

Comprehensive Capital Need Analysis (CNA)

Case Study: Human Life Value & Life Insurance Cover Determination (Dr. Kumar Profile)

A frequent question asked by clients and readers is: *"How do I conduct a comprehensive Capital Need Analysis (CNA) for a client to advise them on the precise life insurance cover they should avail?"*

In the financial pyramid, life insurance fits into the foundational layer: **Protection**. To perform a rigorous CNA, capital requirements must be categorized into four distinct heads.

1. THE FOUR TYPES OF CAPITAL REQUIREMENTS

- **Working Capital:** Ongoing month-on-month living expenses required for day-to-day operations of the household (e.g., food, school fees, rents, maintenance, salaries to domestic staff).
- **Fixed Capital:** Major one-time capital requirements for milestone future goals (e.g., college admission fees, professional study capitation fees, children's auspicious marriage expenses, business seed capital).
- **Reserve Capital:** Emergency reserves set aside to meet unforeseen demands (e.g., sudden medical contingencies, brief hospitalizations).
- **Borrowed Capital:** Existing outstanding debt liabilities owed to third parties or institutions (e.g., housing loans, car loans, personal loans, credit cards).

2. CASE STUDY PROFILE: DR. KUMAR

Client Profile & Baseline Assumptions

- **Primary Earner:** Dr. Kumar (Age 38), Orthopaedic Surgeon earning a net salary of **₹3,00,000 / month**.
- **Spouse:** Mrs. Kumar (Homemaker & Honorary Director at an NGO).
- **Children:** Ms. Aparna (Age 8) and Ms. Alka (Age 2).
- **Monthly Cash Outflow:** ₹75,000 towards EMIs (Car, House, Assets) + ₹2,00,000 ongoing living expenses. Savings capacity = ₹25,000/month.
- **Total Outstanding Debt Liability:** **₹1,00,00,000 (₹1 Crore)**.
- **Immediate Reserve Capital Required:** **₹1,00,00,000 (₹10 Lakhs)**.
- **Key Escalation Parameters:** Inflation Rate = **6% per annum** | Discounting Present Value Factor = **4% per annum**.

3. MILESTONE CAPITAL REQUIREMENTS SCHEDULE

The major long-term fixed capital requirements projected for Dr. Kumar's family milestones include:

- **First Child (Aparna) Higher Education (Year 2032):** ₹50,00,000 (₹50 Lakhs)
- **Second Child (Alka) Higher Education (Year 2038):** ₹55,00,000 (₹55 Lakhs)
- **First Child (Aparna) Grand Marriage (Year 2039):** ₹80,00,000 (₹80 Lakhs)
- **Second Child (Alka) Grand Marriage (Year 2045):** ₹85,00,000 (₹85 Lakhs)

4. YEAR-BY-YEAR INFLATION-ADJUSTED CASH FLOW SCHEDULE (2018 – 2045)

Below is the complete 28-year projection matrix detailing annual working capital escalation, milestone cash outlays, debt liabilities, and cumulative discounted totals:

Year	Working Capital (₹)	World Class Education (₹)	Grand Marriage (₹)	Reserve Capital (₹)	Borrowed Capital (₹)	Total Year-wise Outflow (₹)
2018	2,400,000	-	-	1,000,000	10,000,000	13,400,000.00
2019	2,544,000	-	-	-	-	2,544,000.00
2020	2,696,640	-	-	-	-	2,696,640.00
2021	2,858,438.40	-	-	-	-	2,858,438.40
2022	3,029,944.70	-	-	-	-	3,029,944.70
2023	3,211,741.39	-	-	-	-	3,211,741.39
2024	3,404,445.87	-	-	-	-	3,404,445.87
2025	3,608,712.62	-	-	-	-	3,608,712.62
2026	3,825,235.38	-	-	-	-	3,825,235.38
2027	4,054,749.50	-	-	-	-	4,054,749.50
2028	4,298,034.47	-	-	-	-	4,298,034.47
2029	4,555,916.54	-	-	-	-	4,555,916.54
2030	4,829,271.53	-	-	-	-	4,829,271.53
2031	5,119,027.82	-	-	-	-	5,119,027.82
2032	5,426,169.49	5,000,000	-	-	-	10,426,169.49
2033	5,751,739.66	-	-	-	-	5,751,739.66
2034	6,096,844.04	-	-	-	-	6,096,844.04
2035	6,462,654.68	-	-	-	-	6,462,654.68
2036	6,850,413.97	-	-	-	-	6,850,413.97
2037	7,261,438.81	-	-	-	-	7,261,438.81
2038	7,697,125.13	5,500,000	-	-	-	13,197,125.13
2039	8,158,952.64	-	8,000,000	-	-	16,158,952.64
2040	8,648,489.80	-	-	-	-	8,648,489.80
2041	9,167,399.19	-	-	-	-	9,167,399.19
2042	9,717,443.14	-	-	-	-	9,717,443.14
2043	10,300,489.73	-	-	-	-	10,300,489.73
2044	10,918,519.11	-	-	-	-	10,918,519.11
2045	11,573,630.26	-	8,500,000	-	-	20,073,630.26
PV TOTAL	CUMULATIVE DISCOUNTED PRESENT VALUE (4% PV Factor)					₹10,65,32,914.45

FINAL ADVISORY RECOMMENDATION FOR DR. KUMAR:

Total Required Life Insurance Cover = ₹10.65 Crores (Net Existing Insurance)

Dr. Kumar requires a total gross life insurance protection of **₹10.65 Crores**. To compute the exact new term insurance policy required, subtract the sum assured of his current existing life insurance policies from ₹10.65 Crores.

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