and Results

Evaluation of Awareness about PMMVY

The current study involves an analysis of the level of awareness among beneficiaries. Analysis of the level of awareness begins with different sources of information about the scheme i.e., PMMVY is encapsulated in Table 1. The awareness about PMMVY is important as it helps the needy to benefit from the scheme. Conversely, awareness helps all the stakeholders of a scheme i.e., the sponsoring authority (the Government of India in the case of PMMVY) and the eligible needy or potential beneficiaries (the pregnant women and lactating mothers).

Sources of information	Number of Respondents	Percentage
Accredited Social Health Activist (ASHA)	62	11.5
Aanganwadi Worker (AWW)	192	35.6
Aanganwadi Helper (AWH)	98	18.1
During Gram Panchayat Sabha	23	4.3
Through Campaigning of PMMVY	27	5.0
Through friends and relatives	81	15.0
Hoardings and banners	36	6.7
Through social media	21	3.9
Total	540	100

Table 1 Frequency of different sources of information

Source: Primary data

It is visible from the table that AWW plays a significant role in spreading awareness of PMMVY and contributes 35.6% of total sources of awareness. Surprisingly, the AWH also play a vital role in spreading awareness. It may be because of the typical Indian social fabric where interaction and discussion are the way to learn things. The people involved in a program become aware of various provisions of it, irrespective of their role. However, ASHA workers are important field functionaries in terms of their role and responsibilities in the PMMVY scheme but their contribution is 11.5%. This contribution should have been more. The gram Panchayat (4.3%), hoarding and banners (6.7%), and social media (3.9%) do not leave any impactful mark in spreading awareness. There are well-established ways to spread awareness about social issues such as using technologies and social media platforms. The WhatsApp groups by field functionaries at the local level and hosting social media pages on social networking websites such as Facebook, Telegram mobile application and other such utilities are required to be used for spreading awareness. To assess the awareness, several multiple-response questions (MCQs) are asked from the respondents i.e., potential beneficiaries of PMMVY.

Descriptive Analysis of Items of Awareness

Descriptive statistics are used to summarize and organise data. It is carried out before making inferential statistical comparisons. It measures the frequency, central tendency and dispersion. Conversely, descriptive statistics help to assess a specific population in an easily manageable form by condensing the raw data into a simpler summary (Kaur et al., 2018). The descriptive statistics of data of awareness in Table 2 show that respondents agree that they are aware of various features of PMMVY. But, surprisingly, they disagree on being aware of the features that money is received in three instalments. This implies that PW & LMs are not being made aware of the timing of different instalments and the objectives of disbursing money in three instalments. It questions the efforts made by the government of India through

field functionaries and other means. Another important point about which PW & LMs are not aware is the condition of minimum age for claiming benefits under PMMVY. But the possible reason for this could be the fact that the legal age of a girl to be married in India is 18 years and by the time of pregnancy and childbirth after marriage, generally, PW & LMs cross the age of 19 years.

Item Analysis for Awareness

Factor analysis can be described as a technique of reducing dimensionality by converting a large number of measurable and observable variables into fewer latent variables that share a common variance and are not directly measured (Bartholomew et al., 2011). It assembles the common variable into one factor and thus dimensionality gets reduced to a few factors (Stevens, 2021). In short, factor analysis is useful for placing variables in meaningful categories. Factor analysis is preceded by item analysis which lays down the basis for the selection of various items of a factor. Item analysis assesses items for their reliability i.e., the accuracy or dependability of measurements, using parameters as follows: (i) reliability and effect of inclusion and exclusion of an item using Cronbach's alpha (α) if the item deleted (Taber, 2018), (ii) the proportion of the variance of the item explained by the common factors variation using commonalities (Hogarty et al., 2005), (iii) the correlation between different items using corrected item-total correlation (Ahorsu et al., 2022), and (iv) internal consistency reliability using inter-item correlation (Ahorsu et al., 2022).

Table 2 Descriptive Statistics and Item Analysis

Items	Mean	Variance	Communalitie s	Cronbach's Alpha if Item Deleted	Corrected Item-Total Correlation	Inter-Item Correlation
I am familiar with the condition of timely ANC	3.66	.659	.737	.788	.544	0.590
I am aware that it is a CMB	3.80	.663	.538	.805	.326	0.471
I am aware that financial aid is provided in three instalments	2.73	1.084	.614	.813	.286	0.490
I know that the scheme is applicable only for the first live birth	4.05	.303	.770	.792	.560	0.833
I know that the aid is for covering out-of-pocket expenditures during pregnancy and childbirth	3.65	.558	.824	.765	.847	0.692
I know about the minimum age for receiving the benefit	2.93	1.071	.520	.852	151	0.386
I know that the scheme helps promote health-seeking behaviour	3.98	.421	.676	.792	.520	0.626
I am aware that the amount given is for purchasing nutritious food supplements, compensation for wage loss	3.76	.336	.766	.792	.543	0.626
Mother-Child Protection (MCP) Card is required for availing of the benefit	3.40	.586	.500	.811	.237	0.363
Aadhar card is required to avail of the benefit	3.59	.557	.518	.786	.577	0.482
A Bank account/ post-office account is required	3.46	.754	.668	.798	.418	0.556
Money is credited to Mother's bank account	3.76	.343	.533	.797	.444	0.667
Spouse's Aadhar card is required	3.39	.743	.663	.775	.684	0.696
I am aware that the scheme promotes family planning	3.77	.639	.844	.774	.713	0.833

Source= Primary data

A variation in statistically significant values of these parameters is observed in the literature (AlHadi et al., 2017; Davenport et al., 2015; Yong & Pearce, 2013). Internal consistency represents the homogeneity of variables or the degree to which different variables measure the same thing (Davenport et al., 2015). For p-value < 0.05, the generalized values of α have been ≥ 0.7 , and the item-total correlation is >0.2 (Brown, 2002; Risser et al., 2007). The problematic or irrelevant items for achieving the reliability and adequacy of the data are considered for deletion (Amirrudin et al., 2020).

The item-total correlation describes the strength of the correlation of an item with all other items. The common features of different variables can be explained through the covariance matrix and correlation matrix (Lorenzo-Seva & Ferrando, 2021). The researchers prefer an inter-item correlation matrix as it is easy to interpret results (Yong & Pearce, 2013). The diagonal element of the inter-item correlation matrix is 1 as it describes the correlation of a variable with itself. The largest and non-diagonal values related to that item in the inter-item correlation matrix are given in Table 2. It describes the strength of the correlation of an item with any of the other items which is internal consistency. Its value is 0 when there is no correlation and 1 when items are similar enough to cause multicollinearity (Pedersen et al., 2012; Zijlmans et al., 2019). Conversely, the inter-item correlation should be between 0.3 and 0.9 (Kamaruddin & Udin, 2009). The commonality indicates the proportion of variance of an item that is shared with other variables of the matrix i.e., common variance (Yong & Pearce, 2013). The value of communalities should be more than 0.50 (Mooi et al., 2018). The decision regarding the exclusion of an item from factor analysis is considered if it gives inappropriate values of communality, α , item-total correlation, and inter-item correlation. The output of item analysis in Table 2 shows the values of these parameters to include all variables in factor analysis. The highest value of inter-item correlation is 0.833 (i.e., <0.90) and the lowest value is more than the threshold value of 0.30. So, most of the items are clear in the reliability and internal consistency filters except one item that passes three out of four filters. Accordingly, all items are considered for factor analysis, at this stage.

Factor Analysis for Awareness

Various items for assessing the awareness about PMMVY are first analyzed for their reliability and internal consistency using commonalities, Cronbach's Alpha, item-total correlation, and inter-item correlation. Once all items are evaluated and found eligible for factor analysis, these items are then analyzed for their factorability using Kaiser Meyer Olkin (KMO) and Bartlett's test statistic, respectively. KMO measures sampling adequacy and its value varies from 0 to 1 the KMO between 0.8 and 1.0 means the sampling is adequate, between 0.7 and 0.79 means sampling is middling, sampling is mediocre for KMO values between 0.6 to 0.69, for KMO values less than 0.6 means inadequate sampling, and if the KMO value is less than 0.5, the sampling is not fit for factor analysis (Shrestha, 2021). Bartlett's test analyses the orthogonality of variables. A null hypothesis (H₀) that the variables are orthogonal (i.e., the original correlation matrix is an identity matrix) means they are not correlated and are unsuitable for factor analysis. H₀ is rejected if the p-value in Bartlett's test is <0.05 and the data set is appropriate for factor analysis (Shrestha, 2021).

Table 3	KMO and	Bartlett's	Test of	Awarenes

КМС	0.710	
Bartlett's Test	Chi-Square	5434.141
	Significance	<.001

The output of factor analysis in Table 3 shows that the KMO statistic is 0.710 and the p-value of Bartlett's test is <.001 i.e., variables are not orthogonal.

Factor Extraction for Awareness

Factor extraction includes the determination of the least number of factors to represent the interrelationships among the set of items. Different techniques for obtaining factor solutions are described in the literature (Kline, 2014; Mooi et al., 2018; Stevens, 2021; Yong & Pearce, 2013). Out of these methods, principal component analysis (PCA), maximum likelihood, and common factor analysis techniques have been widely used (Yong & Pearce, 2013). One of the most important parameters in factor analysis is *factor loading*. It describes the strength of an item to a factor. A variable might belong to more than one factor and cross-loading occurs when an item loads 0.32 or higher on two or more factors (Goretzko et al., 2021). EFA is a way to reveal complex patterns by exploring the dataset and testing predictions (Kline, 2014). The PCA is used to analyze the data sets of awareness of PMMVY. The output of EFA using PCA in SPSS v29.0 is encapsulated in Table 3. The PCA produces components and principal factor analysis produces factors (Yong & Pearce, 2013). The two widely used techniques that assist in deciding the number of factors for a given set of variables under PCA are Kaiser's Criterion and Scree Test (Shrestha, 2021). In this study, the 14 items of awareness about PMMVY are grouped into 3 factors using Kaiser's or Eigenvalue Criterion. The eigenvalue is a ratio of common variance to specific variance that is explained by a specific factor and a factor should have an eigenvalue greater than one (Malhotra et al., 2017b).

	Initial Eigenvalues			Extract	tion Sums of S Loadings	Squared	Rotation Sums of Squared Loadings			
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	5.414	38.669	38.669	5.414	38.669	38.669	4.221	30.154	30.154	
2	2.010	14.357	53.025	2.010	14.357	53.025	2.793	19.949	50.102	
3	1.614	11.531	64.556	1.614	11.531	64.556	2.024	14.454	64.556	
4	1.066	7.614	72.171							

Table 5 Trinine 51 55 Output for Total variance Explained by extracted factors of Awarenes	Table 3 Trimmed SPSS out	out for Total Variance I	Explained by extracte	d factors of Awareness
--------------------------------------------------------------------------------------------	--------------------------	--------------------------	-----------------------	------------------------

There are *Kaiser's criterion* and *Jolliffe's criterion* for retaining factors (Yong & Pearce, 2013) and the decision of accommodating the 14 variables of awareness in 3 factors fulfils both of these criterion. The *Rotation* of factors helps in minimizing the number of items with high loadings on each factor i.e., minimum cross-loading. The *varimax method* is recommended in literature to explore the data set (Yong & Pearce, 2013). The output of factor analysis and factor loading of different variables in three factors is encapsulated in Table 4.

	C	ompone	Factor Name	
items/ variables	1	2	3	&α
I am aware that the scheme promotes family planning	.871			General
I know that the scheme is applicable only for first-live birth	.870			Awareness
Money is credited to Mother's bank account	.729			(0.873)
I know that the scheme helps promote health-seeking behaviour among PW & LM	.691			
I am fully aware that it is a CMB	.661			-
I am aware that the amount given is for purchasing nutritious food supplements, compensation for wage loss	.606			
I know that the aid is for covering out-of-pocket expenditures during pregnancy and childbirth	.560			
A Bank account/ post-office account is required		.814		Requisite
Mother-Child Protection Card is required		.685		Documents
Aadhar card is required to avail of the benefit		.647		(0.714)
Spouse's Aadhar card is required		.581		
I am familiar with the condition of timely ANC			.800	Healthcare
I am aware that financial aid is provided in three instalments			.777	Related Awareness
I know about the minimum age for receiving the benefit			.470	(0.606)

Table 4 SPSS output of Rotated Component Matrix for Awareness

The final step of factor analysis is naming the factor analysis and it is more than an art as there are no rules for naming factors/ components. The names of retained factors for awareness are assigned such that the name best represents the concerned variables within that factor. The names assigned to these variables are "*F1= General Awareness*", "*F2= Requisite Document Awareness*", and "*F3= Healthcare Related Awareness*". The Cronbach Alpha (α) for these factors is mentioned against each factor in parenthesis. The value of α for each factor is more than a statically significant value of 0.6. This implies that calculated factors are reliable. The *General Awareness factor* encompasses the awareness about the general objectives of PMMVY such as promoting family planning, health-seeking behaviour among women, and utilizing financial aid for compensating wage loss, purchasing nutritious food etc. The 2nd factor encompasses the awareness of various documents for claiming maternity. The 3rd factor comprehends the awareness of the healthcare-related objectives of PMMVY.

Hypothesis Testing Related to Differences in Awareness

To analyze the variation in awareness among beneficiaries having different geographical, cultural, and societal exposures The variation in awareness is analyzed using a t-test and ANOVA test. The t-test is used to check for differences between different groups of respondents from beneficiaries having two independent variables and responses are measured on an interval or ratio scale. The ANOVA test is used for the above-mentioned analysis when there are more than two independent variables (Malhotra et al., 2017b).

To analyse the differences in awareness, the grand mean is computed for all three factors. Conversely, the fourteen items of awareness are represented by three factors. These three factors are used to compare

the difference in means for various independent variables i.e., characteristics of beneficiaries. The Levene test determines if there is homogeneity in the mean of various factors (Gastwirth et al., 2009). Levene's test is a preliminary test to decide whether to go for Welch's test or the t-test/ ANOVA test. If there is heterogeneity in grand means of factors i.e., the null hypothesis of Levene's test is rejected; and the Welch test is conducted to know the presence of significant difference in means (Zimmerman, 2004) otherwise ANOVA or t-test is conducted. The results of these tests are shown in Table 5. The null hypothesis, H₀₁ is that *the error mean of factors is equal across beneficiaries of different demographic profiles*. The results in Table 5 show that the p-value for the F-statistics of Levene's test is more than 0.05 for all three factors. Hence the null hypothesis cannot be rejected for any of the factors and a t-test is required to know if there is any significant difference in means of different demographic profiles.

Residence	Urban	Rural	Total	Leven	e's Test	t-test		
Factors				F-statistics	Significance	t-statistic	Sig. 2-tailed	
F1	3.8177	3.8318	3.8280	2.388	.123	282	.778	
F2	3.5121	3.4449	3.4630	2.646	.104	1.160	.246	
F3	3.0552	3.1232	3.1049	1.487 .223		-1.020	.308	

Table 5 Analysis of the difference in awareness with the demographic profile of beneficiaries

The null hypothesis for the t-test is H₀₂ is that *there is no significant difference in the mean of factors across beneficiaries of different demographic profiles.* The p-values corresponding to the t-statistic are greater than the cut-off value of 0.05 and this shows that there is no statistically significant difference in general awareness, requisite document-related awareness, and healthcare-related awareness among PW & LMs of rural and urban areas. During the data collection stage, it was observed that most beneficiaries were aware of different conditions of PMMVY except the condition of the minimum age of eligibility and money being received in three instalments. There was a difference in awareness among different beneficiaries but the case was not of a difference in awareness among beneficiaries from rural and urban areas.

Table 6 encapsulates variation in means of factors of different variables of awareness. The results of Levene's tests of mean do not reject the null hypothesis (H_{03}) that *the error mean of factors is equal across beneficiaries of different educational statuses*. This implies that the data set needs an ANOVA test for analysing the difference in mean of factors among beneficiaries of different educational statuses. The values of means of different factors of awareness depict that beneficiaries having schooling up to senior secondary are more aware of the general features and various documents required. However, the awareness about various health-related conditions of PMMVY is maximum among beneficiaries having post-graduation or even higher education. This implies that an educationally qualified post-graduate PW & LM is more cautious about maternal health and family planning as compared to a comparatively less educated woman. However, the null hypothesis (H_{04}) that *there is no significant difference in mean of factors across beneficiaries having different educational backgrounds* cannot be rejected as described by values of F-statistics of ANOVA test and corresponding significance i.e., > 0.05.

The p-values in the results of Levene's test in Table 7 do not allow to reject the null hypothesis (H_{05}) that *the error mean of factors is equal across beneficiaries of different religions.* Accordingly, the ANOVA test is applied to analyse the difference in mean of factors among beneficiaries of different religions.

Education				lood			Levene Test		ANOVA		
Factors	Illiterate	Primary School	Secondary School	Senior Secondary Scl	Graduation	PG and above	Total	Levene Statistic	Significance	F-Statistic	Significance
F1	3.6548	3.7095	3.8489	3.8730	3.8095	3.7967	3.8280	0.263	0.933	1.661	0.142
F2	3.3646	3.2875	3.4454	3.5200	3.4599	3.4519	3.4630	1.357	0.239	1.679	0.138
F3	3.1250	3.0444	3.1839	3.0534	3.1523	3.3333	3.1049	0.564	0.727	1.277	0.272

Table 6 Analysis of varying awareness among beneficiaries of different Educational Statuses

Table 7 Analysis of varying awareness among beneficiaries of different Religions

Religion							Levene Tes	evene Test ANOVA		
Factors	Hindu	Muslim	Sikh	Christian	Others	Total	Levene Statistic	Significance	F-Statistic	Significance
F1	3.8244	3.8571	3.8341	3.7033	3.9554	3.8280	0.718	0.580	0.699	0.593
F2	3.4785	3.4398	3.4274	3.3462	3.4688	3.4630	1.880	0.113	0.373	0.828
F3	3.1128	3.1285	3.0645	2.9744	3.0833	3.1049	1.414	0.136	0.301	0.877

It can be observed that beneficiaries belonging to a religion other than Hindu, Muslim, Sikh, and Christian are more aware of the general features of PMMVY. When it comes to awareness about requisite documents for claiming benefits, the Hindu PW & LMs have an edge over others. The awareness about healthcare-related conditions of PMMVY is highest among women of Muslim religion. However, all these differences are not statistically significant.

Results and discussion

The analysis of public beliefs about the only CMB scheme sponsored by the central government of India i.e., PMMVY, after approximately six years of implementation in 2017. The survey involving 540 PW & LM of Haryana state through a designed questionnaire demonstrates that most of the potential beneficiaries are aware of the different features of the scheme such as required documents, number of instalments, objectives of the scheme, and limitation of the scheme to first live birth only. The Ministry of Women and Child Development of the Indian government has launched an online portal (i.e., https://pmmvy.wcd.gov.in/) for self-registration by beneficiaries on 17th March 2023. A mobile phone application named PMMVYsoft and two helplines 181 and 112 for assistance are other commendable initiatives made by the government of India to make user friendly enrolment and monetary benefit claim process.

Conclusions and Suggestions

The unorganized sectors have no regulation regarding paid maternity leaves, no medical bill reimbursement or cashless health-related services for their female workers. This makes things even more important that the benefits of the CMB scheme must be effectively used to ensure the well-being of PW & LM and her newborn. The provision of payment of monetary aid under PMMVY in three instalments is for its effective use to purchase nutritious food, timely antenatal checkups, and proper rest at times when it is most needed. This highlights the importance of awareness about various provisions of the PMMVY. The money received under the scheme must be dedicatedly used for purchasing nutritious food, antenatal care (ANC) and postnatal care (PNC), paying for expenses incurred in institutional delivery and medicines as and when required, maintaining personal hygiene to avoid infection, and vaccination of newborns. This will help in beginning a healthy life in the womb of a healthy mother and reducing MMR and IMR.

Declaration of Conflicting Interests

The author declared no conflicts of interest concerning this article's research, authorship, and/or publication.

Funding

The author received no financial support for this article's research, authorship, and/or publication.

Reference

- 1. Ahorsu, D. K., Lin, C. Y., Imani, V., Saffari, M., Griffiths, M. D., & Pakpour, A. H. (2022). The Fear of COVID-19 Scale: Development and Initial Validation. International Journal of Mental Health and Addiction, 20(3), 1537–1545.
- AlHadi, A. N., AlAteeq, D. A., Al-Sharif, E., Bawazeer, H. M., Alanazi, H., AlShomrani, A. T., Shuqdar, R. M., & AlOwaybil, R. (2017). An arabic translation, reliability, and validation of Patient Health Questionnaire in a Saudi sample. Annals of General Psychiatry, 16(1), 1–9.
- 3. Amirrudin, M., Nasution, K., & Supahar, S. (2020). Effect of Variability on Cronbach Alpha Reliability in Research Practice. Jurnal Matematika, Statistika Dan Komputasi, 17(2), 223–230.
- 4. Barona-Vilar, C., Escribá-Agüir, V., & Ferrero-Gandía, R. (2009). A qualitative approach to social support and breast-feeding decisions. Midwifery, 25(2), 187–194.
- 5. Bartholomew, D., Knott, M., & Moustaki, I. (2011). Latent Variable Models and Factor Analysis: A Unified Approach: 3rd Edition. Latent Variable Models and Factor Analysis: A Unified Approach: 3rd Edition, 1–277.

⁶⁵⁷ www.journal-innovations.com

- 6. Bishnoi, N., & Bishnoi, V. K. (2022). Maternity Benefit Programs: An Investment in Human Resource. Population Review, 61(1), 58–67.
- 7. Brown, J. D. (2002). The Cronbach Alpha Reliability Estimate. JALT Testing & Evaluation SIG Newsletter, 6(1), 17–18.
- 8. Datta, S., Kodali, B. S., & Segal, S. (2010). Maternal Physiological Changes During Pregnancy, Labor, and the Postpartum Period. Obstetric Anesthesia Handbook, 1–14.
- 9. Davenport, E. C., Davison, M. L., Liou, P. Y., & Love, Q. U. (2015). Reliability, Dimensionality, and Internal Consistency as Defined by Cronbach: Distinct Albeit Related Concepts. Educational Measurement: Issues and Practice, 34(4), 4–9.
- 10. Gastwirth, J. L., Gel, Y. R., & Miao, W. (2009). The Impact of Levene's Test of Equality of Variances on Statistical Theory and Practice. Statistical Science, 24(3), 343–360.
- 11. Gethe, R. K., & Pandey, A. (2023). Impact of Maternity Benefits Act, 1961 [Amendment 2017] on job employment of working mothers in India. International Journal of Law and Management, 65(5), 373–404.
- 12. Goretzko, D., Pham, T. T. H., & Bühner, M. (2021). Exploratory factor analysis: Current use, methodological developments and recommendations for good practice. Current Psychology, 40(7), 3510–3521.
- 13. Gyamfi, A., Spatz, D. L., Jefferson, U. T., Lucas, R., O'Neill, B., & Henderson, W. A. (2023). Breastfeeding Social Support among African American Women in the United States: A Meta-Ethnography. Advances in Neonatal Care, 23(1), 72–80.
- 14. Hogarty, K. Y., Hines, C. V., Kromrey, J. D., Perron, J. M., & Mumford, A. K. R. (2005). The quality of factor solutions in exploratory factor analysis: The influence of sample size, communality, and overdetermination. Educational and Psychological Measurement, 65(2), 202–226.
- 15. Kamaruddin, N. K., & Udin, Z. M. (2009). Supply chain technology adoption in Malaysian automotive suppliers. Journal of Manufacturing Technology Management, 20(3), 385–403.
- 16. Kramer, M. S., & Kakuma, R. (2012). Optimal duration of exclusive breastfeeding. Cochrane Database of Systematic Reviews, 2012(8).
- 17. Lorenzo-Seva, U., & Ferrando, P. J. (2021). Not Positive Definite Correlation Matrices in Exploratory Item Factor Analysis: Causes, Consequences and a Proposed Solution. Structural Equation Modeling, 28(1), 138–147.
- McGovern, P., Dowd, B., Gjerdingen, D., Gross, C. R., Kenney, S., Ukestad, L., McCaffrey, D., & Lundberg, U. (2006). Postpartum health of employed mothers 5 weeks after childbirth. Annals of Family Medicine, 4(2), 159–167.
- 19. Meedya, S., Fahy, K., & Kable, A. (2010). Factors that positively influence breastfeeding duration to 6 months: A literature review. Women and Birth, 23(4), 135–145.
- 20. Patnaik, B. C. M., Satpathy, I., & Agarwal, M. (2014). An introspection into awareness of maternity benefit Act 1961 in semi-urban area. International Journal of Management, 5(9), 13–17. Patnaik/publication/266188677_An_introspection_into_awareness_of_maternity_benefit_Act_1961_ in_semi-urban_area/links/542953f30cf2e4ce940c9ea2/An-introspection-into-awareness-ofmaternity-benefit-Act-1961-in-s
- 21. Risser, J., Jacobson, T. A., & Kripalani, S. (2007). Development and psychometric evaluation of the self-efficacy for appropriate medication use scale (SEAMS) in low-literacy patients with chronic disease. Journal of Nursing Measurement, 15(3), 203–219.
- 22. Ritonga et al. (2022). The Physiological Changes In The Postpartum Period After Childbirth. Asian Journal of Social and Humanities, 1(4), 105–125.
- 23. S, L., & S, R. (2019). Awareness regarding maternity benefit schemes among antenatal women in rural Tamil Nadu. International Journal of Clinical Obstetrics and Gynaecology, 3(5), 220–223. https://doi.org/10.33545/gynae.2019.v3.i5d.354
- 24. Shrestha, N. (2021). Factor Analysis as a Tool for Survey Analysis. American Journal of Applied

Mathematics and Statistics, 9(1), 4–11.

- 25. Stevens, J. P. (2021). Exploratory and Confirmatory Factor Analysis. Applied Multivariate Statistics for the Social Sciences, 337–406.
- 26. Syeda, B., Agho, K., Wilson, L., Maheshwari, G. K., & Raza, M. Q. (2021). Relationship between breastfeeding duration and undernutrition conditions among children aged 0–3 Years in Pakistan. International Journal of Pediatrics and Adolescent Medicine, 8(1), 10–17.
- 27. Taber, K. S. (2018). The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. Research in Science Education, 48(6), 1273–1296.
- 28. Tan, E. K., & Tan, E. L. (2013). Alterations in physiology and anatomy during pregnancy. Best Practice and Research: Clinical Obstetrics and Gynaecology, 27(6), 791–802.
- 29. Verma, A., Shukla, R., & Negi, Y. S. (2020). An analysis of awareness and implementation of maternity benefits act a study in western Himalayan state of Himachal Pradesh, India. Annals of Biology, 36(1), 126–131.
- 30. Von Haaren, P., & Klonner, S. (2020). Maternal cash for better child health? The impacts of India's IGMSY/PMMVY maternity benefit scheme. University of Heidelberg, 689.
- 31. Yong, A. G., & Pearce, S. (2013). A Beginner's Guide to Factor Analysis: Focusing on Exploratory Factor Analysis. Tutorials in Quantitative Methods for Psychology, 9(2), 79–94.
- 32. Zimmerman, D. W. (2004). A note on preliminary tests of equality of variances. British Journal of Mathematical and Statistical Psychology, 57(1), 173–181.